REGULAR MEETING OF THE MILPITAS CITY COUNCIL

AGENDA

TUESDAY, JUNE 15, 2021
MILPITAS, CA
6:00 PM (CLOSED SESSION)
7:00 PM (PUBLIC BUSINESS)

For assistance in the following languages, you may call:
Đối với Việt Nam, gọi 408-586-3122
Para sa Tagalog, tumawag sa 408-586-3051
Para español, llame 408-586-3232

City Council meeting is held via teleconference /Zoom webinar only (no physical meeting space).
You may watch the Council meeting without providing public comment by accessing it via links here.

Meeting shall be livestreamed - Go to:
Facebook: https://www.facebook.com/CityofMilpitas/
YouTube: https://www.ci.milpitas.ca.gov/youtube
Web Streaming: https://www.ci.milpitas.ca.gov/webstreaming

PUBLIC COMMENT INSTRUCTIONS

Oral public comments may be provided live during the City Council meeting by first registering for the zoom meeting in advance by providing email address (not disclosed) and a name. To minimize technical difficulties, please make sure that you have the latest version of Zoom Meetings. Here is the link to register for this meeting only:

https://ci-milpitas-ca-gov.zoom.us/webinar/register/WN_cuZS3NW5RU6G3TIENKviNg

A link will be sent to you to join the City Council meeting in order to give your comments. All registered meeting attendees who wish to speak must click on the “raise hand” icon when the Mayor calls for public comments. If participating by calling in on your phone, dial *9 to use the “raise hand” feature, and when you are called upon, hit *6 to unmute your phone. Your phone number will be displayed in the live meeting. The Mayor or staff will call the speakers to begin.

All comments provided shall be limited to three minutes or less as determined by the Mayor. All members of the public will be limited to one comment per agenda item, and one comment for non-agenda items. online written comment form previously used is no longer available for public comment.

MILPITAS CITY COUNCIL CODE OF CONDUCT

- Be respectful and courteous (words, tone, and body language).
- Model civility.
- Avoid surprises.
- Praise publicly and criticize privately.
- Focus on the issue, not the person.
- Refrain from using electronic devices while on the Council dais.
- Disclose conflicts of interest and affiliations related to agenda items.
- Separate governing from campaigning.
- The Council speaks with one voice after making policy on issues.
- Respect the line between policy and administration.
- Council will hold one another accountable to comply with this Code of Conduct.

CALL MEETING TO ORDER by Mayor and ROLL CALL by City Clerk (6:00 PM)

ADJOURN TO CLOSED SESSION

(a) CONFERENCE WITH LABOR NEGOTIATORS
Pursuant to Government Code Section 54957.6
Agency designated representative: Mayor Rich Tran
Employee: City Attorney

CLOSED SESSION ANNOUNCEMENT: Report on action taken in Closed Session, if required per Government Code Section 54957.1, including the vote or abstention of each member present

PLEDGE OF ALLEGIANCE (7:00 PM)

INVOCATION (assigned to Mayor Tran)

PRESENTATIONS
- Juneteenth (Proclamation)
- July – Parks and Recreation Month (Proclamation)

PUBLIC FORUM
Those interested are invited to address City Council on any subject not on tonight's agenda, orally via zoom webinar (instructions on page 1). Speakers may provide their name and city of residence for the Clerk's record, and comments may be limited to three minutes or less. As an item not listed on the agenda, no response is required from City staff or the Council and no action can be taken. The City Council may instruct the City Manager to place the item on a future meeting agenda.

ANNOUNCEMENTS AND FUTURE AGENDA ITEMS (7:20 PM)
Members of the City Council or City Manager may make brief announcements at this time. Members of the City Council may also suggest future agenda items at this time. For future agenda items, the City Council shall not debate the topic or engage in discussion but shall simply state a "yes" or "no" as to whether to direct the City Manager to place the item on a future meeting agenda. If a majority of the City Council agrees to place an item on a future meeting agenda, the City Manager shall place the item on a subsequent agenda for City Council discussion.

ANNOUNCEMENT OF CONFLICT OF INTEREST AND CAMPAIGN CONTRIBUTIONS

READING OF THE CITY COUNCIL CODE OF CONDUCT

APPROVAL OF AGENDA

CONSENT CALENDAR (7:30 PM)
Consent calendar items are considered to be routine and will be considered for adoption by one motion. There will be no separate discussion of these items unless a City Councilmember, member of the audience or staff requests the Council to remove an item from (or be added to) the consent calendar. Any person desiring to speak on any item on the consent calendar should ask to have that item removed from the consent calendar.

C1. Receive City Council Calendars of Meetings for June and July 2021 (Staff Contact: Wendy Wood, City Clerk, 408-586-3001)

Recommendation: Receive City Council Calendars of Meetings for June and July 2021.

C2. Approve City Council meeting minutes of the June 1, 2021, Regular City Council Meeting and June 8, 2021 Special City Council Meeting (Staff Contact: Wendy Wood, City Clerk, 408-586-3001)

Recommendation: Approve meeting minutes of the June 1, 2021, Regular City Council Meeting and June 8, 2021 Special City Council Meeting.

C3. Waive the Second Reading and Adopt Ordinance No. 227.8 Amending Chapter 215 (Regulation of Smoking in Certain Places), Title V (Public Health, Safety and Welfare), of the Milpitas Municipal Code Relating to Prohibiting Smoking in Multi-Unit Housing and Certain Outdoor Areas (Staff Contact: Ned Thomas, Planning Director, 408-586-3273)

Recommendation: Move to waive the second reading and adopt Ordinance No. 227.8 amending Chapter 215, Title V of the Milpitas Municipal Code relating to prohibiting smoking in multi-unit housing and certain outdoor areas.

C4. Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue, Tract 10324 by Lennar Homes of California and LMC Milpitas Holdings I, LLC, and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)

Recommendations: (1) Adopt a Resolution granting acceptance of public improvements for the 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue, Tract 10324, Public Improvement Plan 2-1202; (2) approving a reduction in the faithful performance bonds to $109,785 and $115,255, respectively, which shall be subject and in effect for the duration of a one-year warranty period; (3) grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

C5. Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for the Metro Subdivision located at 1425 South Milpitas Boulevard, Tract 10349 by Pulte Home Corporation, and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)

Recommendations: (1) Adopt a resolution granting acceptance of public improvements for the Metro Subdivision located at 1425 South Milpitas Boulevard, Tract 10349 by Pulte Home Corporation, Public Improvement Plan 2-1183 and 2-1164; (2) approve a reduction in the faithful performance bond to $79,250, which shall be subject and in effect for the duration of a one-year warranty period; (3) grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

C6. Adopt a Resolution Authorizing the Continued Participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority (Staff Contact: Sharon Goei, Building Safety and Housing Director, 408-586-3260)

Recommendations: (1) Adopt a Resolution authorizing the continued participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority; and (2) authorize the City Manager, or designee, to execute any documents necessary to continue participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority program.

C7. **Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for the South Main Senior Lifestyles Project located at 80 Cedar Way by Milpitas Phase I, LP and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)**

Recommendation: (1) Adopt a Resolution granting acceptance of public improvements for the South Main Senior Lifestyles Project located at 80 Cedar Way, Public Improvement Plan 2-1236; (2) approve a reduction in the faithful performance bonds to $157,500 and $116,800, respectively, which shall be subject and in effect for the duration of a one-year warranty period; and (3) grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

C8. **Adopt a Resolution approving Site Development Permit Amendment No. SA21-0001 to amend Site Development Permit No. SD17-0006 to reduce the scope of a previously approved project from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home located on a 1.6-acre site at 517 Vista Ridge Drive in the R-1-H Hillside Single-family Residential Zoning District and Making Findings of Exemption under CEQA (Staff Contact: Ned Thomas, Planning Director, 408-586-3273 and Adrienne Smith, Associate Planner, 408-586-3287)**

Recommendation: Adopt a Resolution approving Site Development Permit Amendment No. SA21-0001 to reduce the scope of a previously approved project from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home located on a 1.6-acre site at 517 Vista Ridge Drive in the R-1-H Hillside Single-family Residential Zoning District and making findings of exemption under the California Environmental Quality Act (CEQA).

C9. **Approve and Authorize the City Manager to Execute a General Services Agreement with Hanford Applied Restoration & Conservation for Wrigley, Ford, and Wrigley-Ford Creek Maintenance for a total Amount Not-to-Exceed $128,430.00. (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)**

Recommendation: Approve and Authorize the City Manager to execute a General Services Agreement with Hanford Applied Restoration & Conservation for Wrigley, Ford, and Wrigley-Ford Creek Maintenance for a total amount not-to-exceed $128,430.00.

C10. **Approve Change Order No. 3 in the Amount of $93,826 for the Contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, Increasing the Total Project Not-to-Exceed Amount from $1,989,005 to $ $2,082,831 and approve an appropriation in amount of $253,497 from General Government CIP Fund to CP 3424. (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)**

Recommendations: (1) Approve Change Order No. 3 in the amount of $93,826 for the contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, increasing the total project not-to-exceed amount from $1,989,005 to $2,082,831; and (2) approve an appropriation in amount of $253,497 from the General Government CIP Fund to CP 3424.

C11. **Approve and Authorize the City Manager to Execute an Agreement with Mark 43 for a Law Enforcement Records Management System (RMS) for a Six Year Software License Agreement for the Not-To-Exceed Amount of $1,049,956 (Staff Contacts: Steven Fox, Police Captain, 408-586-2525)**

Recommendation: Approve and Authorize the City Manager to execute an agreement with Mark 43 for a law enforcement Records Management System (RMS) for a six-year Software License Agreement for the not-to-exceed amount of $1,049,956 subject to annual appropriations.

C12. **Approve Accounts Receivable Write-offs for the Fiscal Year Ending June 30, 2021 (Staff Contact: Lauren Lai, Finance Director, 408-586-3111)**

Recommendation: Approve the Accounts Receivable write-offs for the Fiscal Year ending June 30, 2021.

C13. **Adopt a Resolution Declaring Certain City Owned Land "Exempt Surplus Land" Under the Surplus Land Act (Government Code Section 54220 et seq.) and Approving and Authorizing, Pursuant to CEQA Findings, the City Manager to Execute the Right-of-Way Agreement with the Santa Clara Valley Water District for the Purchase of Easements and City Owned Land for Lower Penitencia Creek Flood Protection Improvements (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)**

Recommendation: Adopt a Resolution declaring certain City owned land "Exempt Surplus Land" under the Surplus Land Act (Government Code Section 54220 et seq.) and approving and authorizing, pursuant to CEQA findings, the City Manager to execute the Right-of-Way Agreement with the Santa Clara Valley Water District for the purchase of easements and City owned land for Lower Penitencia Creek Flood Protection Improvements.

C14. **Approve and Authorize the City Manager to Execute the Construction Contract with McGuire and Hester to Provide Construction of the Main Lift Station Emissions Control Facility for the Not-To-Exceed Amount of $1,293,500. (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)**

Recommendations: (1) Award NIB No. 2511 to McGuire and Hester; (2) approve and authorize the City Manager to execute the construction contract with McGuire and Hester to provide construction of the Main Lift Station Emissions Control Facility for the not-two exceed amount of $1,293,500; and (3) authorize the City Manager to execute one or more change orders related to the project to increase the maximum compensation by an aggregate amount not to exceed $200,000.

C15. **Approve Amendment to Bateman Community Living, LLC Contract FY2020-21 for Senior Nutrition Services (Staff Contact: Renee Lorentzen, Recreation and Community Services Director, 408-586-3226)**

Recommendation: Approve amendment to Bateman Community Living, LLC contract FY2020-2021 to increase the contract amount by $70,000 to $146,500 to cover the cost of additional Senior Nutrition meals during the pandemic.

C16. **Receive Monthly Report for Unhoused Services (Staff Contact: Sharon Goei, Building Safety and Housing Director, 408-586-3260)**

Recommendation: Receive April 2021 report for unhoused services.

C17. **Approve Amendment to Measure F Oversight Committee Bylaws to Adjust Regular Quarterly Meeting Dates (Staff Contact: Lauren Lai, Lauren Lai, Finance Director, 408-586-3111)**

Recommendation: Approve amendment to Measure F Oversight Committee Bylaws to adjust regular quarterly meeting dates.

C18. **Approve and Authorize the City Manager to Enter into a Side Letter to Amend the Memorandum of Understanding between the City and LIUNA/UPEC Local 792, representing the Milpitas Employees Association (MEA) Unit amending the Vacation Cash Out MOU provisions (Jeannine Seher, Director of Human Resources, 408-586-3086)**

Recommendation**:** Approve and authorize the City Manager to Enter into a Side Letter to amend the Memorandum of Understanding between the City and LIUNA/UPEC Local 792, representing the Milpitas Employees Association (MEA) Unit amending the Vacation Cash Out MOU provisions.

C19. Accept Commissioner Resignation (Staff Contact: Wendy Wood, City Clerk, 408-586-3001)

Recommendation: Accept the resignation of Commissioner Gil Roy Galindez Casanova III from Community Advisory Commission; and confirm the noticing of the unscheduled vacancy.

C20. Establish a Project titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)

Recommendation: Establish CP 3495 titled "COVID-19 Safe Facility Improvements" and approve a budget amendment in the amount of $375,000 to fund the project with American Rescue Plan Act Funds.

C21. Approve Delegation of Authority to the City Manager or Designee to Approve and Execute Project Related Documents and Urgent Administrative Items During the City Council Summer Recess, from the last City Council meeting held in June through August 5, 2021 (Staff Contact: Ashwini Kantak, Assistant City Manager, 408-586-3053)

Recommendation: Approve delegation of authority to the City Manager, or his designee, to approve and execute project related documents, including contract documents, and urgent administrative items during the City Council summer recess from the last City Council meeting held in June through August 5, 2021.

PUBLIC HEARINGS (7:45 PM)

22. Conduct a Public Hearing and Adopt a Resolution Confirming the Assessment and Ordering the Levy for the Landscaping and Lighting Maintenance Assessment District No. 98-1(Sinclair Horizon) for Fiscal Year 2020-21 (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)

Recommendations: (1) Open the public hearing, receive any comments, and move to close the hearing following any testimony; and (2) adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 98-1 for Fiscal Year 2020-21.

23. Conduct a Public Hearing and Adopt a Resolution Confirming the Assessment and Ordering the Levy for the Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch for Fiscal Year 2021-22 (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)

Recommendations: (1) Open the public hearing, receive any comments, and move to close the hearing following any testimony; and (2) adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch for Fiscal Year 2021-22.

24. Conduct a Public Hearing to Approve an Amendment to the FY19-20 Annual Action Plan, Approve the Funding Allocations for FY21-22 Community Development Block Grant (CDBG), Adopt the Annual Action Plan for the Corresponding Year, and Consider an Amendment to the Citizen Participation Plan (Staff Contact: Sharon Goei, Building Safety and Housing Director, 408-586-3260)

Recommendations: (1) Open the public hearing, hear testimony, then move to close the public hearing; (2) approve the amendment to the FY19-20 Annual Action Plan; (3) adopt the FY21-22 Annual Action Plan with recommended allocation amounts; (4) authorize the City Manager, or designee, to make any necessary changes to the approved FY21-22 Annual Action Plan as needed to comply with CDBG submission guidelines; (5) authorize the City Manager, or designee, to execute CDBG agreements with the approved subrecipients, and amend the CDBG agreements as needed to comply with CDBG guidelines; (6) approve an amendment to the Citizen Participation Plan; and (7) authorize the City Manager, or designee, to make any necessary changes to the Citizen Participation Plan as needed to comply with CDBG submission guidelines.

25. Conduct a Public Hearing and Adopt a Resolution Adopting the 2020 Urban Water Management Plan and Authorize the Mayor to Sign Letters on Behalf of the City Council Regarding Water Supply Matters (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)

Recommendations: (1) Open the public hearing, hear testimony, then move to close the public hearing; (2) Adopt a Resolution Adopting the 2020 Urban Water Management Plan; and (3) Authorize the Mayor to sign letters on behalf of the City Council regarding water supply matters affecting the City of Milpitas.

26. Conduct a Public Hearing and Adopt a Resolution Adopting the Water Shortage Contingency Plan. (Staff Contact: Tony Ndah, Public Works Director, 408-586-2602)

Recommendations: (1) Conduct a Public Hearing, hear testimony, then move to close the public hearing; and (2) adopt a Resolution Adopting the Water Shortage Contingency Plan.

27. Conduct a Public Hearing, Adopt Resolution A, Conduct a Special Election for Community Facilities District No. 2008-1 – Annexation 21, and Adopt Resolution B. (Staff Contact: Steve Erickson, Engineering Director/City Engineer, 408-586-3301)

Recommendations: Conduct a Public Hearing, hear testimony, then move to close the public hearing; and adopt the following Resolutions: (1) Resolution (A) of the City Council of the City of Milpitas Acting as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Making Certain Determinations and Authorizing Submittal of Levy of Special Taxes to the Qualified Electors of Certain Territory Proposed to be Annexed to Community Facilities District No. 2008-1 (Public Services); and (2) Resolution (B) of the City Council of the City of Milpitas Acting in its Capacity as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Declaring the Results of a Special Election in that Territory Designated as Community Facilities District No. 2008-1 (Public Services), Annexation No. 21 and Adding Such Territory To Such Community Facilities District.

COMMUNITY SERVICES AND SUSTAINABLE INFRASTRUCTURE (9:45 PM)

28. Receive a Presentation on the Draft Parks and Recreation Master Plan and Provide Direction to Staff (Staff Contacts: Steve Erickson, Engineering Director/City Engineer, 408-586-3301; and Renee Lorentzen, Recreation and Community Services Director, 408-586-3409)

Recommendation: Receive a Presentation on the Draft Parks and Recreation Master Plan and provide direction to staff.

LEADERSHIP AND SUPPORT SERVICES (10:15 PM)

29. Receive a presentation on a Return to the Workplace Plan for the City of Milpitas (Staff Contact: Ashwini Kantak, Assistant City Manager, 408-586-3053)

Recommendation: Receive a presentation on a Return to the Workplace Plan for the City of Milpitas.

REPORTS OF MAYOR & COUNCILMEMBERS - from assigned Commissions, Committees and Agencies (10:45 PM)

30. Recommendations from Mayor Tran for Appointments for City Commissions (Contact: Mayor Tran, 408- 586-3029)

Recommendation: Approve Mayor Tran's recommendations for the following City commissions: Arts Commission; Community Advisory Commission; Economic Development and Trade Commission; Energy and Environmental Sustainability Commission; Library and Education Advisory Commission; Parks, Recreation, and Cultural Resources Commission; Public Safety and Emergency Preparedness Commission; Science, Technology, and Innovation Commission; Veterans Commission; and Youth Advisory Commission; and approve the final appointments.

31. Receive and Direct Staff on the List of Agenda Items Requested by City Councilmembers (Contact: Mayor and City Councilmembers, 408-586-3000)

Recommendation: Review the list of items that have been requested by City Councilmembers on a form, at a Council meeting, or through the City Manager. Direct items to a City Council Subcommittee, to be placed onto a specific meeting date, or specify alternate direction to staff. No substantive discussion about any specific item shall occur and the City Council shall hold all debate about the item until it is scheduled as a full agenda item.

NEXT AGENDA PREVIEW (10:55 PM)

32. Receive Preview List of Anticipated Items for the Next Regular City Council Meeting (Staff Contact: Wendy Wood, City Clerk, 408-586-3001)

Recommendation: Receive list of anticipated agenda items for the next regular City Council meeting.

ADJOURNMENT (11:00 PM)

KNOW YOUR RIGHTS UNDER THE OPEN GOVERNMENT ORDINANCE

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions and other City agencies exist to conduct the people's business. This ordinance assures that deliberations are conducted before the people and City operations are open to the people's review. For more information on your rights under the Open Government Ordinance or to report a violation, contact the City Attorney's office at ~~Milpitas City Hall, 455 E. Calaveras Blvd., Milpitas, CA 95035~~
e-mail:cdiaz@ci.milpitas.ca.gov / Phone: 408-586-3040

The Open Government Ordinance is codified in the Milpitas Municipal Code as Title I Chapter 310 and is available online at the City's website www.ci.milpitas.ca.gov by selecting the Milpitas Municipal Code link.

Materials related to an item on this agenda submitted to the City Council after initial distribution of the agenda packet are available for public inspection ~~at the City Clerk's office at Milpitas City Hall, 3rd floor 455 E. Calaveras Blvd., Milpitas and~~ on City website. City Council agendas and related materials can be viewed online: www.ci.milpitas.ca.gov/government/council/agenda_minutes.asp (select meeting date)

APPLY TO SERVE ON A CITY COMMISSION

Commission application forms are available online at www.ci.milpitas.ca.gov or at Milpitas City Hall. Contact the City Clerk's Office at 408-586-3001 for more information.

If you need assistance, per the Americans with Disabilities Act, for any City of Milpitas public meeting, please call the City Clerk at 408-586-3001 or send an e-mail to CityClerk@ci.milpitas.ca.gov prior to the meeting. You may request a larger font agenda.

May 2021

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July 2021

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Milpitas City Council Calendar

June 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 **7:00 PM**-City Council	2 **2:00 PM**-Santa Clara VTA Monthly Briefing - Northeast Group (CM) **5:30 PM**-Veterans Commission (RT) **7:00 PM**-Community Advisory Commission (EC)	3 **12:00 PM-**Santa Clara Library JPA (EC) **2:00 PM-**City Council Housing Subcommittee (EC/AP) **5:30 PM**-Milpitas Chamber of Commerce Board (EC) **5:30 PM**-Santa Clara VTA Board of Directors (CM)	4	5
6	7 **5:30 PM-**Park Marker (PRCR) Subcommittee **7:00 PM**-Parks, Recreation & Cultural Resources Commission (CM)	8 **4:00 PM-**Milpitas HOPE Suicide Prevention Task Force **5:30 PM-**Special City Council	9 **7:00 PM**-Silicon Valley Clean Energy Board of Directors (EC) **7:00 PM**-Planning Commission	10 **4:00 PM**-Treatment Plant Advisory Committee (CM) **4:00 PM**-Santa Clara VTA Policy Advisory Committee (AP) **5:00 PM-**Homelessness Task Force **6:00 PM**-Cities Assoc of SCC Legislative Action Comm (CM) **7:00 PM**-Cities Assoc of SCC (CM)	11 **3:00 PM**-City Council Transportation Subcommittee (RT/CM) ****4:30 PM**-City Council Finance Subcommittee (RT/CM)*	12
13	14 **6:00 PM-**Special City Council	15 **6:00 PM**-Closed Session **7:00 PM**-City Council	16 **6:00 PM**-Energy and Environmental Sustainability Commission (EC)	17 **5:30 PM-**Measure F Oversight Committee **6:00 PM-**Short-term Rental Workshop	18	19
20	21 ***5:30 PM-**Park Marker (PRCR) Subcommittee (Tent.)* **5:00 PM**- Special City Council **7:00 PM**-Science, Technology, and Innovation Commission (RT)	22 **10:00 AM-**Special City Council **1:30 PM**-Senior Advisory Commission (AP) **6:00 PM-**Short-term Rental Workshop	23 **5:30 PM**-Cities Assoc. of SCC - Recycling and Waste Reduction Commission of SCC (AP) **7:00 PM**-Planning Commission	24 **4:00 PM-** City/MUSD Collaborative Subcommittee (RT/CM) **6:00 PM-** Main Street Community Conversations – History and Culture	25 **10:30 AM**-Association of Bay Area Governments General Meeting (AP)	26
27	28 ***7/7:30PM**- Special Arts Commission (RT) (Tent.)*	29	30 **7:00 PM**-Special Youth Advisory Commission (EC)			

****Finance Subcommittee will meet only as needed***

Updated 6/10/21

June 2021

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August 2021

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Milpitas City Council Calendar

July 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 **5:30 PM**-Milpitas Chamber of Commerce Board (EC)	2	3
4	5 **INDEPENDENCE DAY** **Observance** **City offices closed** 	6	7	8	9	10
11	12	13	14	15 **6:30 PM**-Bay Area Water Supply Conserv Agency (CM)	16	17
18	19	20	21	22 **4:00 PM**-Silicon Valley Regional Interoperability Authority (SVRIA) (KD)	23	24
25	26	27	28 **12:00 PM**-Santa Clara Valley Water District - Water Commission (CM)	29	30	31

Updated 6/9/2021

CITY OF MILPITAS
MEETING MINUTES

Minutes of: **Joint Meeting of the Milpitas City Council and the Milpitas Housing Authority**
Date: **Tuesday, June 1, 2021**
Time: **7:00 PM Open Session**
Location: **Meeting held via teleconference/zoom webinar online Milpitas, CA**

CALL TO ORDER

Mayor Tran called the joint meeting of the Milpitas City Council and the Milpitas Housing Authority to order at 7:00 PM. City Clerk Wood called the roll. The meeting took place via teleconference/zoom webinar.

PRESENT: Mayor Tran, Vice Mayor Montano, Councilmembers Chua, Dominguez, and Phan

ABSENT: None

PLEDGE

Mayor Tran led all in the Pledge of Allegiance.

INVOCATION

Mayor Tran led the Invocation.

PRESENTATION

Mayor Tran proclaimed the month of June as LGBTQ+ Pride Month, and proclaimed June 12, 2021, as Philippine Independence Day in the City of Milpitas.

PUBLIC FORUM

The following spoke during Public Forum:

1. Voltaire Montemayor
2. Barbara Jo Navarro
3. John Agg

ANNOUNCEMENTS & FUTURE AGENDA ITEMS

Councilmember Chua made the following requests and announcements:

1. The City Manager provide a status update of the request she made regarding an amendment to the affordable housing ordinance to remove the option for the developers to pay fees and have them provide 15 percent affordable housing.
2. Hold a job fair with 20 local businesses and an additional one in the fall, with the Milpitas Chamber of Commerce taking a large role and the City providing support.
3. Announced that San Jose Conservation Corps partnered with the City to pick up mattresses and tires and wanted to thank them and the City's Public Works Department for an excellent job.
4. Presented a video of the Police Department badge pinning ceremony.

Mayor Tran stated his support for law enforcement and expressed his gratitude for the Milpitas S.W.A.T. team that responded to the VTA incident.

Vice Mayor Montano made the following requests:

1. The City create a mural for Veterans.
2. The City partner with the Milpitas Chamber of Commerce to promote the City with events such as an Art and Wine Festival, Rancho Days, Little Cornfield Day, or Frontier Days.

Councilmember Dominguez thanked the Milpitas Police Department for their support and commented on the recent VTA incident.

ANNOUNCEMENT OF CONFLICT OF INTEREST AND CAMPAIGN CONTRIBUTIONS

City Attorney Diaz asked the Mayor and City Councilmembers if they had any personal conflicts of interest. By roll call, there were no conflicts of interest. City Attorney Diaz asked the Mayor and City Councilmembers if they had any reportable campaign contributions. By roll call, there were no reportable campaign contributions

CODE OF CONDUCT

City Attorney Diaz read aloud the City Council Code of Conduct.

APPROVAL OF AGENDA

Mayor Tran stated that item 12 will be postponed to the next meeting.

Motion: to approve the June 1, 2021, meeting agenda, including the postponement of item 12 to the next meeting.

Motion/Second: Mayor Tran / Vice Mayor Montano

Motion carried by a vote of: AYES: 5
NOES: 0

CONSENT CALENDAR

Mayor Tran asked staff to respond to previous speaker Barbara Jo Navarro's comments on item C4.

Recreation and Community Services Director Lorentzen responded.

Mayor Tran moved items 13 and 14, to the consent calendar.

The following items were added to the Consent Calendar:

1. Agenda Item No. 13: Receive and Direct Staff on List of Agenda Items Requested by City Councilmembers

2. Agenda Item No. 14: Receive Preview List of Anticipated Items for the Next Regular City Council Meeting Scheduled on June 15, 2021

Motion: to approve the modified Consent Calendar, including Items No. C1 – C7; Agenda Item No. 13, and 14.

Motion/Second: Mayor Tran / Councilmember Dominguez

Motion carried by a vote of: AYES: 5
NOES: 0

C1. Council Calendar

Received the City Council calendar of upcoming meetings for June 2021.

C2. Meeting Minutes

Approved the meeting minutes of the May 18, 2021, Regular City Council Meeting.

C3. Resolution – Flag raising for Philippine Independence Day

Adopted **Resolution No. 9073** to do a flag raising to commemorate Philippine Independence Day at Cesar Chavez Plaza.

C4. Establish and Fund the Pedestrian Trail Replacement Project

Approved a budget amendment to establish and reallocate $71,080 of unused funds from the Creighton Park Project (CIP 5109) to the Pedestrian Trail Replacement Project (CIP 3492) Connecting Sinnott, Browne, and Murphy Parks.

C5. Execute a Master Funding Agreement with the Santa Clara VTA for the 2016 Measure B Bike and

Approved and authorized the City Manager to Execute a Master Funding Agreement with the Santa Clara Valley Transportation Authority (VTA) for the 2016 Measure B Bike and Pedestrian Education and Encouragement Program; established the Fiscal Year 2021-22 Project Bike and Pedestrian Public Outreach Project (CIP No. 4306); and

Pedestrian Education and Encouragement Program	approved an FY 2021-22 budget appropriation of $45,000 for Project No. 4306 funded from Measure B Bike and Pedestrian Education and Encouragement Funding.
C6. Accept Commissioner Resignation	Accepted the resignations of Commissioner Rajani Nair from the Science, Technology and Innovation Commission and Commissioner Benjamin Tang from the Art Commission; and confirmed the noticing of the unscheduled vacancies.
C7. Execute Amendment No. 5 to the Cost-Sharing Agreement	Approved and authorized the City Manager to execute Amendment No. 5 to the Cost Sharing Agreement among West Valley Sanitation District, Cupertino Sanitary District, County Sanitation District No. 2-3 of Santa Clara County, Burbank Sanitary District, and the City of Milpitas.

PUBLIC HEARINGS

8. Resolutions - Approve the Fiscal Year 2021-22 Operating Budget for the City of Milpitas and the Milpitas Housing Authority, Approve the Fiscal Year 2021-22 Gann Appropriations Limit

City Manager McHarris introduced the item and provided background.

Finance Director Lai presented the proposed Fiscal Year 2021-22 Operating Budget.

Mayor Tran opened the public hearing.

The following spoke during Public Comment:

1. Voltaire Montemayor

Mayor Tran closed the public hearing.

Mayor Tran spoke about the importance of public safety and requested that the City keep the Chief Fire Enforcement Officer position.

Council asked questions and commented on vacant and defunded positions in public safety.

Mayor Tran polled the Council for support to keep the Chief Fire Enforcement Officer position. Roll call as follows:

AYES: 2 (Phan, Tran)
NOES: 2 (Chua, Montano)
ABSTAIN: 1 (Dominguez)

Mayor Tran asked the City Manager to add this discussion to next week's special meeting agenda item.

Councilmember Chua asked for clarification on Exhibit 2 approval of FY2021-22 budgeted contracts/payments over $100,000.

Finance Director Lai provided clarification.

Mayor Tran requested that the line items be reviewed by the Finance Subcommittee and that the subcommittee report is sent to the City Council.

Councilmember Phan asked about using American Rescue Plan Act (ARPA) funding for some defunded positions.

Mayor Tran asked the City Manager to bring the list of positions back to next week's special meeting agenda item, to see what positions may be eligible for ARPA funding.

Motion: to adopt the following Resolutions**: Resolution No. 9074** a Joint Resolution of the City Council and Milpitas Housing Authority to approve the Fiscal Year 2021-22 Operating Budget the City of Milpitas and the Milpitas Housing Authority, approving the Appropriations Limit, Fiscal Policies and Budget Guidelines and authorizing various

financial actions by the City Manager, including approving and authorizing the execution of various contracts and payments over $100,000; **Resolution No. 9075** amending Resolution No. 1626, the Classification Plan, to authorize additional positions and amend budgeted allocated positions. **Resolution No. 9076** amending Resolution No. 1626, the Classification Plan, to adjust the hourly rate ranges for classifications due to a minimum wage increase pursuant to Ordinance No. 292; and **Resolution No. 9077** amending Resolution No. 1626, the Classification Plan, to adjust the Salary Schedules for all IAFF, Mid-CON, PROTECH, MEA, Miscellaneous Unrepresented and Fire Unrepresented Classifications.

Motion/Second: Mayor Tran / Councilmember Chua

Motion carried by a vote of: AYES: 5
NOES: 0

9. Ordinance - No. 227.8 Amending Chapter 215 (Regulation of Smoking in Certain Places)

Planning Director Thomas introduced this item. Principal Planner Lee presented the staff report.

Mayor Tran opened the public hearing.

The following spoke during Public Comment:

1. Voltaire Montemayor
2. Vanessa Marvin
3. Amandeep Banwait
4. Maanvi Thawani
5. Carol Baker

Mayor Tran closed the public hearing.

City Attorney read aloud title of **Ordinance No. 227.8**.

Motion: to waive the first reading beyond the title and introduce **Ordinance No. 227.8** amending Chapter 215, Title V of the Milpitas Municipal Code and making findings of CEQA exemption.

Motion/Second: Mayor Tran / Councilmember Dominguez

Motion carried by a vote of: AYES: 5
NOES: 0

COMMUNITY SERVICES & SUSTAINABLE INFRASTRUCTURE

10. Update on the Beautify Milpitas Program

Recreation and Community Services Director Lorentzen presented an update on the Beautify Milpitas Program.

Council requested that the Beautify Milpitas program be held monthly, include graffiti cleanup, participate in the National Cleanup day in September, and look at collaborating with schools to rotate the dumpster day around the City to bring it into the neighborhoods.

Mayor Tran requested a Neighborhood Beautification day update in August.

The following spoke during Public Comment:
1. Voltaire Montemayor

No motion was made.

PUBLIC SAFETY

11. Presentation of Police Department's Response to Mental Health Related Calls

Acting Police Chief Hernandez gave a presentation on the Police Department's response to mental health related calls.

The following spoke during Public Comment:

1. Voltaire Montemayor

Councilmember Dominguez requested 5150 W&I data updates every three months and would like staff to explore having a phone number for people experiencing mental health or substance abuse crises to call to get a referral for help.

Councilmember Chua requested a presentation on the Police Department's response to substance abuse.

No motion was made.

REPORTS OF MAYOR & COUNCILMEMBERS

12. Recommendations from Mayor Tran for Appointments for City Commissions

This item was postponed to the next meeting during the approval of the agenda and approved as follows.

Motion/Second: Mayor Tran / Vice Mayor Montano

Motion carried by a vote of: AYES: 5
NOES: 0

C13. List of Agenda Items Requested by City Councilmembers

Reviewed the list of items that have been requested by City Councilmembers at a Council meeting, or through the City Manager.

This item was moved onto the Consent Calendar and approved as follows.

Motion/Second: Mayor Tran / Councilmember Dominguez

Motion carried by a vote of: AYES: 5
NOES: 0

NEXT AGENDA PREVIEW

C14. Preview Agenda Items

Received a list of anticipated agenda items for the June 15, 2021, Regular City Council meeting.

This item was moved onto the Consent Calendar and approved as follows.

Motion/Second: Mayor Tran / Councilmember Dominguez

Motion carried by a vote of: AYES: 5
NOES: 0

ADJOURNMENT

Mayor Tran asked everyone to take a moment of silence to remember the people whose lives were lost in the VTA shooting. Mayor Tran adjourned the meeting at 11:14 PM.

Draft meeting minutes submitted by City Clerk, Wendy Wood

MEETING MINUTES
CITY OF MILPITAS

Minutes of:	**Special Meeting of the Milpitas City Council**
Date:	**Tuesday, June 8, 2021**
Time:	**5:30 PM Open Meeting**
Location:	**Meeting held via teleconference/zoom webinar online Milpitas, CA**

CALL TO ORDER

Mayor Tran called the virtual special City Council meeting to order at 5:30 PM. City Clerk Wood called the roll. The meeting took place via teleconference/zoom webinar.

PRESENT: Mayor Tran, Vice Mayor Montano, Councilmembers Chua, Dominguez, and Phan

ABSENT: None

PLEDGE

Mayor Tran led the Pledge of Allegiance.

PUBLIC FORUM

The following spoke during the public forum:
1. Voltaire Montemayor
2. Jackie Romero

ANNOUNCEMENTS & FUTURE AGENDA ITEMS

City Manager McHarris announced that the City is launching an International Trade and Commerce program this week with a focus on competing at home and abroad, developing trade and commerce, building business-to-business relationships, workforce development opportunities, and retaining and creating jobs. The first webinar will be on Thursday, June 10, from 10:00 to 11:00 AM and registration information is on the City's COVID-19 business resource webpage.

Mayor Tran thanked City staff and the organization for their work and wished Planning Commissioner Larry Ciardella a happy birthday. He also spoke about the Chief Fire Enforcement Officer position and asked if there was Council support to keep the position.

Councilmember Chua spoke about a webinar Kaiser hosted with 35 Spanish speaking mothers on vaccination hesitancy with COVID-19. She also announced that there will be another webinar in English on Wednesday, June 9, from 2:00 to 3:00 PM.

Councilmember Phan commented on the Chief Fire Enforcement Officer position and asked about discussing all the positions on the list from last week's meeting tonight.

Councilmember Dominguez made a request to proclaim August 21, 2021 as Yard Sale Day in the City of Milpitas, with no city staff work required.

Mayor Tran asked the City Attorney to review the request and provide legal advice to Council on the steps the City can take.

Vice Mayor Montano congratulated the Milpitas High School seniors, the Calaveras Hills High School seniors, and the Milpitas Unified School District Adult Education 2020-21 graduates.

ANNOUNCEMENT OF CONFLICT OF INTEREST AND CAMPAIGN CONTRIBUTIONS

City Attorney Diaz asked the Mayor and City Councilmembers if they had any personal conflicts of interest or reportable campaign contributions. By roll call, no conflicts of interest or contributions were reported.

CODE OF CONDUCT

City Attorney Diaz read aloud the City Council Code of Conduct.

APPROVAL OF AGENDA

Mayor Tran approved the June 8, 2021, Special Meeting agenda.

AGENDA ITEM

1. American Rescue Plan Act Update (ARPA) and Proposed Investment Framework and Preliminary Investment Plan

Assistant City Manager Kantak gave a presentation on the American Rescue Plan Act (ARPA), provided background information, a review of the State and Local fiscal recovery funds goals and uses, and an outline of the proposed ARPA preliminary investment plan.

The following spoke during public comment:

1. Warren Wettenstein
2. Drew Mitchell
3. Makiko Barrett
4. John Agg
5. Voltaire Montemayor
6. Kunal Khandwala
7. Inderjit Mundra
8. Rick Wakida
9. Lesley Makishima
10. Jackie Romero
11. Julie Carreira
12. Lisa Shenefiel
13. Michael Anderson

Mr. Wettenstein, President of the Milpitas Chamber of Commerce, stated that the money would help businesses, bring back the International Barbeque Festival, business workshops, and provide business assistance to get started. He stated that they could provide a defined plan on how the money would be allocated.

Kunal Khandwala, representative from the hospitality industry, provided additional information on the amount of money needed for the hotels.

Mayor Tran spoke about the Chief Fire Enforcement Officer position.

Councilmember Chua requested that the Rent and Mortgage Relief funding be extended over three years instead of two years, to allow more time to see if more funding will be available from the federal government.

Mayor Tran requested that Council consider a minimum one year of funding for the Chief Fire Enforcement Officer position through the ARPA funds.

Vice Mayor Montano requested the following adjustments:

1. Low and Moderate-Income Assistance line item increase from $300,000 to $500,000;
2. Rent and Mortgage Relief line item increase from $1,200,000 to 1,500,000;
3. Accessory Dwelling Unit (ADU) Program line item reduce from $1,500,000 to $1,000,000; and
4. Workforce Development line item increase from $270,000 to $300,000 with funding taken from the ADU Program line item and include a summer youth job program for low-income households.

Council discussed removing the Curbside Trash Pickup Pilot Program line item and after further discussion, Council decided to leave it on the list for funding.

Councilmember Dominguez requested a decrease in the HR/Financial Management System line item by $230,000 and use that funding to increase the Workforce Development program line item, to $500,000.

Mayor Tran proposed decreasing the funding of the HR/Financial Management System line item to $2 million.

Councilmember Dominguez requested that the $1 million funding decrease from the HR/Financial Management System line item be used to increase the Social Services line item from 500,00 to $800,000.

Vice Mayor Montano commented on reducing the HR/Financial Management System line item to $2 million and requested that $200,000 of that money go to the Low and Moderate-Income Assistance line item, to increase it from $300,000 to $500,000.

Councilmember Chua stated that she did not want to reduce the ADU Program line item.

Councilmember Phan proposed splitting up the funding years so the Fire Inspector position is defunded for one fiscal year and the Chief Fire Enforcement Officer position would be funded for one fiscal year.

Mayor Tran polled the Council on the proposal and by roll call, the votes were as follows:

AYES: 1 (Phan)
NOES: 3 (Chua, Montano, Tran)
ABSTAIN: 1 (Dominguez)

Mayor Tran stated there was consensus from the Council for funding line item three the Low and Moderate-Income Assistance program, decreasing the funding of the HR/Financial Management System line item from $3 million to $2 million, and increasing funding for workforce development.

After discussion, Mayor Tran asked if there was a consensus from the Council to fund everything as proposed by staff and use the $1 million requested to be taken out of the HR/Financial Management System line item for the items Councilmembers would like to increase. There being no objections, he directed staff to move forward with the recommendations with the change to move the HR line item from $3 million to $2 million to free up $1 million for discussion at the next meeting. He stated that Councilmember's requests for increased funding for certain line items will be discussed at the next meeting or a special meeting.

Motion: to adjourn the meeting

Motion/Second: Mayor Tran / Vice Mayor Montano

Motion carried by a vote of: AYES: 5
NOES: 0

ADJOURNMENT

Mayor Tran adjourned the special City Council meeting at 9:26 PM.

Draft meeting minutes submitted by City Clerk, Wendy Wood

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Waive the Second Reading and Adopt Ordinance No. 227.8 Amending Chapter 215 (Regulation of Smoking in Certain Places), Title V (Public Health, Safety and Welfare), of the Milpitas Municipal Code Relating to Prohibiting Smoking in Multi-Unit Housing and Certain Outdoor Areas**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	**Ned Thomas, Director of Planning (408) 586-3273**
Recommendation:	Move to waive the second reading and adopt Ordinance No. 227.8 amending Chapter 215, Title V of the Milpitas Municipal Code relating to prohibiting smoking in multi-unit housing and certain outdoor areas.

Background:
Ordinance No. 227.8 amending Chapter 215, Title V of the Milpitas Municipal Code was introduced at the June 1, 2021 City Council meeting. This Ordinance is now ready for its second reading and adoption.

Fiscal Impact:
There is no fiscal impact.

Environmental Review:
The Ordinance is not a project under the requirements of the California Environmental Quality Act (CEQA) and the CEQA Guidelines because it has no potential for resulting in either a direct or reasonably foreseeable indirect change in the environment. If the Ordinance is found to be a project under CEQA, the action being considered is exempt from environmental review pursuant to CEQA Guidelines Section 15061(b)(3) in that the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. The Ordinance, which would prohibit smoking in multi-unit housing and certain outdoor areas, would have no or only a de minimis impact on the environment.

Recommendations:
Move to waive the second reading and adopt Ordinance No. 227.8 amending Chapter 215, Title V of the Milpitas Municipal Code relating to prohibiting smoking in multi-unit housing and certain outdoor areas.

Attachment:
Ordinance No. 227.8

REGULAR

NUMBER: **227.8**

TITLE: **AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MILPITAS AMENDING CHAPTER 215 OF TITLE V OF THE MILPITAS MUNICIPAL CODE RELATING TO PROHIBITING SMOKING IN MULTI-UNIT HOUSING AND CERTAIN OUTDOOR AREAS**

HISTORY: This Ordinance was introduced (first reading) by the City Council at its meeting of June 1, 2021, upon motion by Mayor Tran and was adopted (second reading) by the City Council at its meeting of _____, upon motion by _____. The Ordinance was duly passed and ordered published in accordance with law by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

RECITALS AND FINDINGS:

WHEREAS, the City of Milpitas (the "City") is a municipal corporation, duly organized under the constitution and laws of the State of California; and

WHEREAS, the U.S. Surgeon General has concluded that there is no risk-free level of exposure to secondhand smoke and the California Air Resources Board identified secondhand smoke as a toxic air contaminant for which there is no safe level of exposure; and

WHEREAS, secondhand smoke is responsible for an estimated 34,000 heart disease–related and 7,300 lung cancer–related deaths among adult nonsmokers each year; and

WHEREAS, in children, secondhand smoke causes ear infections, more frequent and severe asthma attacks, respiratory infections, and increases the risk of Sudden Infant Death Syndrome (SIDS); and

WHEREAS, exposure to electronic smoking device aerosol has immediate impacts on the human respiratory and cardiovascular system and poses a risk to human health; and

WHEREAS, secondhand cannabis smoke has been identified as a health hazard; the California Environmental Protection Agency includes cannabis smoking on the Proposition 65 list of chemicals known to the state to cause cancer; and

WHEREAS, studies have shown that exposure to secondhand smoke outdoors can reach levels attained indoors depending on the amount of wind and number and proximity of smokers; and

WHEREAS, research demonstrates that secondhand smoke in multi-unit housing can and does transfer between units, creeping under doorways and through wall cracks; and

WHEREAS, according to the County of Santa Clara, close to one-third (29%) of adults who live in multi-unit housing in the County reported smelling tobacco smoke drifting into their home in the previous week. The rate of secondhand smoke exposure was higher among those with less than a high school diploma (38%) and adults with household incomes less than $15,000 (36%); and

WHEREAS, harmful residues from tobacco smoke can be absorbed by and cling to virtually all indoor surfaces long after smoking has stopped and then be emitted back into the air, making this "thirdhand smoke" a potential health hazard; and

WHEREAS, California cities and counties have the legal authority to adopt local laws that prohibit all tobacco use indoors and outdoors in areas not already covered by state law; and

WHEREAS, state law allows local governments to adopt ordinances that permit residential rental agreements to prohibit smoking tobacco products within rental units; and

WHEREAS, state law prohibits smoking within 25 feet of playgrounds as well as within 20 feet of government buildings and expressly authorizes local communities to enact additional restrictions; and

WHEREAS, the City of Milpitas currently prohibits smoking in recreational areas; outdoor dining areas; and within 25 feet of government buildings; and

WHEREAS, to provide for the public health, safety, and welfare by discouraging the inherently dangerous behavior of smoking around non-tobacco users, especially children, to protect the public from exposure to secondhand smoke where they live, work, and play, and to protect the public from nonconsensual exposure to secondhand smoke in and around their homes, the City desires to amend and add new sections to Chapter 215 of Title V of the Milpitas Municipal Code relating to smoking within multi-unit housing, public places, service areas, and outdoor dining areas.

NOW, THEREFORE, the City Council of the City of Milpitas does ordain as follows:

SECTION 1. RECORD AND BASIS FOR ACTION

The City Council has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to the City Council. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

SECTION 2. AMENDMENT OF MILPITAS MUNICIPAL CODE TITLE V, CHAPTER 215

Chapter 215 (Regulation of Smoking in Certain Places) of Title V of the Milpitas Municipal Code is hereby amended to read as follows:

Chapter 215 - REGULATION OF SMOKING IN CERTAIN PLACES

V-215-1.10 Purpose

The City Council of the City of Milpitas recognizes the right and need of those who wish to breathe fresh air. In order to serve the public health, safety and general welfare, the purpose of this Chapter is to prohibit smoking in the areas defined herein with some exceptions. The City Council hereby adopts and incorporates as if set out at length herein, California Labor Code Section 6404.5, California Health and Safety Code Sections 104495 and 114371; and California Government Code Sections 7596-7598, as now written and as amended from time to time. A copy of these laws shall be available for inspection during regular business hours in the office of the City Clerk.

V-215-1.15 Definitions

The following words and phrases, whenever used in this Chapter, shall be construed as defined in this Section:

(a) “Common area” shall mean every enclosed area or unenclosed area of a multi-unit residence that residents of more than one unit are entitled to enter or use, including, but not limited to, halls, pathways, lobbies, courtyards, elevators, stairs, community rooms, playgrounds, gym facilities, swimming pools, parking garages, parking lots, grassy or landscaped areas, restrooms, laundry rooms, cooking areas, and eating areas.

(b) "Electronic smoking device" shall mean an electronic and/or battery-operated device, which can be used to deliver any aerosolized or vaporized substance to the person inhaling from the device. "Electronic smoking device" includes but is not limited to any such electronic smoking devices, whether manufactured, distributed, marketed, or sold as an electronic cigarette, an electronic cigar, an electronic cigarillo, an electronic pipe, an electronic hookah, vape pen, or any other product name or descriptor.

(c) “Enclosed area” shall mean all space between a floor and a ceiling that is bounded by walls, doorways, or windows, whether open or closed, covering more than 50 percent of the combined surface area of the vertical planes constituting the perimeter of the area. A wall includes any retractable divider, garage door, or other physical barrier, whether temporary or permanent.

(d) “Landlord” shall mean any person or agent of a person who owns, manages, or is otherwise legally responsible for a unit in a multi-unit residence that is leased to a residential tenant. For purposes of this Chapter, a tenant who sublets a unit (e.g., a sublessor) is not a landlord.

(e) “Multi-unit residence” shall mean property containing two or more attached units, including, but not limited to, apartment buildings, condominiums, duplexes and triplexes, senior and assisted living facilities, and long-term health care facilities. Multi-unit residences do not include the following:

1. a hotel or motel that meets the requirements of California Civil Code Section 1940(b)(2);
2. a mobile home park;
3. a campground;
4. a marina or port;
5. a single-family home, except if used as a health care facility subject to licensing requirements; and
6. a single-family home with a with a detached or attached accessory dwelling unit or second unit permitted pursuant to California Government Code Sections 65852.1, 65852.150, 65852.2, or an

ordinance of the City adopted pursuant to those sections, except if the single-family home or accessory dwelling unit/second unit is used as a health care facility subject to licensing requirements.

(f) "Nonsmoking area" shall mean any area in which smoking is prohibited by

1. this Chapter or other law;
2. binding agreement relating to the ownership, occupancy, or use of real property; or
3. a person with legal control over the area.

(g) "Outdoor dining area" shall mean any privately owned or publicly owned area, street, or sidewalk, which is available or customarily used by the general public and which is designed, established, or regularly used for consuming food or drink.

(h) "Person" shall mean any natural person, partnership, cooperative association, corporation, personal representative, receiver, trustee, assignee, or any other legal entity, including government agencies.

(i) "Place of employment" shall mean any area under the legal or de facto control of an employer that an employee or the general public may have cause to enter in the normal course of the operations, regardless of the hours of operations.

(j) "Public place" shall mean any place, publicly or privately owned, which is open to the general public regardless of any fee or age requirement.

(k) "Reasonable distance" shall mean a distance of 25 feet in any direction from an area in which smoking is prohibited.

(l) "Recreational area" shall mean any outdoor area, including streets and sidewalks adjacent to recreational areas, owned or operated by the City of Milpitas and open to the general public for recreational purposes, regardless of any fee or age requirement. The term "recreational area" includes, but is not limited to parks, picnic areas, playgrounds, sports fields, walking paths, gardens, hiking trails, bike paths, horseback riding trails, swimming pools, skateboard parks, and bleacher areas, spectator seating areas, concession stands, parking lots or other areas designated or primarily used for parking vehicles of persons accessing a recreational area.

(m) "Service area" shall mean any publicly or privately owned area, including streets and sidewalks, that is designed to be used or is regularly used by one or more persons to receive a service, wait to receive a service, or to make a transaction, whether or not such service or transaction includes the exchange of money. The term "service area" includes, but is not limited to, areas including or adjacent to information kiosks, automatic teller machines (ATMs), ticket lines, bus stops or shelters, mobile vendor lines, or cab stands.

(n) "Smoke" shall mean the gases, particles, or vapors released into the air as a result of combustion, electrical ignition, or vaporization, when the apparent or usual purpose of the combustion, electrical ignition, or vaporization is human inhalation of the byproducts. The term "smoke" includes, but is not limited to tobacco smoke, electronic smoking device vapors, and marijuana smoke.

(o) "Smoking" shall mean:

1. inhaling, exhaling, or burning, any tobacco, nicotine, cannabis, or plant product, whether natural or synthetic, including a pipe, cigar, cigarillo, hookah water pipe, or cigarette of any kind;
2. carrying any lighted, heated, or activated tobacco, nicotine, marijuana, or plant product, whether natural or synthetic, intended for inhalation; or
3. using an electronic smoking device.

(p) "Unenclosed Area" shall mean any area that is not an enclosed area.

(q) "Unit" shall mean a personal dwelling space, even where lacking cooking facilities or private plumbing facilities, and includes any associated exclusive-use enclosed area or unenclosed area, such as, for example, a private balcony, porch, deck, or patio. "Unit" includes, without limitation, an apartment; a condominium; a townhouse; a room in a senior facility; a room in a long-term health care facility, assisted living facility, community care facility, or hospital; a room in a hotel or motel; a dormitory room; a room in a single-room occupancy facility; a room in a homeless shelter; a mobile home; a camper vehicle or tent; a single-family home; and an accessory dwelling unit or second unit.

V-215-1.20 Smoking Prohibited

(a) Smoking is prohibited in the enclosed areas of the following places within the City:

1. Places of employment; and
2. Public places

(b) Smoking is prohibited in the unenclosed areas of the following places within the City:

1. Recreational areas;
2. Outdoor dining areas;
3. Service areas; and
4. Public places, when being used for a public event, including a farmer's market, parade, craft fair, or any event which may be open to or attended by the general public, provided that smoking is permitted on streets and sidewalks being used in a traditional capacity as pedestrian or vehicular thoroughfares, unless otherwise prohibited by this Chapter or other law.

(c) Reasonable Distance Required for Smoking.

1. Smoking is prohibited within a reasonable distance of entrances, exits, open windows, and ventilation intake systems into an enclosed area in which smoking is prohibited under Section V-215-1.20(a), except while actively passing on the way to another destination and provided smoke does not enter any area in which smoking is prohibited.
2. Smoking in all unenclosed areas is prohibited within a reasonable distance from any unenclosed areas in which smoking is prohibited under Section V-215-1.20(b), except while actively passing on the way to another destination and provided smoke does not enter any area in which smoking is prohibited.
3. The smoking prohibitions in Section V-215-1.20(c)(2) shall not apply to unenclosed areas on private residential properties that are not multi-unit residences.

(d) Nothing in this Chapter shall be construed to prohibit smoking in any area in which such smoking is already prohibited by State or federal law unless the applicable State or federal law does not preempt additional local regulation.

(e) No person shall dispose of used smoking waste within the boundaries of an area in which smoking is prohibited by this Chapter.

V-215-1.25 Smoking—Optional Areas

Notwithstanding any other provisions of this Chapter to the contrary, the following areas shall not be subject to the smoking restrictions of this Chapter:

(a) On-stage smoking as part of a stage production, or similar exhibition in a public facility.

(b) Any public area where smoking is permitted or is not otherwise prohibited by this Chapter.

(c) A private residence that is not a multi-unit residence.

V-215-1.30 Smoking in Multi-Unit Housing

(a) Beginning January 1, 2022, no person shall smoke inside any new or existing unit of a multi-unit residence, in any enclosed or unenclosed common area of a multi-unit residence, or within a reasonable distance of any operable doorway, window, opening, or vent of a multi-unit residence.

(b) Smoking is prohibited in multi-unit residences as provided in subsection (a) of this Section, except that a person with legal control over a common area, or authorized representative, may designate a portion of the common area as a designated smoking area; provided, that at all times the designated smoking area complies with subsection (c) of this Section.

(c) Designated smoking areas in multi-unit residences. A designated smoking area shall:

1. Be an unenclosed area;
2. Be a reasonable distance from unenclosed areas primarily used by children and unenclosed areas with improvements that facilitate physical activity including, for example, playgrounds, tennis courts, swimming pools, and school campuses;
3. Be a reasonable distance in any direction from any operable doorway, window, opening or other vent into an enclosed area that is located at the multi-unit residence and is a nonsmoking area;
4. Have a clearly marked perimeter;
5. Have receptacles designed for and primarily used for disposal of tobacco waste and that are maintained free of tobacco-related litter including, but not limited to, cigarette butts; and
6. Be identified by conspicuous signs.

(d) Smoking and the use of electronic smoking devices is prohibited in adjacent unenclosed property within a reasonable distance in any direction of any doorway, window, opening, or other vent into an enclosed area of a multi-unit residence.

(e) Common Areas Free from Smoking Waste. Persons with legal control over common areas in multi-unit residences, and their authorized representatives, shall ensure that all common areas except those meeting the requirements of subsection (c) of this Section remain free of smoking and tobacco waste, and ash trays, ash cans, or other receptacles designed for or primarily used for disposal of smoking and tobacco waste.

(f) Signage. “No Smoking” signs shall be posted as required by Section V-215-1.35 of this Chapter, but are not required inside any unit of a multi-unit residence. Signs shall be maintained by the person or persons with legal control over the common areas or the authorized representative of such person.

(g) Lease Terms. Every lease or other rental agreement for the occupancy of a new or existing unit in a multi-unit residence entered into, renewed, or continued month-to-month after January 1, 2022 shall include the following:

1. A clause providing that it is a material breach of the agreement to smoke or allow smoking:
   i. in the unit, including exclusive-use areas such as balconies, porches, or patios; and
   ii. in any common area of the multi-unit residence other than a designated smoking area.
2. A description of and/or image depicting the location(s) of any designated smoking area(s) on the property, if any.
3. A clause expressly conveying third-party beneficiary status to all occupants of the multi-unit residence as to the smoking provisions of the lease or other rental agreement. Such a clause shall provide that any tenant of the multi-unit residence may sue another tenant/owner to enforce the smoking provisions of the agreement but that no tenant shall have the right to evict another tenant for a breach of the smoking provisions of the agreement.

(h) Whether or not a landlord complies with subsection (g) of this Section, the clauses required by that subsection shall be implied and incorporated by law into every agreement to which subsection (g) of this Section applies and shall become effective as of the earliest possible date on which the landlord could have made the insertions pursuant to subsection (g) of this Section.

(i) This Chapter shall not create additional liability for a landlord to any person for a tenant’s breach of any smoking provision in a lease or other rental agreement for the occupancy of a unit in a multi-unit residence if the landlord has fully complied with the provisions of this Chapter, except as otherwise allowed by applicable State law.

(j) Failure to enforce any smoking provision required by this Chapter shall not affect the right to enforce such provision in the future, nor shall a waiver of any breach constitute a waiver of any subsequent breach or a waiver of the provision itself.

V-215-1.35 Posting of Signs

"Smoking" or "No Smoking" signs, whichever are appropriate, with letters of not less than one inch in height, or the international "No Smoking" symbol (consisting of a pictorial representation of a burning cigarette enclosed in a red circle with a red bar across it) shall be clearly, sufficiently, and conspicuously posted in or outside of every building or other place where smoking is controlled by this Chapter, by the owner, operator, manager, or other person having control

of such building or other place. When a sign is posed on the exterior of a building to indicate "No Smoking," it shall include the distance limitations contained in this Chapter. Signs are not required inside any unit of a multi-unit residence. Notwithstanding this provision, the presence or absence of signs shall not be a defense to a charge of smoking in violation of any provision of this Chapter.

V-215-1.40 Inspection

The City Manager, or his or her designee(s), shall have the authority to enforce the provisions of this Chapter. Such enforcement shall include the right to enter places of employment or any playground or sports facility, as defined in California Labor Code Section 6404.5~~,~~ and California Health and Safety Code, Section 104495~~,~~ at any time a City owned and/or operated facility is open to the public, or during regular business hours for the purpose of making reasonable inspections to observe and enforce compliance with this Chapter.

V-215-1.45 Penalty

(a) In addition to any other remedy available at law, the City may enforce any violation of this Chapter pursuant to Section I-1-4.09 of the Milpitas Municipal Code or by administrative citation pursuant to Title I, Chapter 21 of the Milpitas Municipal Code.

(b) Each instance of smoking in violation of this Chapter shall constitute a separate violation. For violations other than smoking, each day of a continuing violation of this Chapter shall constitute a separate violation.

(c) Any violation of this Chapter is hereby declared to be a public nuisance.

(d) In addition to other remedies provided by this Chapter or otherwise available at law or in equity, any violation of this Chapter may be remedied by a civil action brought by the City Attorney, including, without limitation, administrative or judicial nuisance abatement proceedings, civil code enforcement proceedings, and suits for injunctive relief.

(e) Any person may bring a civil action to enforce this Chapter to prevent future violations and may sue to recover actual or statutory damages, including court costs, and attorney fees.

(f) Owners, operators, property managers, and officers of homeowners' associations for residential properties, whether rental or owner-occupied, are required to post signs in accordance with Section V-215-1.35 and provide notice to residents or tenants of the requirements of this Chapter. Owners, operators, and property managers of rental property must include the requirements of Section V-215-1.30 in the lease or other rental agreement. If the owners, operators, property managers, and officers of rental property and homeowners' associations for residential properties have satisfied these requirements, they shall not be responsible for violations of the requirements of this Chapter by tenants or residents, or guests of tenants or residents.

(g) An owner, operator, or manager ("owner") of a commercial establishment shall not be responsible for violations of this Chapter within an area under the owner's control, by a patron or other member of the public ("patron"); provided, that the owner:

1. Has posted signs in accordance with this Chapter; and
2. Has verbally asked the patron not to smoke.

This limitation shall not limit the liability of an employer for the actions of employees in places of employment, or any other violation of this Chapter by the employer.

V-215-1.150 Nonretaliation

No person or employer shall discharge, refuse to hire on, or in any manner retaliate against any employee or applicant for employment because such employee or applicant makes a complaint regarding violation of this Chapter or exercises any rights granted to him or her under this Chapter. No person or landlord shall terminate a tenancy, or modify the terms of a tenancy, or in any manner retaliate against any tenant because such tenant makes a complaint regarding violation of this Chapter or exercises any rights granted to him or her under this Chapter.

SECTION 3. CEQA

The City Council finds, pursuant to Title 14 of the California Code of Regulations, Section 15061(b)(3), that this Ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a Project which has the potential for causing a significant effect on the environment.

SECTION 4. SEVERABILITY

The provisions of this Ordinance are separable, and the invalidity of any phrase, clause, provision or part shall not affect the validity of the remainder.

SECTION 5. EFFECTIVE DATE AND POSTING

In accordance with Section 36937 of the Government Code of the State of California, this Ordinance shall take effect thirty (30) days from and after the date of its passage. However, Section V-215-1.30 shall not become operative until January 1, 2022. The City Clerk of the City of Milpitas shall cause this Ordinance or a summary thereof to be published in accordance with Section 36933 of the Government Code of the State of California.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue, Tract 10324 by Lennar Homes of California and LMC Milpitas Holdings I, LLC, and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period.**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, 408-586-3301
Recommendation:	Adopt a Resolution granting acceptance of public improvements for the 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue, Tract 10324, Public Improvement Plan 2-1202; and Approving a reduction in the faithful performance bonds to $109,785 and $115,255, respectively, which shall be subject and in effect for the duration of a one-year warranty period; and Grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Background:
On May 17, 2016, the City Council adopted a resolution annexing certain real property into Community Facilities District No. 2008-1, and approved the Subdivision Improvement Agreement ("Agreement"), and the Final Map for Tract 10324 for the 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue by Lennar Homes of California and LMC Milpitas Holdings I, LLC ("Developer").

As part of project construction, the Developer constructed public improvements that included public parks, Montague Expressway and Capitol Avenue frontage improvements, utility connections, installation of a new recycled water pipeline along Great Mall Parkway and Capitol Avenue, installation of a new potable water pipeline along Montague Expressway, public sidewalks, asphalt roadway pavement, landscaping, street lighting, and miscellaneous other items of work.

Analysis:
The public improvement work has been successfully completed and inspected in accordance with the approved plans and specifications, and the work is ready for acceptance and commencement of the 1-year warranty period. Staff recommends the City Council adopt a resolution to accept the public improvements, and to reduce the performance bonds to $109,785 and $155,255, respectively, which is 10% of the security's original value, and authorize to the City Engineer to release the performance bond after the one-year warranty period once all required warranty work is satisfactorily completed.

Policy Alternatives:
Alternative 1:
Do not approve resolution granting acceptance of installed public improvements.

Pros: None

Cons: The Subdivision Improvement Agreement between the City and Developer requires the City to accept successfully installed pubic improvements that have passed inspection and meet the requirements of the Agreement and the approved plans and specifications. Not accepting the completed public improvements as required by the Subdivision Improvement Agreement would delay the project and may subject the City to a claim by the Developer.

Reason not recommended: Granting acceptance of installed public improvements would allow the City to own and maintain the improvements and would ensure the City is in compliance with the terms of the agreement with the Developer.

Fiscal Impact:
The public improvements have been constructed by the Developer as a requirement of the Subdivision Improvement Agreement. The City will have perpetual maintenance responsibilities for the improvements following completion of the 1-year warranty period.

California Environmental Quality Act:
Granting acceptance of public improvements and reducing faithful performance bond for public improvements are not considered projects under CEQA as there will be no direct or reasonably foreseeable indirect physical change in the environment.

Recommendation:
1. Adopt a Resolution granting acceptance of public improvements for the 450 Montague Residential Project located at 450 Montague Expressway and 620 E. Capitol Avenue, Tract 10324, Public Improvement Plan 2-1202; and

2. Approving a reduction in the faithful performance bonds to $109,785 and $115,255, respectively, which shall be subject and in effect for the duration of a one-year warranty period; and

3. Grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Attachments:
Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING ACCEPTANCE AND REDUCING PERFORMANCE BONDS OF 450 MONTAGUE RESIDENTIAL PROJECT, TRACT 10324 AND GRANTING AUTHORIZATION TO THE CITY ENGINEER TO RELEASE THE PERFORMANCE BONDS AFTER THE ONE-YEAR WARRANTY PERIOD

WHEREAS, the City Council of the City of Milpitas on June 21, 2016 approved the plans and specifications for the 450 Montague Residential Project, Tract No. 10324, (the "Project") to be completed by Lennar Homes of America and LMC Milpitas Holdings I, LLC as part of its residential development on 450 Montague Expressway and 620 E. Capitol Avenue; and

WHEREAS, the City of Milpitas has heretofore entered into a subdivision improvement agreement on June 21, 2016 with by Lennar Homes of America and LMC Milpitas Holdings I, LLC; and

WHEREAS, by Lennar Homes of California and LMC Milpitas Holdings I, LLC, as Principal, and Liberty Mutual Insurance Company, as Surety, executed and posted certain Performance Bonds Nos. 024067269 and 024067272, respectively, conditioned upon the faithful performance of the provisions of said subdivision improvement agreement and upon the faithful performance of all improvement work required thereunder; and

WHEREAS, said public improvements for the 450 Montague Residential Project have been completed and the subdivision improvement agreement provides that the security shall extend for a period of one year after the date of acceptance of said improvements to cover the warranty period of said improvements under said agreement; and

WHEREAS, the City Council is willing to consent to a reduction in the penal sum of said security during said one year warranty period; and

WHEREAS, the City Engineer of the City of Milpitas has made a final inspection of said improvements for the 450 Montague Residential Project and recommends that the City Council of the City of Milpitas accept the same as constructed in accordance with the approved plans and specifications.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.
2. Those certain public improvements constructed as part of the 450 Montague Residential Project, Tract No. 10324, are hereby accepted as constructed in accordance with the approved plans and specifications upon recommendation of the City Engineer of the City of Milpitas.
3. The penal sum of the faithful performance bonds securing said improvements may be reduced to the sum of $109,785 and $115,255 respectively, upon request of Principal and Surety, with said penal sum as reduced to apply from the date of completion and acceptance of said improvements and to extend for the balance of the term of one year of said security. Provided, however, that nothing herein contained shall in any way be deemed to be a waiver, release or relinquish by City of any obligations imposed upon the developer or his surety, or sureties, by law or by the above referend public improvement agreement, save and except as expressly set forth herein.
4. The City Council grants authorization to the City Engineer to release the performance bond after the one-year warranty period without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

_____
Wendy Wood, City Clerk

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for the Metro Subdivision located at 1425 South Milpitas Boulevard, Tract 10349 by Pulte Home Corporation, and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period.**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, 408-586-3301
Recommendation:	1. Grant acceptance of public improvements for the Metro Subdivision located at 1425 South Milpitas Boulevard, Tract 10349 by Pulte Home Corporation, Public Improvement Plan 2-1183 and 2-1164; and 2. Approve a reduction in the faithful performance bond to $79,250, which shall be subject and in effect for the duration of a one-year warranty period; and 3. Grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Background:
On September 6, 2016, the City Council approved the Final Map and the Subdivision Improvement Agreement ("Agreement") for Tract 10349 for Metro Subdivision located at 1425 South Milpitas Boulevard by Pulte Home Corporation ("Developer"). The Developer was conditioned to complete certain public improvements as part of the project.

Public improvements constructed along portions of South Milpitas Boulevard, Gardens Street, and Merry Loop included sidewalk, curb and gutter, curb ramps, median island, pavement, utility services, traffic signal, streetlights, utility relocation and undergrounding, landscaping, and other miscellaneous items of work.

Analysis:
The public improvement work has been successfully completed in accordance with the approved plans, and specifications, and the work is ready for acceptance and commencement of the 1-year warranty period. Staff recommends the City Council adopt a resolution to accept the public improvements, reduce the performance bond to $79,250.00, which is 10% of the security's original value, and authorize to the City Engineer to release the performance bond after the one-year warranty period once all required warranty work is satisfactorily completed.

Policy Alternatives:
Alternative 1:
Do not approve resolution granting acceptance of installed public improvements.

Pros: None

Cons: The Subdivision Improvement Agreement between the City and Developer requires the City to accept successfully installed pubic improvements that have passed inspection and meet the requirements of the Agreement and the approved plans and specifications. Not accepting the completed public improvements as

required by the Subdivision Improvement Agreement would delay the project and may subject the City to a claim by the Developer.

Reason not recommended: Granting acceptance of installed public improvements would allow the City to own and maintain the improvements and would ensure the City is in compliance with the terms of the agreement with the Developer.

Fiscal Impact:
The public improvements have been constructed by the Developer as a requirement of the Subdivision Improvement Agreement. The City will have perpetual maintenance responsibilities for the improvements following completion of the 1-year warranty period.
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California Environmental Quality Act:
Granting acceptance of public improvements and reducing faithful performance bond for public improvements are not considered projects under CEQA as there will be no direct or reasonably foreseeable indirect physical change in the environment.

Recommendation:
1. Grant acceptance of public improvements for the Metro Subdivision located at 1425 South Milpitas Boulevard, Tract 10349, Public Improvement Plan 2-1183 and 2-1164; and
2. Approve a reduction in the faithful performance bond to $79,250.00, which shall be subject and in effect for the duration of a one-year warranty period; and
3. Grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Attachments:
Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING ACCEPTANCE AND REDUCING PERFORMANCE BOND OF METRO SUBDIVISION, TRACT 10349 AND GRANTING AUTHORIZATION TO THE CITY ENGINEER TO RELEASE THE PERFORMANCE BOND AFTER THE ONE-YEAR WARRANTY PERIOD

WHEREAS, the City Council of the City of Milpitas on April 8th, 2016 approved the plans and specifications for the Metro Subdivision, Tract No. 10349, (the "Project") to be completed by Pulte Home Corporation as part of its residential development on 1425 South Milpitas Boulevard; and

WHEREAS, the City of Milpitas has heretofore entered into a subdivision improvement agreement on September 6th, 2016 with Pulte Home Corporation, for the Metro Subdivision; and

WHEREAS, Pulte Home Corporation, as Principal, and Berkley Insurance Company, as Surety, executed and posted a certain Performance Bond Numbers 0192520, 0192521, 0192522 and 0202133 conditioned upon the faithful performance of the provisions of said subdivision improvement agreement and upon the faithful performance of all improvement work required thereunder; and

WHEREAS, said public improvements for the Metro Subdivision have been completed and the subdivision improvement agreement provides that the security shall extend for a period of one year after the date of acceptance of said improvements to cover the warranty period of said improvements under said agreement; and

WHEREAS, the City Council is willing to consent to a reduction in the penal sum of said security during said one year warranty period; and

WHEREAS, the City Engineer of the City of Milpitas has made a final inspection of said improvements for the Metro Subdivision and recommends that the City Council of the City of Milpitas accept the same as constructed in accordance with the approved plans and specifications.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. Those certain public improvements constructed as part of the Metro Subdivision, Tract No. 10349, are hereby accepted as constructed in accordance with the approved plans and specifications upon recommendation of the City Engineer of the City of Milpitas.

3. The penal sum of the faithful performance bond securing said improvements may be reduced to the sum of $79,250.00, upon request of Principal and Surety, with said penal sum as reduced to apply from the date of completion and acceptance of said improvements and to extend for the balance of the term of one year of said security. Provided, however, that nothing herein contained shall in any way be deemed to be a waiver, release or relinquish by City of any obligations imposed upon the developer or his surety, or sureties, by law or by the above referend public improvement agreement, save and except as expressly set forth herein.

4. The City Council grants authorization to the City Engineer to release the performance bond after the one-year warranty period without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____

Wendy Wood, City Clerk

APPROVED:

_____

Rich Tran, Mayor

APPROVED AS TO FORM:

_____

Christopher J. Diaz, City Attorney

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Adopt a Resolution Authorizing the Continued Participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Sharon Goei, Building Safety and Housing Director, 408-586-3260
Recommendations:	(1) Adopt a Resolution authorizing the continued participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority; and (2) authorize the City Manager, or designee, to execute any documents necessary to continue participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority program.

Background:
California Vehicle Code Sections 9250.7 and 22710 provide for the establishment of a service authority for abandoned vehicle abatement and the imposition of a $1 service fee on vehicle registration fees in a County, if the County Board of Supervisors, and the majority of the jurisdictions within the County, adopt resolutions supporting such action.

Since the inception of the Santa Clara County Abandoned Vehicle Abatement Service Authority (AVASA) in 1992, the City of Milpitas has been a member agency. In August of 2011, the City Council adopted Resolution No. 8109 approving the City's continued participation in the AVASA program and the imposition of the $1 vehicle registration fee. Pursuant to the Vehicle Code, the imposition of the vehicle registration fee was limited to a period of 10 years and is set to expire on April 30, 2022. The Vehicle Code permits the vehicle registration fee to be extended in 10-year increments, if the County Board of Supervisors, by a two-thirds vote, and a majority of the cities having a majority of the incorporated population within the County, adopt resolutions providing for the extension of the fee.

Analysis
The Santa Clara County AVASA is a Joint Powers Authority. The Department of Motor Vehicles collects a $1 fee from every vehicle being registered or renewing registration on a countywide basis. If the City Council votes to continue the City's participation in the AVASA program, the City will be able to request reimbursements for their efforts in abating abandoned vehicles. If the City decides not to participate in the AVASA program, it will not be eligible for reimbursements, however, the $1 fee will still be collected from residents living in Milpitas.

One consideration for the continued participation in the AVASA program is that it enables the City to receive reimbursements that help offset City staff costs to abate vehicles. There are staff members in the Police Department as well as the Code Enforcement team from the Building Safety and Housing Department that directly handle vehicle abatement and AVASA reporting. Should the City decide to decommit from the AVASA program, the City will continue to abate abandoned vehicles, but at the City's own expense. By continuing its participation in the AVASA program, the City will minimize the fiscal impact of the staff time incurred to abate abandoned vehicles.

From FY 2011-2020, the City has collected $575,411.87 in reimbursements from the program. During that same time, the AVASA program abated 5,515 vehicles from the City. Since 2011, the trend in both

reimbursement funding and the number of abated vehicles has grown, suggesting a need to continue participation in the program. It should also be noted that every jurisdiction in Santa Clara County will continue on as a member agency in the AVASA program.

The new 10-year program will begin on May 1, 2022 and will sunset on April 30, 2032, unless extended again in 2031. The State of California's Controller's Office will require all certified resolutions submitted to its office by August 1, 2021 to ensure a seamless continuation of the program, without a lapse in reimbursement funding. A copy of the draft resolution that authorizes the City's continued participation in the AVASA program and the imposition of the $1 vehicle registration fee is available as Attachment to this report. Staff recommends that Council adopt the resolution to continue the City's participation in the AVASA program.

Policy Alternative:
Alternative: Do not authorize participation in the Abandoned Vehicle Abatement Service Authority Program.

Pros: None.
Cons: City will not be able to receive reimbursement of costs for abating abandoned vehicles.

Reason for no Recommending: If the City decides not to participate in the AVASA program, it will not be eligible for reimbursements, however, the $1 fee will still be collected from residents living in Milpitas. The City will not be able to offset staff costs related to abatement of abandoned vehicles.

Fiscal Impact:
Continued participation in the AVASA program enables the City to receive reimbursements that help offset the amount of City staff cost to abate vehicles. If the City decides not to participate in the AVASA program, the City will not be eligible for reimbursements.

California Environmental Quality Act:
The actions being considered have no potential for causing a significant effect on the environment and are exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3).

Recommendations:
(1) Adopt a Resolution Authorizing the Continued Participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority; and (2) authorize the City Manager, or designee, to execute any documents necessary to continue participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority program.

Attachment:
Resolution Authorizing the Continued Participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority

RESOLUTION NO. ___

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS AUTHORIZING CONTINUED PARTICIPATION IN THE SANTA CLARA COUNTY ABANDONED VEHICLE ABATEMENT SERVICE AUTHORITY

WHEREAS, California Vehicle Code Sections 9250.7 and 22710 provide for the establishment of a service authority for abandoned vehicle abatement, and the imposition of a $1.00 service fee on vehicle registration fees in a County (the Fee), if the County Board of Supervisors, and the majority of the cities within the County, adopt resolutions supporting such action; and

WHEREAS, in August of 2011, the City Council adopted Resolution No. 8109 approving the City's continued participation in the Santa Clara County Abandoned Vehicle Abatement Service Authority (AVASA) and the imposition of the Fee; and

WHEREAS, pursuant to applicable law, the imposition of the Fee was limited to a period of 10 years and was set to expire on April 30, 2022; and

WHEREAS, State law permits the Fee to be extended in 10-year increments, if the County Board of Supervisors, by a two-thirds vote, and a majority of the cities having a majority of the incorporated population within the County, adopt resolutions providing for the extension of the fee, and

WHEREAS, the City, because of the inherent cost savings, desires to continue participating in the AVASA Program.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The City Council approves the continued participation in the existing "Agreement for Santa Clara County Abandoned Vehicle Abatement Service Authority" and the collection, by the Department of Motor Vehicles, of one-dollar ($1.00) vehicle registration fee for this purpose.

3. The City Council requests the extension of the Santa Clara County AVASA Program for another 10-year term, beginning in May 2022.

4. The City Council authorizes the City's continued participation as a member of the Santa Clara County AVASA Program and authorizes the City Manager's or designee's execution, on behalf of the City, of any documents necessary to accomplish the purposes of this Resolution.

PASSED AND ADOPTED this ___ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

_____
Wendy Wood, City Clerk

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	Adopt a Resolution Granting Acceptance of Public Improvements and Approving Reduction of Faithful Performance Bond for Public Improvements for the South Main Senior Lifestyles Project located at 80 Cedar Way by Milpitas Phase I, LP and Granting Authorization to the City Engineer to Release the Performance Bond after the One-year Warranty Period.
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, 408-586-3301
Recommendation:	(1) Adopt a Resolution granting acceptance of public improvements for the South Main Senior Lifestyles Project located at 80 Cedar Way, Public Improvement Plan 2-1236; (2) approve a reduction in the faithful performance bonds to $157,500 and $116,800, respectively, which shall be subject and in effect for the duration of a one-year warranty period; and (3) grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Background:
On February 6th, 2018, the City Council approved the Subdivision Improvement Agreement ("Agreement"), and the Parcel Map for the South Main Senior Lifestyles Project located at 80 Cedar Way by Milpitas Phase I, LP ("Developer").

As part of project construction, the Developer constructed public improvements including Costa Street, frontage improvements along Cedar Way and South Main Street, traffic signal improvements, utility connections, potable water, storm, and sanitary sewer pipelines, sidewalks, asphalt pavement, landscaping, street lighting, and miscellaneous other items of work.

Analysis:
The public improvement work has been successfully completed and inspected in accordance with the approved plans and specifications, and the work is ready for acceptance and commencement of the 1-year warranty period. Staff recommends the City Council adopt a resolution to accept the public improvements, and to reduce the performance bonds to $157,500 and $116,800, respectively, which is 10% of the security's original value, and authorize to the City Engineer to release the performance bond after the one-year warranty period once all required warranty work is satisfactorily completed.

Policy Alternatives:
Alternative 1:
Do not approve resolution granting acceptance of installed public improvements.

Pros: None

Cons: The Subdivision Improvement Agreement between the City and Developer requires the City to accept successfully installed pubic improvements that have passed inspection and meet the requirements of the Agreement and the approved plans and specifications. Not accepting the completed public improvements as

required by the Subdivision Improvement Agreement would delay the project and may subject the City to a claim by the Developer.

Reason not recommended: Granting acceptance of installed public improvements would allow the City to own and maintain the improvements and would ensure the City is in compliance with the terms of the agreement with the Developer.

Fiscal Impact:
The public improvements have been constructed by the Developer as a requirement of the Subdivision Improvement Agreement. The City will have perpetual maintenance responsibilities for the improvements following completion of the 1-year warranty period.

California Environmental Quality Act:
Granting acceptance of public improvements and reducing faithful performance bond for public improvements are not considered projects under CEQA as there will be no direct or reasonably foreseeable indirect physical change in the environment.

Recommendation:

1. Adopt a Resolution granting acceptance of public improvements for the South Main Senior Lifestyles Project located at 80 Cedar Way, Public Improvement Plan 2-1236; and

2. Approve a reduction in the faithful performance bonds to $157,500 and $116,800, respectively, which shall be subject and in effect for the duration of a one-year warranty period; and

3. Grant authorization to the City Engineer to release the performance bond after the one-year warranty period, without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

Attachments:

Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING ACCEPTANCE AND REDUCING PERFORMANCE BONDS OF SOUTH MAIN SENIOR LIFESTYLES RESIDENTIAL PROJECT AND GRANTING AUTHORIZATION TO THE CITY ENGINEER TO RELEASE THE PERFORMANCE BONDS AFTER THE ONE-YEAR WARRANTY PERIOD

WHEREAS, the City Council of the City of Milpitas on February 6th, 2018 approved the plans and specifications for the South Main Senior Lifestyles Residential Project, (the "Project") to be completed by Milpitas Phase I, LP as part of its residential development on 80 Cedar Way; and

WHEREAS, the City of Milpitas has heretofore entered into a subdivision improvement agreement on February 6th, 2018 with Milpitas Phase I, LP; and

WHEREAS, by Milpitas Phase I, LP as Principal, and International Fidelity Insurance Company, as Surety, executed and posted certain Performance Bond No. SAIFSU0733645 conditioned upon the faithful performance of the provisions of said subdivision improvement agreement and upon the faithful performance of all improvement work required thereunder; and

WHEREAS, said public improvements for the South Main Senior Lifestyles Residential Project have been completed and the subdivision improvement agreement provides that the security shall extend for a period of one year after the date of acceptance of said improvements to cover the warranty period of said improvements under said agreement; and

WHEREAS, the City Council is willing to consent to a reduction in the penal sum of said security during said one-year warranty period; and

WHEREAS, the City Engineer of the City of Milpitas has made a final inspection of said improvements for the South Main Senior Lifestyles Residential Project and recommends that the City Council of the City of Milpitas accept the same as constructed in accordance with the approved plans and specifications.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.
2. Those certain public improvements constructed as part of the South Main Senior Lifestyles Residential Project are hereby accepted as constructed in accordance with the approved plans and specifications upon recommendation of the City Engineer of the City of Milpitas.
3. The penal sum of the faithful performance bonds securing said improvements may be reduced to the sum of $157,500, and $116,800 respectively, upon request of Principal and Surety, with said penal sum as reduced to apply from the date of completion and acceptance of said improvements and to extend for the balance of the term of one year of said security. Provided, however, that nothing herein contained shall in any way be deemed to be a waiver, release or relinquish by City of any obligations imposed upon the developer or his surety, or sureties, by law or by the above referend public improvement agreement, save and except as expressly set forth herein.
4. The City Council grants authorization to the City Engineer to release the performance bond after the one-year warranty period without further City Council action provided all required warranty work is completed to the satisfaction of the City Engineer.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

_____

Wendy Wood, City Clerk

_____

Rich Tran, Mayor

APPROVED AS TO FORM:

_____

Christopher J. Diaz, City Attorney

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Adopt a Resolution approving Site Development Permit Amendment No. SA21-0001 to amend Site Development Permit No. SD17-0006 to reduce the scope of a previously approved project from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home located on a 1.6-acre site at 517 Vista Ridge Drive in the R-1-H Hillside Single-family Residential Zoning District and Making Findings of Exemption under CEQA (Staff Contact: Ned Thomas, Planning Director, 408-586-3273)**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Adrienne Smith, Associate Planner, 408-586-3287
Recommendation:	Adopt a Resolution approving Site Development Permit Amendment No. SA21-0001 to reduce the scope of a previously approved project from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home located on a 1.6-acre site at 517 Vista Ridge Drive in the R-1-H Hillside Single-family Residential Zoning District and making findings of exemption under the California Environmental Quality Act (CEQA).

Background:

On April 17, 2017, Ashish and Varsha Gandhi submitted a request for a site development permit to construct a 4,831-square foot, two-story single-family residence with a 736-square foot, three-car attached garage, in-ground pool and associated site new improvements. The Planning Commission approved the application on July 11, 2018 and recommended approval of the permit to the City Council. The City Council approved the permit on August 7, 2018. City Council approval is required because the development site is located in the Hillside area.

On January 26, 2021, the applicant requested an amendment to Site Development Permit No. SD17-0006 to reduce the scope of the project including the square footage of the home and various site improvements.

On May 26, 2021, the Planning Commission held a public hearing on the proposed Project. Prior to and during the public hearing, staff received no public comment. One oral comment from a Milpitas resident was received during the public hearing asking whether the project conformed to the development standards of the Hillside Ordinance. The Planning Commission voted unanimously to approve the project. In accordance with the Milpitas "H" Hillside Combining District Ordinance (Milpitas Municipal Code Section XI-10-45, et seq.), the project must receive site and architectural review approval by the City Council as well as the Planning Commission. (See MMC Section XI-10- 45.09.) Pursuant to MMC Section XI-10-45-09-5, Council review of the project does not require a public hearing.

Analysis:

General Plan Consistency

The General Plan designation for the project site is Hillside Low Density (HLD). The General Plan details the goals, objectives and policies for the City's Hillside Area. It is characterized by gentle to steep slopes, grassy terrain with some chaparral and trees, wildlife, geologically unstable areas, the Ed R. Levin County Regional Park, and a feeling of remoteness from the more urban portions of the City. The HLD designation allows

maximum of one housing unit per gross acre. The project conforms with the policies and standards of the City's General Plan, as outlined in the following table:

Table 1: General Plan Consistency

Policy	Consistency Finding
CD 7-1 Maintain the visual character of hillsides, recognizing both the importance of the exposure of hillside development from offsite public views and the importance of providing panoramic public views from and of hillsides.	**Consistent.** The proposed single-story house is well below the maximum height for homes east of the crestline and will not impede the views of the hillside from the valley floor, or the views from existing neighboring homes.
CD 7-2 Minimize the alteration of existing landforms and maintain the natural topographic characteristics of hillside areas, allowing only minimal disruption.	**Consistent.** The proposed project is limiting cut and fill to 224 cubic yards to accommodate the footprint of the home and the required grade at the driveway for firetruck access.
CD 7-3 Protect the natural character of hillside areas by means of contour grading to blend graded slopes and terraces with the natural topography.	**Consistent.** New contours will be designed to blend with the natural existing site contours as demonstrated in the civil drawings.
CD 7-4 Avoid mass graded pads within hillside areas. Smaller steps or grade changes should be used over single, large, slope banks to the greatest extent feasible.	**Consistent.** The building pad is proposed at the flattest portion of the lot and will necessitate only minimal grading.
CD 7-6 Require hillside development to incorporate architecture, scale, massing, building form, building color, roof materials, and landscaping to reflect the natural hillside setting.	**Consistent.** The proposed home is single-story and oriented at an angle to the front property line to minimize the perception of excessive bulk. The light and medium grey building colors and the warm brown stone veneer accenting the street-facing north and east sides of the home, are in an earth tone palette.

Zoning Code Consistency

The site is zoned Hillside Single-Family Residential (R1-H). This zoning district promotes and encourages the orderly development of the City's hillside area through the application of regulations and requirements established to meet the particular constraints associated with development of hillside areas, including, but not limited to slope, safe access, visibility, and geologic concerns.

Table 2 demonstrates the project's consistency with the applicable development standards of the R1-H Zoning District per Section XI-10-45 - "H" Hillside Combining District of the Milpitas Zoning Ordinance:

Table 2: R1-H Development Standards of the Zoning Code

Standards	Hillside Requirements	Previous Approval	Proposed	Complies
Front Setback (min)	25 ft.	25 ft.	40 ft.	Yes
Side Setback (min)	40 ft.	40 ft. and 76 ft.	40 ft. and 71 ft.	Yes
Rear (min)	40 ft.	112 ft.	122 ft.	Yes
Size of Main Dwelling	6,000 sq. ft. maximum	5,981 sq. ft. (includes garage and covered porches)	4,074 sq. ft. (includes garage and covered porches)	Yes
Impervious Surfaces (max)	8,000 sq. ft. maximum	6,512 sq. ft.	7,750 sq. ft.	Yes
Building Height (max)	Two-story, 27 ft. max east of crestline	Two-story, 27 ft.	One-story, 16 ft.	Yes
Parking	4 or more bedrooms: 3 per unit, plus 1 per each additional bedroom	5 spaces required/provided. Two in driveway and 3 in garage	3 spaces required and 5 spaces provided. Two in driveway and 3 in garage	Yes
Fencing	54" (4.5 ft.) max., 75% visual transparency. May exceed max. height subject to Planning Commission approval	72" (6 ft.) at front, sides and rear to match height of neighboring fence, 78% visual transparency	None	Yes

Due to the subject property's location, the project is also required to comply with the Site and Architectural standards of the City's Hillside Combining District. Per City Code Section XI-10-45.09-7 of the Zoning Ordinance, the Planning Commission and City Council shall consider the following guidelines in its review. See Table 3 below for consistency:

Table 3: Site and Architectural Guidelines Section XI-10-45.09-7

Guidelines	Consistency Finding
(a) Avoid unreasonable interference with Views and Privacy. The height, elevations and placement on the site of the proposed main or accessory structure, when considered with reference to the nature and location of residential structures on adjacent lots, will avoid unreasonable interference with views and privacy.	**Consistent.** The proposed home is located east of the crestline and is 10 feet lower than the maximum permitted height of 27 feet. Additionally, the proposed home is sited a minimum of 40 feet back from all property lines on a 1.6-acre parcel, including a minimum of 100 feet from the closest neighboring home, and therefore will not interfere with privacy.
(b) Preserve Natural Landscape. The natural landscape will be preserved insofar as practicable by designing structures to follow the natural contours of the site and minimizing tree and soil removal.	**Consistent.** The project site is currently undeveloped with one existing site tree which will remain in place. The applicant will plant 10 larger trees and 7 mid-sized trees along with numerous flowering plants and natural ground cover, the majority of which will follow the natural contours of the site.
(c) Minimize Perception of Excessive Bulk. The design of the proposed main and /or accessory structure(s) in relation to the immediate neighborhood should minimize the perception of excessive bulk.	**Consistent.** The footprint of the proposed home is angled in its orientation to the front property line, thus minimizing the perception of excessive bulk.
(d) Impairment of Light and Air. The proposed main or accessory structure(s) shall not unreasonably impair the light and air of adjacent properties nor unreasonably impair the ability of adjacent properties to utilize solar energy.	**Consistent.** The proposed home is 16 feet tall, well below the maximum height of 27 feet from grade permitted for homes located east of the crestline and it meets or exceeds all minimum setbacks as required by Section XI-10-45 of the City's Zoning Code. Also, the proper siting of the home will minimize the impairment of natural light and airflow for the adjacent properties and will not impair their ability to utilize solar energy.
(e) Grading. All grading shall be kept to an absolute minimum and shall comply with the grading ordinance criteria.	**Consistent.** As proposed, the main dwelling shall be located where the parcel is flattest, so grading can be minimized. The proposed grading plan shows that 224 cubic yards of aggregate grading will be required for the construction of the home.

Findings for Site Development Permit Amendment:

A finding is a statement of fact relating to the information that the City Council has considered in making a decision. Findings shall identify the rationale behind the decision to take a certain action.

Site Development Permit Amendment (Section XI-10-57.03(F)(1))

1. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development.*

   The architectural design and site planning of the proposed home is aesthetically compatible with the neighboring homes with an emphasis of minimizing changes to the natural topography of the site. The proposed home incorporates earth tone colors and materials and is sited in a manner to minimize bulk and maximize setbacks from existing neighboring homes.

2. *The project is consistent with the Milpitas Zoning Ordinance.*

   As outlined in Table 2 above, the proposed home meets the development standards in the Single-Family Hillside Zoning District for setbacks, height requirements, maximum impervious surface coverage, parking, grading, and landscaping.

3. *The project is consistent with the Milpitas General Plan.*

   As outlined in Table 1 above, the proposed project is consistent with the policies of the Milpitas General Plan. Hillside Development and Preservation Policies CD 7-1 through CD 7-4 and CD 7-6 require hillside development projects to respect the visual and topographic character of the land, avoid unnecessary grading and include architecture form, colors and materials that reflect the natural hillside setting. The project meets this finding, as the proposed home is designed to minimize grading and work, is located east of the crestline and will not impede views of the hillside from the valley floor and proposes a streamlined color palette of earth tones and natural stone accents.

Policy Alternatives:

Alternative 1: Deny the request for Site Development Permit Amendment No. SA21-0001 a request to amend Site Development Permit No. SD17-0006.

Pros: Denial of the project could leave the vacant land undeveloped for the time being.

Cons: Denying the project would leave open the possibility of a later application proposing a larger home and more intensive site improvements.

Reason not recommended: The Project is consistent with the vision, goals, and policies of the City of Milpitas General Plan and the Zoning Ordinance, including the development standards and the Site and Architectural guidelines of the "H" Hillside Combining District. The proposed Site Development Permit Amendment proposes to substantially reduce the square footage and scope of site improvements of the previously approved site development permit. This reduced scope will result in a smaller home, significantly reduced grading and a less intensively developed parcel overall to better maintain the character of the Hillside Combining District.

Fiscal Impact:
None.

California Environmental Quality Act:
The project is exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures). Section 15303(a) includes, but is not limited to, one single-family residence, or a second dwelling unit in a residential zone. The project's proposed new construction of a single-family residence is within a residentially zoned area

on a legal parcel. As a separate and independent basis, the project is also exempt pursuant to CEQA Guidelines Section 15183 (Projects consistent with an existing General Plan, Community Plan, or Zoning Ordinance).

Recommendation:

Adopt a Resolution approving Site Development Permit Amendment No. SA21-0001 to reduce the scope of a previously approved project from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home located on a 1.6-acre site located at 517 Vista Ridge Drive in the R-1-H Hillside Single-family Residential Zoning District and making findings of exemption under CEQA.

Attachments:

Attachment A: City Council Resolution

Attachment B: Planning Commission Staff report (dated May 26, 2021)

Attachment C: Planning Commission Meeting Minutes for May 26, 2021

Attachment D: Project Plans

RESOLUTION NO. ____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING SITE DEVELOPMENT PERMIT AMENDMENT NO. SA21-0001 TO REDUCE THE SCOPE OF A PREVIOUSLY APPROVED PROJECT FROM A TWO-STORY, 4,831 SQUARE-FOOT HOME TO A ONE-STORY, 3,000 SQUARE-FOOT HOME LOCATED ON A 1.6-ACRE SITE AT 517 VISTA RIDGE DRIVE IN THE R-1-H HILLSIDE SINGLE-FAMILY RESIDENTIAL ZONING DISTRICT, AND MAKING FINDINGS OF EXEMPTION UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

WHEREAS, on January 26, 2021, an application was submitted by Ashish Gandhi ("Applicant"), to amend Site Development Permit No. SD17-0006 to reduce the scope of a previously approved project from a two-story, 4,831 square-foot home to a one-story, 3,000 square-foot home located at 517 Vista Ridge Drive (collectively, the "Project"). The property (APN: 042-30-009) is located within the R-1-H Hillside Single-Family Residential Zoning District; and

WHEREAS, the Planning Department completed an environmental assessment for the Project in accordance with the California Environmental Quality Act (CEQA), and recommends that the City Council determine this Project is exempt from environmental review pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures) and, as a separate and independent basis, CEQA Guidelines Section 15183 (Projects Consistent with a General Plan, Community Plan, or Zoning); and

WHEREAS, on May 26, 2021, the City of Milpitas Planning Commission held a duly-noticed public hearing on the subject application, at which time all those in attendance were given the opportunity to speak on the Project, and the Planning Commission recommended approval of the Project to the City Council, subject to the Conditions of Approval; and

WHEREAS, on June 15, 2021, a duly-noticed meeting was held before the City Council to consider the subject application, at which time the City Council received and considered all evidence presented, both written and oral, regarding the subject application.

NOW THEREFORE, the City Council of the City of Milpitas hereby finds, determines and resolves as follows:

SECTION 1. Recitals

The City Council has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

SECTION 2. CEQA Findings

This Project is categorically exempt from further environmental review pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures) and, as a separate and independent basis, the Project is exempt from further environmental review pursuant to CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning) in that alterations to the site are limited to interior tenant improvements and minor exterior changes.

SECTION 3. Site Development Permit Findings

In accordance with Milpitas Municipal Code ("MMC") Section XI-10-57.03(F)(1), the City Council makes the following findings for approval of Site Development Permit Amendment No. SA21-0001, based on the evidence in the public record:

1. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development in that:*

   The architectural design and site planning of the proposed Project is aesthetically compatible with the neighboring homes with an emphasis of minimizing changes to the natural topography of the site. The proposed incorporates earth tone colors and materials and is sited in a manner to minimize bulk and maximize setbacks from existing neighboring homes.

2. *The project is consistent with the Milpitas Zoning Ordinance in that:*

   Table 1 demonstrates the Project's consistency with the applicable development standards of the R1-H Zoning District per MMC Section XI-10-45 - "H" Hillside Combining District, including setbacks, height requirements, maximum impervious surface coverage, parking, grading, and landscaping. Due to the subject property's location, the Project is also required to comply with the Site and Architectural standards of the City's Hillside Combining District (MMC Section XI-10-45.09-7). Table 2 demonstrates consistency with applicable guidelines for site and architectural design and grading and landscaping.

Table 1: R1-H Development Standards

Standards	Hillside Requirements	Previous Approval	Proposed	Complies
Front Setback (min)	25 ft.	25 ft.	40 ft.	Yes
Side Setback (min)	40 ft.	40 ft. and 76 ft.	40 ft. and 71 ft.	Yes
Rear Setback (min)	40 ft.	112 ft.	122 ft.	Yes
Size of Main Dwelling	6,000 sq. ft. maximum	5,981 sq. ft. (includes garage and covered porches)	4,074 sq. ft. (includes garage and covered porches)	Yes
Impervious Surfaces (max)	8,000 sq. ft. maximum	6,512 sq. ft.	7,750 sq. ft.	Yes
Building Height (max)	Two-story, 27 ft. max east of crestline	Two-story, 27 ft.	One-story, 16 ft.	Yes
Parking	4 or more bedrooms: 3 per unit, plus 1 per each additional bedroom	5 spaces required/provided. Two in driveway and 3 in garage	3 spaces required and 5 spaces provided. Two in driveway and 3 in - garage	Yes
Fencing	54" (4.5 ft.) max., 75% visual transparency.	72" at front, sides and rear to match height of neighbor fence, 78% visual transparency	None	Yes

Table 2
Site and Architectural Guidelines Section XI-10-45.09-7

Guidelines	Consistency Finding
(a) Avoid unreasonable interference with Views and Privacy. The height, elevations and placement on the site of the proposed main or accessory structure, when considered with reference to the nature and location of residential structures on adjacent lots, will avoid unreasonable interference with views and privacy.	**Consistent.** The proposed home is located east of the crestline and is 10 feet lower than the maximum permitted height of 27 feet. Additionally, the proposed home is sited a minimum of 40 feet back from all property lines on a 1.6-acre parcel, including a minimum of 100 feet from the closest neighboring home, and therefore will not interfere with privacy.
(b) Preserve Natural Landscape. The natural landscape will be preserved insofar as practicable by designing structures to follow the natural contours of the site and minimizing tree and soil removal.	**Consistent.** The Project site is currently undeveloped with one existing site tree which will remain in place. The Applicant will plant 10 larger trees and 7 mid-sized trees along with numerous flowering plants and natural ground cover, the majority of which will follow the natural contours of the site.
(c) Minimize Perception of Excessive Bulk. The design of the proposed main and /or accessory structure(s) in relation to the immediate neighborhood should minimize the perception of excessive bulk.	**Consistent.** The footprint of the proposed home is angled in its orientation to the front property line, thus minimizing the perception of excessive bulk.
(d) Impairment of Light and Air. The proposed main or accessory structure(s) shall not unreasonably impair the light and air of adjacent properties nor unreasonably impair the ability of adjacent properties to utilize solar energy.	**Consistent.** The proposed home is 16 feet tall, well below the maximum height of 27 feet from grade permitted for homes located east of the crestline and it meets or exceeds all minimum setbacks as required by Section XI-10-45 of the City's Zoning Code. Also, the proper siting of the home will minimize the impairment of natural light and airflow for the adjacent properties and will not impair their ability to utilize solar energy.
(e) Grading. All grading shall be kept to an absolute minimum and shall comply with the grading ordinance criteria.	**Consistent.** As proposed, the main dwelling shall be located where the parcel is flattest, so grading can be minimized. The proposed grading plan shows that 640 cubic yards of aggregate grading will be required for the construction of the home.

Site & Architectural Design

Similar in aesthetic to the previously approved Site Development Permit, the amended architecture and design is traditional in style with earth tone colors and materials that are consistent with most of the homes in the neighborhood. The new design, however, is more streamlined and excludes the more ornate architectural elements of the previous design such as precast window moldings, wrought iron balcony railings and fluted doorway columns. The new exterior materials are composed of smooth application stucco painted in medium and light grey tones, with a warm brown stone veneer skirting the base of the street-facing north and east façades. Also, in contrast with the previously approved concrete tile roof, the Applicant is now proposing a Tesla solar roof.

All exterior materials and finishes work together as a palette of earth-toned browns and greys, creating harmony with the site's natural surroundings and existing neighboring residences.

Grading and Landscaping

Due to the sloped lot and vehicular access requirements, some grading is required to make the site feasible for residential development. To limit the amount of ground to be removed, the Applicant has again proposed a site plan which locates the home on the flattest portion of the site. The previous site development permit granted approval of 1,280 cubic yards of cut and fill for the construction of a new home, expansive patios and the required grade at the driveway for firetruck access. Due to a reduction in building footprint/foundation, elimination of patios and an overall narrowed scope of landscaping, the Applicant now requests a significantly reduced 224 cubic yards of aggregate cut and fill.

The previously approved landscape plan is amended to eliminate the in-ground pool, patios and the crushed stone pathways running the side and rear perimeters of the property. Landscaping is now limited to the front yard and side areas adjacent to the home. While the Applicant previously planned for the driveway to be constructed of porous paving materials, the amended plan now proposes a driveway constructed of concrete and asphalt. The proposed planting schedule includes a variety of flowers and trees with low to medium water consumption rates, bark mulch ground cover and river rocks bordering the front and back of the home. As demonstrated in Attachment B (Project Plans), the grading and landscaping plans conform to City Council Resolution No. 6066 – Hillside Landscaping and water Conservation Policy and Fire Hazard Mitigation Measures, and to the City's Hillside Ordinance.

3. *The project is consistent with the Milpitas General Plan in that:*

As outlined in Table 3, the proposed Project is consistent with the policies of the Milpitas 2040 General Plan.

Table 3: General Plan Consistency

Policy	Conformance
CD 7-1 Maintain the visual character of hillsides, recognizing both the importance of the exposure of hillside development from offsite public views and the importance of providing panoramic public views from and of hillsides.	**Consistent.** The proposed single-story house is well below the maximum height for homes east of the crestline and will not impede the views of the hillside from the valley floor, or the views from existing neighboring homes.
CD 7-2 Minimize the alteration of existing landforms and maintain the natural topographic characteristics of hillside areas, allowing only minimal disruption.	**Consistent.** The proposed Project is limiting cut and fill to 224 cubic yards to accommodate the footprint of the home and the required grade at the driveway for firetruck access.
CD 7-3 Protect the natural character of hillside areas by means of contour grading to blend graded slopes and terraces with the natural topography.	**Consistent.** New contours will be designed to blend with the natural existing site contours as demonstrated in the civil drawings.

CD 7-4 Avoid mass graded pads within hillside areas. Smaller steps or grade changes should be used over single, large, slope banks to the greatest extent feasible.	**Consistent.** The building pad is proposed at the flattest portion of the lot and will require a minimal amount of necessary grading.
CD 7-6 Require hillside development to incorporate architecture, scale, massing, building form, building color, roof materials, and landscaping to reflect the natural hillside setting.	**Consistent.** The proposed home is single-story and is oriented at an angle to the front property line to minimize the perception of excessive bulk. The light and medium grey building colors and the warm brown stone veneer accenting the street-facing north and east sides of the home, are in an earth tone palette.

SECTION 4: City Council Approval

The City Council of the City of Milpitas hereby approves Site Development Permit Amendment No. SA21-0001, subject to the Conditions of Approval attached hereto as **Exhibit 1** and incorporated herein.

This decision is based on the Findings contained in this Resolution, the full record before this Council, and the Council's interpretation of the Milpitas Municipal Code.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

EXHIBIT 1

CONDITIONS OF APPROVAL
HILLSIDE HOME
517 VISTA RIDGE DRIVE
SITE DEVELOPMENT PERMIT AMENDMENT NO. SA21-0001

General Conditions

1. General Compliance. The applicant, including all successors in interest (collectively "Permittee") shall comply with each and every condition set forth in this Permit. This Site Development Permit Amendment No. SA21-0001 ("Permit") shall have no force or effect and no building permit shall be issued unless and until all things required by the below-enumerated precedent conditions have been performed or caused to be performed and this Resolution has been recorded by the Permittee with the Santa Clara County's Recorder Office and a copy shall be provided to the Planning Department.

2. Effective Date. Unless there is a timely appeal filed in accordance with the Milpitas Zoning Code, the date of approval of this Permit is the date on which the decision-making body approved this Permit.

3. Permit Expiration. Pursuant to Section XI-10-64.06 of the Milpitas Municipal Code, this Permit shall become null and void if the activity permitted by this Permit is not commenced within two (2) years from the date of approval, or for a project submitted with a tentative map, within the time limits of the approved tentative map. Pursuant to Section XI-10-64.06(B) of the Milpitas Municipal Code, an activity permitted by this Permit shall be deemed to have commenced when the project:
   a. Completes a foundation associated with the project; or
   b. Dedicates any land or easement as required from the zoning action; or
   c. Complies with all legal requirements necessary to commence the use, or obtains an occupancy permit, whichever is sooner.

4. Time Extension. Pursuant to Section XI-10-64.07 of the Milpitas Municipal Code, unless otherwise provided by State law, Permittee shall have the right to request a one-time extension of the Permit if the request is made in writing to the Planning Department prior to the expiration date of the approval. **(P)**

5. Notice. Pursuant to California Government Code Section 66020, any protest filed in court relating to the imposition of fees, dedication, reservations, or other exactions to be imposed on the development project shall be filed within ninety (90) days after the date of the adoption of this Resolution. This provision serves as notice from the local agency to the Permittee that the ninety (90) day period in which the applicant may file a protest has begun under California Government Code Section 66020(d)(1).

6. Cost and Approval. Permittee shall fully complete and satisfy each and every condition set forth in this Resolution and any other condition applicable to the project to the sole satisfaction of the City. Additionally, Permittee shall be solely responsible and liable for the cost to satisfy each and every condition.

7. Conditions. Each and every condition set forth in this Exhibit shall apply to the project and continue to apply to the project so long as the Permittee is operating the project under the permits and approvals in this Resolution.

8. Compliance with Laws. The construction, use, and all related activity authorized under this Permit shall comply with applicable local, state, and federal laws, rules, regulations, guidelines, requirements, and policies.

9. Previous Approvals. Permittee shall abide by and continue to comply with all previous City approvals, permits, or requirements relating to the subject property, unless explicitly superseded or revised by this Permit.

10. Indemnification. To the fullest extent permitted by law, Permittee shall indemnify, defend with counsel of the City's choosing, and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to (i) City's approval of the project, including but not limited to, the approval of the discretionary permits, maps under the Subdivision Map Act, and/or the City's related determinations or actions under the California Environmental Quality Act, and (ii) Permittee's construction, operation, use, or related activity under this Permit. This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. Permittee shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. Permittee shall pay to the City upon demand or, as applicable, to counsel of City's choosing, any amount owed pursuant to the indemnification requirements prescribed in this condition.

11. Revocation, Suspension, Modification. This Permit may be suspended, revoked, or modified in accordance with Section XI-10-63.06 of the Milpitas Municipal Code.

12. Severability. If any term, provision, or condition of this Permit is held to be illegal or unenforceable by the Court, such term, provision, or condition shall be severed and shall be inoperative, and the remainder of this Permit shall remain operative, binding, and fully enforceable.

13. Modifications to Approved Plans. Permittee shall develop the Project in conformance with the development plans approved by the City Council on June 15, 2021, in accordance with these Conditions of Approval. Any deviation from the approved site plan, elevations, materials, colors, landscape plan, or other approved submittal shall require that, prior to the issuance of building permits, the Permittee shall submit modified plans and any other applicable materials as required by the City for review and obtain the approval of the Planning Director or designee. If the Planning Director or designee determines that the proposed modifications are significant, the Planning Director or designee shall refer the revised plans for consideration by the Planning Commission or City Council, as applicable, in accordance with the Milpitas Zoning Code. **(P)**

14. Response to Conditions of Approval. Permittee shall provide a written response to comments upon submittal for building permit application. The responses should clearly indicate how each condition of approval has been addressed in the plans and shall note the appropriate plan sheet. **(P)**

15. Landscaping. All aspects of applicant's landscaping plan including plantings and irrigation shall conform to City Council Resolution No. 6066 – Hillside Landscaping and water Conservation Policy and Fire Hazard Mitigation Measures. **(P)**

16. Exterior Finish. Exterior stucco application of the home shall be a minimum of a 20/30 finish. **(P)**

17. The Project shall comply with the requirements of the Milpitas Fire Department as stated per Fire Department Memorandum, dated May 17, 2021. **(F)**

18. The Project shall comply with the requirements of the Milpitas Building Department as stated per Building Department Memorandum, dated February 21, 2021. **(B)**

PRIOR TO CONSTRUCTION PLAN SUBMITTALS

*The following conditions shall be met **prior to** any detailed construction plan check submittals (Building or Engineering, except demolition and rough grade plans), unless otherwise approved by the Director of Engineering/City Engineer. City reserves the right to reject any plan check submittal if any of the following conditions are not met.* ***(E)***

19. Modifications. The Site Development Plan dated May 18, 2021 is subject to change during the plan check stage based upon City's previous comments and conditions stated herein.

20. Submittal Requirements. Permittee to ensure that all plan check submittals are in accordance with City's submittal check list for each permit type, including but not limited to, payment of permit fees and/or fee deposit at the time of the submittal.

PRIOR TO BUILDING PERMIT ISSUANCE

*The following conditions shall be addressed during the building plan check process and shall be met **prior to** any building permit issuance (except demolition permit and rough grade permit), unless otherwise approved by the Director of Engineering/City Engineer.* ***(E)***

21. Easements on the Building Permit Plans. Permittee shall depict all existing easements to remain based upon current preliminary title report and depict new easements on applicable building permit plans.

22. Solid Waste and Recycling Facility Design. Permittee shall comply with all applicable City design guidelines/details associated with haul route, turning radius, vertical and horizontal clearance, trash enclosure, staging area, storage area, etc.

23. Development Fees. Permittee shall pay the following development fees. The information listed in items "a" through "e" are based upon current fee rates; however, those fee rates are subject to change. The exact fee amount shall be determined at the time of building permit fee payment.

    a) Storm water connection fee at $3,594/unit for single-family residential lots 1-4 acres.
    b) Water connection fee at $1,910/unit for single-family residential.
    c) Sewer connection fee at $1,908/unit for single-family residential.
    d) Wastewater Treatment Plant fee per MMC VIII, Chapter 2, Section 7.04.
    e) 3.8% of applicable fees in accordance with City Resolution No. 8969 as Permitting Automation Fee.

24. Mailboxes. The Permittee shall obtain information from the US Postal Service regarding placement of required mailboxes. Structures to protect mailboxes may require Building, Engineering and Planning Department review.

DURING CONSTRUCTION

The following conditions shall be complied with at all times ***during*** *the construction phase of the project, unless otherwise approved by the Director of Engineering/City Engineer.* ***(E)***

25. Prohibition of Potable Water Usage. Permittee shall use recycled water for construction purposes, including dust control and compaction. Permittee shall comply with MMC VIII-6-5.00 and 6-6.00 where potable water usage is prohibited, unless otherwise approved by the City Council.

P = Planning
E = Engineering Department
CA = City Attorney
PD = Police Department
B = Building Department
F = Fire Department
ALL = All Reviewing Departments

MILPITAS PLANNING COMMISSION
STAFF REPORT

May 26, 2021

APPLICATION: **HILLSIDE HOME – 517 Vista Ridge – SA21-0001:** A request to amend Site Development Permit No. SD17-0006 to reduce the scope of previously approved plans from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home. This Project is categorically exempt from further environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures) and; as a separate and independent basis, the Project is exempt from further environmental review pursuant to CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning).

RECOMMENDATION: **Staff recommends that the Planning Commission adopt Resolution No. 21-016, recommending approval of Site Development Permit Amendment No. SA21-0001 to the City Council, subject to the findings and attached Conditions of Approval.**

LOCATION:
Address/APN: 517 Vista Ridge Drive (APN 042-30-009)
Area of City: West side of Vista Ridge Drive

PEOPLE:
Project Applicant: Ashish Gandhi
Property Owner: Ashish and Varsha Gandhi
Project Planner: Adrienne Smith, Associate Planner

LAND USE:
General Plan Designation: Hillside Low-Density (HLD)
Zoning District: Single-Family Residential-Hillside (R1-H)
Site Area: 1.6 acres

ENVIRONMENTAL: Categorically exempt from further environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures) and; as a separate and independent basis, the Project is exempt from further environmental review pursuant to CEQA Guidelines Section

15183 (Projects Consistent with a Community Plan, General Plan, or Zoning).

EXECUTIVE SUMMARY

The applicant is requesting a Site Development Permit Amendment to reduce the scope of their previously approved plans from a two-story, 4,831-square-foot home to a one-story, 3,000-square-foot home on a 1.6-acre vacant lot in the Hillside Combining District. The requested modifications are significant and warrant discretionary review by the final decision-making authorities for the original project, the Planning Commission and City Council.

The project is consistent with the Milpitas General Plan and Zoning Ordinance and staff recommends the Planning Commission adopt Resolution No. 21-016 recommending approval of Site Development Permit Amendment No. SA21-0001 to the City Council, subject to the findings and Conditions of Approval.

Map 1
Project Location

Map 2
Zoning Map

BACKGROUND

History

On April 17, 2017, Ashish and Varsha Gandhi submitted a request for a site development permit to construct a 4,831 square foot, two-story single-family residence with a 736 square foot, three-car attached garage, inground pool and various new landscaping. The Planning Commission approved the application on July 11, 2018 and recommended approval of the permit to the City Council. The City Council approved the permit on August 7, 2018.

Planning entitlements are valid for two years unless they are "vested" by way of a completed foundation, or by obtaining an occupancy permit. The entitlement wasn't vested and expired on August 7, 2020. Traditionally, if an applicant wishes to revive an expired permit, they are required to request for a Time Extension prior to the expiration of the permit. However, effective September 28, 2020, California Assembly Bill No. 1561 extended the effectiveness of housing entitlements that were (a) issued and in effect prior to March 4, 2020 and (b) set to expire prior to December 31, 2021. All such qualifying housing entitlements now remain valid for an additional period of 18 months. Accordingly, the applicant's entitlement is still valid, and on January 26,

2021, the applicant requested an amendment to Site Development Permit No. SD17-0006 to reduce the scope of the project including the square footage of the home and various site improvements.

PROJECT DESCRIPTION

Overview

The project site zoned Single-Family Residential – Hillside, is an undeveloped 1.6-acre parcel located along Vista Ridge Drive in the Spring Valley Heights subdivision. Spring Valley Heights is located east of the hillside crestline and contains 26 lots, an open space parcel and is about 75% built out. A vicinity map of the subject site location is included on the previous page.

The applicant will scale back the square footage of the single-family home by approximately 30%, and will modify the two-story, five-bedroom, five-bathroom home with a 736-square foot attached garage to a single-story, four-bedroom, four-bathroom home with a 704-square foot attached garage and amend the architecture and design. The applicant will also reduce the size of the driveway, eliminate the patio areas, inground pool and perimeter fencing and reduce the scope of grading and landscaping.

Location and Context

The project site is located in the southeastern portion of the City of Milpitas in the hillside area. The following table provides a summary of the zoning and land uses surrounding the site:

Table 1:
Surrounding Zoning and Land Uses

	General Plan	Zoning	Existing Use
Subject Site	Hillside Low Density (HLD)	Single-Family Residential-Hillside (R1-H)	Vacant land
North	Hillside Low Density (HLD)	Single-Family Residential-Hillside (R1-H)	Vacant land
South	Hillside Low Density (HLD)	Single-Family Residential-Hillside (R1-H)	Vacant land
East	Hillside Low Density (HLD)	Single-Family Residential-Hillside (R1-H)	Single-family home
West	Hillside Low Density (HLD)	Single-Family Residential-Hillside (R1-H)	Single-family home

PROJECT ANALYSIS

General Plan and Zoning Conformance

Milpitas General Plan 2040

The General Plan designation for the project site is Hillside Low Density (HLD). The General Plan details the goals, objectives and policies for the City's Hillside Area. It is characterized by gentle to steep slopes, grassy terrain with some chaparral and trees, wildlife, geologically unstable areas, the Ed R. Levin County Regional Park, and a feeling of remoteness from the more urban portions of the City. The Hillside Low Density designation allows a maximum of one (1) housing unit per gross acre. The project is in conformance with the policies and standards of the City's General Plan, as outlined in the following table:

Table 2: General Plan Consistency

Policy	Conformance
CD 7-1 Maintain the visual character of hillsides, recognizing both the importance of the exposure of hillside development from offsite public views and the importance of providing panoramic public views from and of hillsides.	**Consistent.** The proposed single-story house is well below the maximum height for homes east of the crestline and will not impede the views of the hillside from the valley floor, or the views from existing neighboring homes.
CD 7-2 Minimize the alteration of existing landforms and maintain the natural topographic characteristics of hillside areas, allowing only minimal disruption.	**Consistent.** The proposed project is limiting cut and fill to 224 cubic yards to accommodate the footprint of the home and the required grade at the driveway for firetruck access.
CD 7-3 Protect the natural character of hillside areas by means of contour grading to blend graded slopes and terraces with the natural topography.	**Consistent.** New contours will be designed to blend with the natural existing site contours as demonstrated in the civil drawings.
CD 7-4 Avoid mass graded pads within hillside areas. Smaller steps or grade changes should be used over single, large, slope banks to the greatest extent feasible.	**Consistent.** The building pad is proposed at the flattest portion of the lot and will necessitate only minimal grading.
CD 7-6 Require hillside development to incorporate architecture, scale, massing, building form, building color, roof materials, and landscaping to reflect the natural hillside setting.	**Consistent.** The proposed home is single-story and oriented at an angle to the front property line to minimize the perception of excessive bulk. The light and medium grey building colors and the warm brown stone veneer accenting the street-facing north and east sides of the home, are in an earth tone palette.

Development Standards

The site is zoned Hillside Single-Family Residential (R1-H). The "H" Hillside Combining District intends to promote and encourage the orderly development of the hillside area of the City by the application of regulations and requirements established to meet the particular constraints

associated with development of hillside areas, including, but not limited to, geologic problems, slope, safe access and visibility.

Table 3 demonstrates the project's consistency with the applicable development standards of the R1-H Zoning District per Section XI-10-45 - "H" Hillside Combining District of the Milpitas Zoning Ordinance:

Table 3:
R1-H Development Standards

Standards	Hillside Requirements	Previous Approval	Proposed	Complies
Front Setback (min)	25 ft.	25 ft.	40 ft.	Yes
Side Yard Setback (min)	40 ft.	40 ft. and 76 ft.	40 ft. and 71 ft.	Yes
Rear (min)	40 ft.	112 ft.	122 ft.	Yes
Size of Main Dwelling	6,000 sq. ft. maximum	5,981 sq. ft. (includes garage and covered porches)	4,074 sq. ft. (includes garage and covered porches)	Yes
Impervious Surfaces (max)	8,000 sq. ft. maximum	6,512 sq. ft.	7,750 sq. ft.	Yes
Building Height (max)	Two-story, 27 ft. max east of crestline	Two-story, 27 ft.	One-story, 16 ft.	Yes
Parking	4 or more bedrooms: 3 per unit, plus 1 per each additional bedroom	5 spaces required/provided. Two in driveway and 3 in garage	3 spaces required and 5 spaces provided. Two in driveway and 3 in -garage	Yes
Fencing	54" (4.5 ft.) max., 75% visual transparency. May exceed max. height subject to Planning Commission approval	72" (6 ft.) at front, sides and rear to match height of neighboring fence, 78% visual transparency	None	Yes

Due to the subject property's location, the project is also required to comply with the Site and Architectural standards of the City's Hillside Combining District. Per City Code Section XI-10-45.09-7 of the Zoning Ordinance, the Planning Commission and City Council shall consider the following guidelines in its review. See Table 4 below for consistency:

Table 4
Site and Architectural Guidelines Section XI-10-45.09-7

Guidelines	Consistency Finding
(a) Avoid unreasonable interference with Views and Privacy. The height, elevations and placement on the site of the proposed main or accessory structure, when considered with reference to the nature and location of residential structures on adjacent lots, will avoid unreasonable interference with views and privacy.	**Consistent.** The proposed home is located east of the crestline and is 10 feet lower than the maximum permitted height of 27 feet. Additionally, the proposed home is sited a minimum of 40 feet back from all property lines on a 1.6-acre parcel, including a minimum of 100 feet from the closest neighboring home, and therefore will not interfere with privacy.
(b) Preserve Natural Landscape. The natural landscape will be preserved insofar as practicable by designing structures to follow the natural contours of the site and minimizing tree and soil removal.	**Consistent.** The project site is currently undeveloped with one existing site tree which will remain in place. The applicant will plant 10 larger trees and 7 mid-sized trees along with numerous flowering plants and natural ground cover, the majority of which will follow the natural contours of the site.
(c) Minimize Perception of Excessive Bulk. The design of the proposed main and /or accessory structure(s) in relation to the immediate neighborhood should minimize the perception of excessive bulk.	**Consistent.** The footprint of the proposed home is angled in its orientation to the front property line, thus minimizing the perception of excessive bulk.
(d) Impairment of Light and Air. The proposed main or accessory structure(s) shall not unreasonably impair the light and air of adjacent properties nor unreasonably impair the ability of adjacent properties to utilize solar energy.	**Consistent.** The proposed home is 16 feet tall, well below the maximum height of 27 feet from grade permitted for homes located east of the crestline and it meets or exceeds all minimum setbacks as required by Section XI-10-45 of the City's Zoning Code. Also, the proper siting of the home will minimize the impairment of natural light and airflow for the adjacent properties and will not impair their ability to utilize solar energy.

Guidelines	Consistency Finding
(e) Grading. All grading shall be kept to an absolute minimum and shall comply with the grading ordinance criteria.	**Consistent.** As proposed, the main dwelling shall be located where the parcel is flattest, so grading can be minimized. The proposed grading plan shows that 224 cubic yards of aggregate grading will be required for the construction of the home.

Site & Architectural Design

Similar in aesthetic to the previously approved Site Development Permit, the amended architecture and design is traditional in style with earth tone colors and materials that are consistent with most of the homes in the neighborhood. The new design, however, is more streamlined and excludes the more ornate architectural elements of the previous design such as precast window moldings, wrought iron balcony railings and fluted doorway columns. The new exterior materials are composed of smooth application stucco painted in medium and light grey tones, with a warm brown stone veneer skirting the base of the street-facing north and east façades. Also, in contrast with the previously approved concrete tile roof, the applicant is now proposing a Tesla solar roof.

All exterior materials and finishes work together as a palette of earth-toned browns and greys, creating harmony with the site's natural surroundings and existing neighboring residences.

Grading and Landscaping

Due to the sloped lot and vehicular access requirements, some grading is required to make the site feasible for residential development. To limit the amount of ground to be removed, the applicant has again proposed a site plan which locates the home on the flattest portion of the site. The previous site development permit granted approval of 1,280 cubic yards of cut and fill for the construction of a new home, expansive patios and the required grade at the driveway for firetruck access. Due to a reduction in building footprint/foundation, elimination of patios and an overall narrowed scope of landscaping, the applicant now requests a significantly reduced 224 cubic yards of aggregate cut and fill.

The previously approved landscape plan is amended to eliminate the inground pool, patios and the crushed stone pathways running the side and rear perimeters of the property. Landscaping is now limited to the front yard and side areas adjacent to the home. While the applicant previously planned for the driveway to be constructed of porous paving materials, the amended plan now proposes a driveway constructed of concrete and asphalt. The proposed planting schedule includes a variety of flowers and trees with low to medium water consumption rates, bark mulch ground cover and river rocks bordering the front and back of the home. As demonstrated in Attachment B (Project Plans), the grading and landscaping plans conform to City Council Resolution No. 6066 – Hillside Landscaping and water Conservation Policy and Fire Hazard Mitigation Measures and to the City's Hillside Ordinance.

FINDINGS FOR APPROVAL (OR DENIAL)

A finding is a statement of fact relating to the information that the Planning Commission has considered in making a decision. Findings shall identify the rationale behind the decision to take a certain action. Staff has found that the proposed project is consistent with the General Plan, Zoning Ordinance, and all required Findings.

Site Development Permit Findings (Section XI-10-57.03(F)(1))

1. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development in that:*

The architectural design and site planning of the proposed home is aesthetically compatible with the neighboring homes with an emphasis of minimizing changes to the natural topography of the site. The proposed home incorporates earth tone colors and materials and is sited in a manner to minimize bulk and maximize setbacks from existing neighboring homes.

1. *The project is consistent with the Milpitas Zoning Ordinance in that:*

The proposed home meets the development standards in the Single-Family Hillside Zoning District for setbacks, height requirements, maximum impervious surface coverage, parking, grading, and landscaping.

2. *The project is consistent with the Milpitas General Plan in that:*

The proposed project is consistent with the policies of the Milpitas General Plan, as demonstrated in Table 2, including Hillside Development and Preservation policy nos. CD 7-1 through CD 7-4 and CD 7-6, which require that hillside development respect the visual and topographic character of the land, avoid unnecessary grading and include architecture form, colors and materials that reflect the natural hillside setting. The project meets this finding, as the proposed home is designed to minimize grading and work, is located east of the crestline and will not impede views of the hillside from the valley floor and proposes a streamlined color palette of earth tones and natural stone accents.

ENVIRONMENTAL REVIEW

A categorical exemption pursuant to Section 15303(a) of the CEQA Guidelines – New Construction or Conversion of Small Structures, has been applied to this project. Section 15303(a) includes, but is not limited to, one single-family residence, or a second dwelling unit in a residential zone. The project's proposed new construction of a single-family residence is within a residentially zoned area on a legal parcel. As a separate and independent basis, the project is exempt from further CEQA review pursuant to Section 15183 of the CEQA Guidelines, which provides that projects which are consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified (i.e., the EIR for the Milpitas General Plan) shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. There are no such peculiar impacts associated with this project or its site.

PUBLIC COMMENT/OUTREACH

Staff provided public notice for the application in accordance with City and State public noticing requirements. A notice was published in the Milpitas Post on May 14, 2021. In addition, 13 notices were sent to owners and occupants within 300 feet of the project site. A public notice was also provided on the project site, on the City's Website, www.ci.milpitas.ca.gov, and posted at City Hall. At the time of writing this report, there have been no inquiries from the public.

RECOMMENDATION

STAFF RECOMMENDS THAT the Planning Commission:

1. Open the Public Hearing to receive comments;
2. Close the Public Hearing; and
3. Adopt Resolution No. 21-016, recommending approval of Site Development Permit Amendment No. SA21-0001 to the City Council, subject to the findings and attached Conditions of Approval.

ATTACHMENTS

A: Resolution No. 21-016
B: Project Plans

CITY OF MILPITAS
Planning Commission

MEETING MINUTES
7:00 PM
Wednesday, May 26, 2021
via Teleconference (Virtual Meeting)

CALL TO ORDER

Chair Tao called the meeting to order at 7:02 PM. Recording Secretary Elizabeth Medina called the roll.

PLEDGE OF ALLEGIANCE

Vice Chair Chuan led the pledge of allegiance.

ROLL CALL

PRESENT: Chair Tao, Vice Chair Chuan, Commissioner Albana, Alcorn, Belong, Ciardella, Galang

ABSENT: None.

STAFF: Ned Thomas, Jessica Garner, Martin de los Angeles, Adrienne Smith, Jaime Garcia, Elizabeth Medina

CONFLICT OF INTEREST DECLARATION

City Attorney Martin de los Angeles asked if any member of the Commission had any personal or financial conflict of interest related to any of the items on the agenda and there were none.

APPROVAL OF THE MEETING AGENDA

By motion, approve the meeting agenda for May 26, 2021.

Motion/Second Vice Chair Chuan/Commissioner Belong
Motion carried by a vote of AYES: 7 NOES: 0

APPROVAL OF MINUTES

By motion, approve the special meeting minutes for April 28, 2021.

Motion/Second Commissioner Belong/Commissioner Albana
Motion carried by a vote of AYES: 6 NOES: 0 ABSTAIN: 1 (Galang)

By motion, approve the regular meeting minutes for April 28, 2021.

Motion/Second Commissioner Alcorn/Commissioner Ciardella
Motion carried by a vote of AYES: 7 NOES: 0

ANNOUNCEMENTS

Chair Tao followed up with commissioners on required training for Sexual Harassment Prevention.

PUBLIC FORUM

Chair Tao invited members of the public to address the commission and there were none.

PUBLIC HEARING

IX-1 Zoning Text Amendment – Accessory Dwelling Units – P-ZA21-0003: A City-initiated Zoning Ordinance Text Amendment to regulate accessory dwelling units (ADUs) within the City of Milpitas. The proposed amendments modify regulations related to ADUs to comply with Government Code Sections 65852.2 and 65852.22. The proposed amendment is exempt

from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15282(h) (ordinance regarding second units in a single-family or multifamily residential zone). Project Planner: Rozalynne Thompson, (408) 586-3278, rthompson@ci.milpitas.ca.gov

**Continued from April 14th Planning Commission meeting.*

Recommendation: Staff recommends to move the item to a date certain, being June 23, 2021.

Motion/Second Commissioner Alcorn/Commissioner Albana
Motion carried by a vote of AYES: 7 NOES: 0

IX-2 HILLSIDE HOME – 517 Vista Rdg – P-SA21-0001: A request to amend Site Development Permit No. P-SA21-0001 to reduce the scope of previously approved plans from a two-story, 4,381-square foot home to a one-story, 3,000-square foot home. This Project is categorically exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15303(a) (New Construction or Conversion of Small Structures) and; as a separate and independent basis, the Project is exempt from further environmental review pursuant to CEQA Guidelines Section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning). Project Planner: Adrienne Smith, (408) 586-3287, asmith@ci.milpitas.ca.gov

Project Planner Adrienne Smith, City staff [*Jaime Garcia/Assistant Fire Marshal, Traffic and Transpiration Manager/Steve Chan]*, and applicant's team [*Ashish and Varsha Gandhi*] addressed commissioners' clarifying questions in regard to location of San Andreas fault to property area, setbacks for fire prevention, reason for reduction of previous approved permits, home association approval requirements, water supply via City of Milpitas, landscape maintenance/weed abatement in area for fire prevention, and emergency evacuation plans in the area.

Chair Tao invited members of the public to address the commission. The following resident(s) commented: John Doll.

Motion to close the Public Forum.

Motion/Second Commissioner Belong/Commissioner Ciardella
Motion carried by a vote of AYES: 7 NOES: 0

Recommendation: Staff recommends that the Planning Commission adopt Resolution No. 21-016, recommending approval of Site Development Permit Amendment No. SA21-0001 to the City Council, subject to the attached Conditions of Approval.

Motion/Second Commissioner Chuan/Commissioner Ciardella
Motion carried by a vote of AYES: 7 NOES: 0

NEW BUSINESS NO ITEMS.

ADJOURNMENT Chair Tao adjourned the meeting at 7:48 pm

Motion/Second Commissioner Galang/Commissioner Ciardella
Motion carried by a vote of AYES: 7 NOES: 0

Meeting Minutes submitted by
Planning Commission Secretary Elizabeth Medina

517 Vista Ridge - 2021

Planning Submission 4 - 5/18/2021

Site:

517 Vista Ridge Drive, Milpitas CA 95035

Contact:

Ashish & Varsha Gandhi
1502 Bond St, Milpitas, CA 95035
Phone: 925-324-3481

517 Vista Ridge | **Title Sheet**

1. Project Description
    1. Project Analysis
2. Site Plan
    1. Amended Proposed Site Plan
    2. Previous Approved Site Plan
3. Elevation Plan
    1. Proposed Elevation Plans - Color
    2. Previous Elevation Plans
4. Floor Plan
    1. Proposed Architectural Floor Plan
    2. Cabinets & Appliance Plan
5. Architectural Roof Plan
    1. Roof Plan
    2. Roof Drainage Plan
6. Electrical Plans
7. Mechanical Plan
8. Plumbing & Sprinklers Plans
9. Landscape & Irrigation Plan - NEW Plan included
10. Civil Plans - *Attached Document - Updated Based on Previous Comments*
    1. Proposed Site Plan
    2. Existing Conditions & Demolition Plans
    3. Grading, Drainage & Utility Plans
    4. Erosion Control Plans
    5. Boundary & Topographic Survey Plans
11. Structural Plans - *Attached Document*
    1. Foundation Plan
    2. Framing & Roof Plan
12. Structural Calculations - *Attached Document*
13. Title 24 Official Certificate - *Attached Document*
14. Septic Plan - *Attached Document*
15. Soil Report - *Attached Document*
16. Preliminary Title Report - *Attached Document*

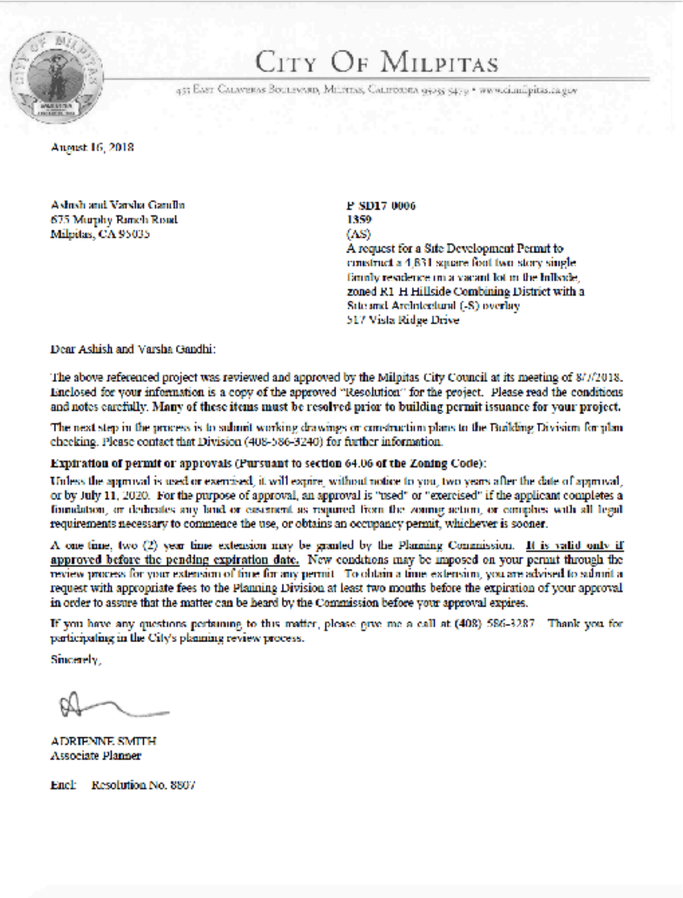
Project Description

517 Vista Ridge | **Project Description**

Building Design Criteria

- 2019 California Building Code (CBC)
- 2019 California Residential Code (CRC)
- 2019 California Mechanical Code (CMC)
- 2019 California Electrical Code (CEC)
- 2019 California Plumbing Code (CPC)
- 2019 California Energy Code (CEnC)
- 2020 Milpitas Municipal Code (MMC)

- Amendment to previously approved project
- Single Family Home
- Single Level max height ~17’
- 3000 sqft living area
- 370 sqft covered porches
- 704 sqft 3 car garage
- ~3000 sqft asphalt/pavers driveway
- Concrete Slab on Grade foundation
- Gabled roofs
- Connected to city water at curb
- Connected to PG&E at curb
- Approved Gravity Septic system



CITY OF MILPITAS

455 East Calaveras Boulevard, Milpitas, California 95035-5479 • www.ci.milpitas.ca.gov

August 16, 2018

Ashish and Varsha Gandhi
675 Murphy Ranch Road
Milpitas, CA 95035

P SD17 0006
1359
(AS)
A request for a Site Development Permit to construct a 4,831 square foot two story single family residence on a vacant lot in the Inlkside, zoned R1-H Hillside Combining District with a Site and Architectural (-S) overlay
517 Vista Ridge Drive

Dear Ashish and Varsha Gandhi:

The above referenced project was reviewed and approved by the Milpitas City Council at its meeting of 8/7/2018. Enclosed for your information is a copy of the approved "Resolution" for the project. Please read the conditions and notes carefully. **Many of these items must be resolved prior to building permit issuance for your project.**

The next step in the process is to submit working drawings or construction plans to the Building Division for plan checking. Please contact that Division (408-586-3240) for further information.

Expiration of permit or approvals (Pursuant to section 64.06 of the Zoning Code):

Unless the approval is used or exercised, it will expire, without notice to you, two years after the date of approval, or by July 11, 2020. For the purpose of approval, an approval is "used" or "exercised" if the applicant completes a foundation, or dedicates any land or easement as required from the zoning action, or complies with all legal requirements necessary to commence the use, or obtains an occupancy permit, whichever is sooner.

A one time, two (2) year time extension may be granted by the Planning Commission. **It is valid only if approved before the pending expiration date.** New conditions may be imposed on your permit through the review process for your extension of time for any permit. To obtain a time extension, you are advised to submit a request with appropriate fees to the Planning Division at least two months before the expiration of your approval in order to assure that the matter can be heard by the Commission before your approval expires.

If you have any questions pertaining to this matter, please give me a call at (408) 586-3287. Thank you for participating in the City's planning review process.

Sincerely,

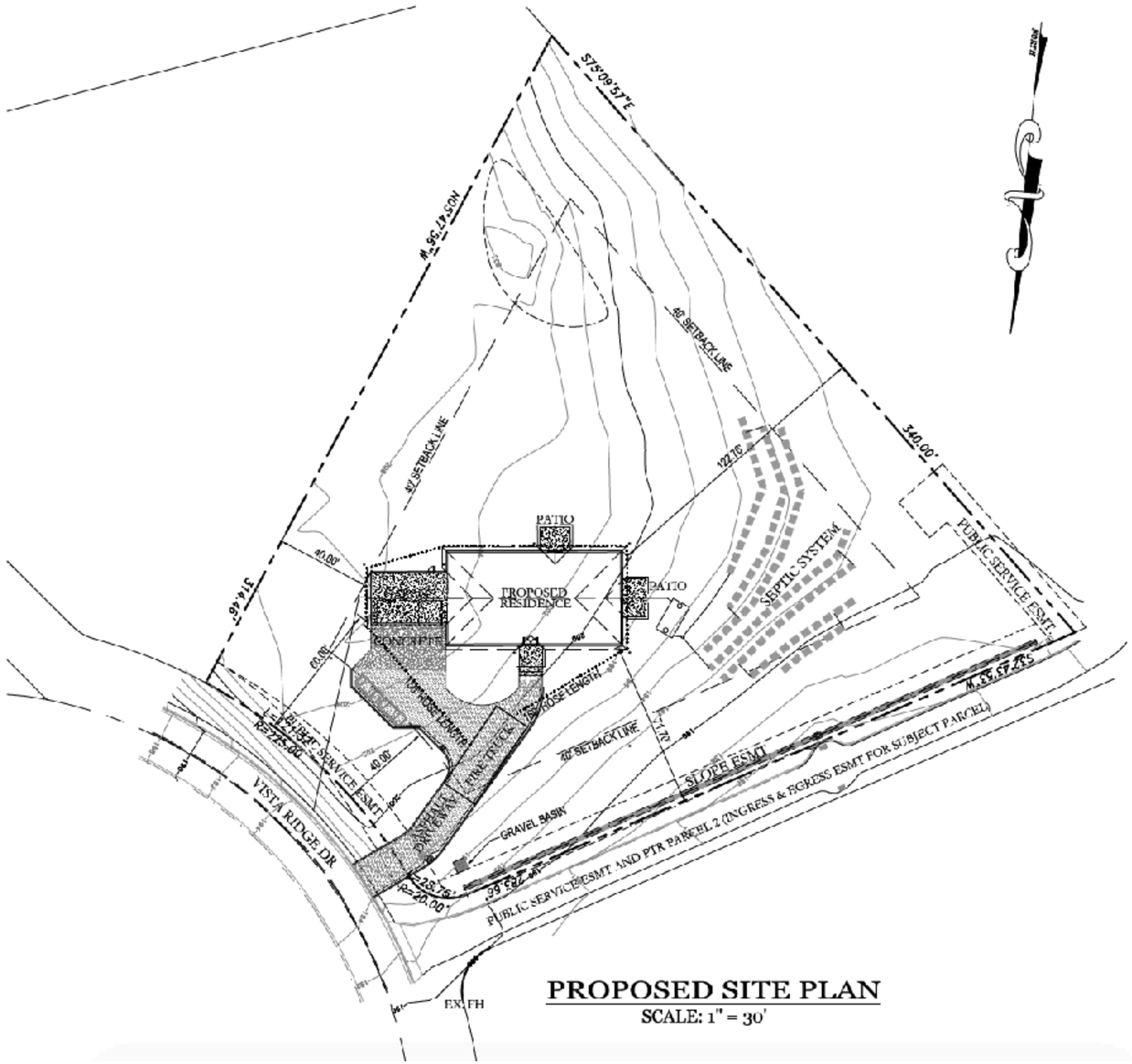
ADRIENNE SMITH
Associate Planner

Encl: Resolution No. 8807

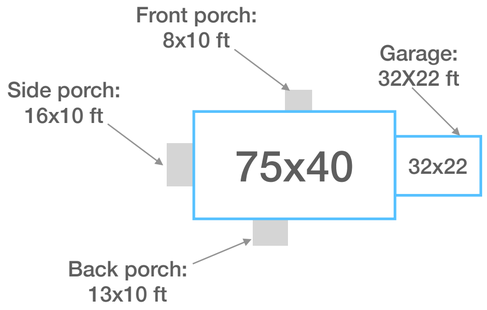
Project Analysis		
	Previously Approved	**New Proposed**
Lot Size	1.56 acres	1.56 acres
Zoning	R1-H	R1-H
Allowable Max Height	27’	27’
Allowable Max Covered Area	6000 sf	6000 sf
Allowable Max Impervious Area	8000 sf	8000 sf
House Height	27’	~17’
House Size		
First Floor	3034 sf	3000 sf
Second Floor	1797 sf	0
Total Living Space	4831 sf	3000 sf
Garage	736 sf	704 sf
Covered Porches	387 sf	370 sf
Unconditioned Area	27 sf	0 sf
Total Area Under Roof	5981 sf	4074 sf
Impervious Surface Area		
House + Garage + Porches Footprint	4184 sf	4074
Swim Spa	150 sf	0 sf
Patio Areas	2299 sf	0 sf
Driveway Concrete	0	826 sf
Driveway Asphalt		2850 sf
Total Impervious Area	6512 sf	7750 sf
Pervious Surface Area		
Driveway, Hydro Flo Paving	5716 sf	0 sf
Grading Earthwork Estimated Excess	160 cy	56 cy
Sewage System	Gravity Flow Septic - Approved	Gravity Flow Septic - Same design
Landscaping	As per plan	New Landscaping Plan
Irrigation Plans	As per proposed	No Irrigation Plan
Planting Plan	As per proposed	As per Landscape Plan
Fencing & Gate	As per plan	No Fencing or Gate
Fire Sprinklers	100%	100%
Type Of Construction	V-B w/AFES CBC 310.1 = R3 & 312.1 =U	
Occupancy Classified	R-3 @ House & U-1 @ Private Garage	R-3 @ House & U-1 @ Private Garage
Building Envelop Setbacks	40’	40’
Nearest house	300’	300’

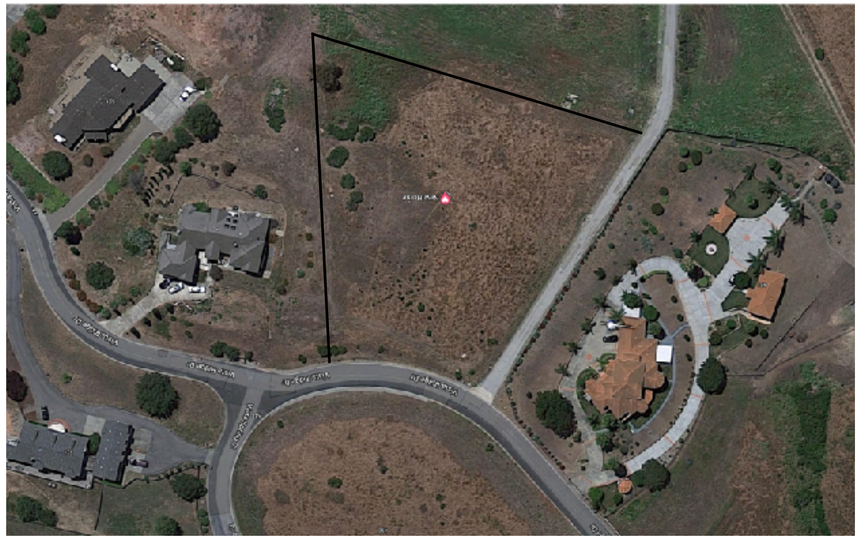
Site Plan

517 Vista Ridge | **Amended Proposed Site Plan - See Civil Plans For Details**

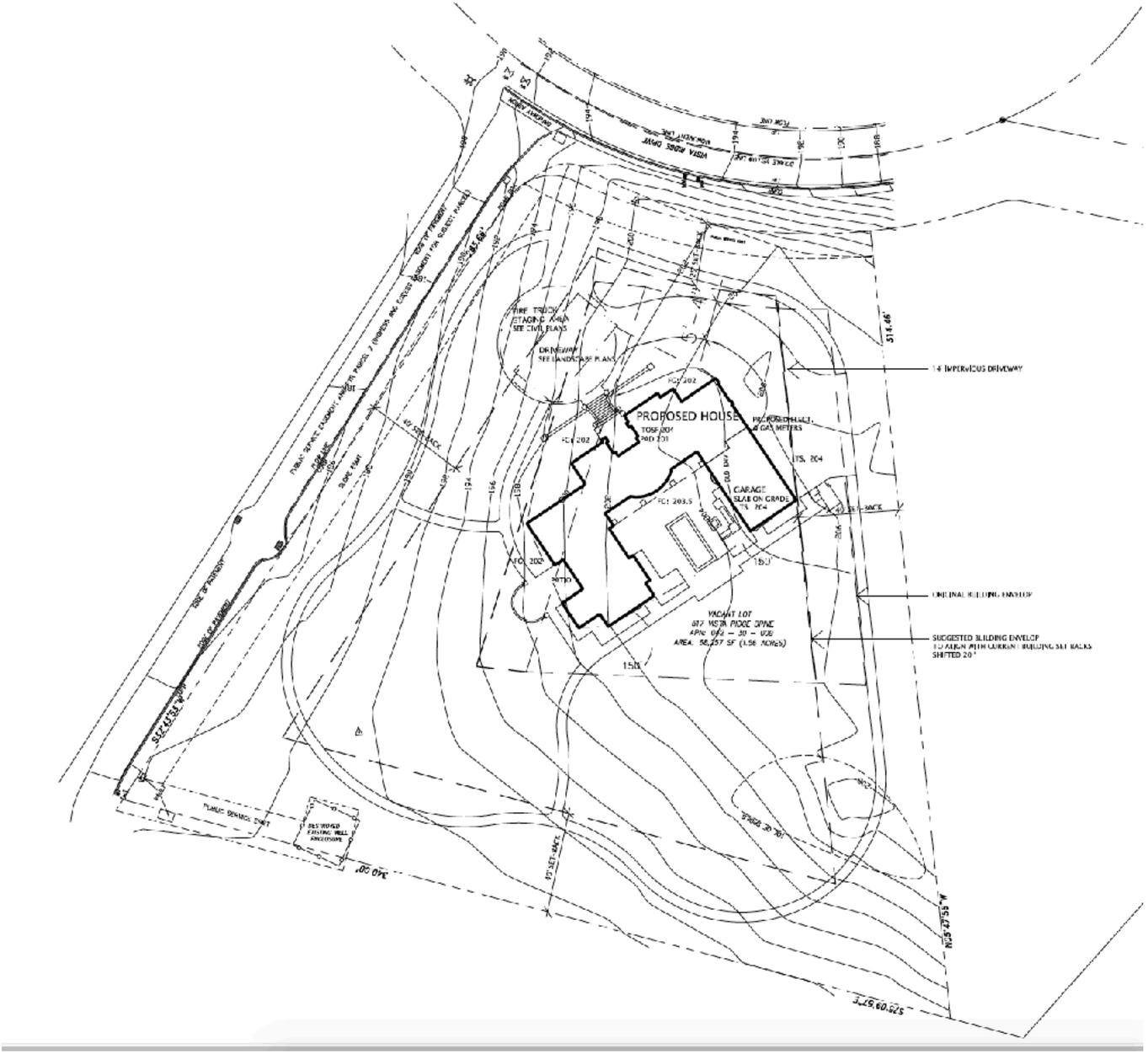


House Living Area: 3000 sqft
Covered Porches: 370 sqft
Garage: 704 sqft
Asphalt Driveway: 2850 sqft
Concrete Driveway: 826 sqft





517 Vista Ridge | **Previous Approved Site Plan - 08/08/2018**



Elevations

517 Vista Ridge | **Proposed Elevations**

Gallery Collection 9/18 ft. x 7 ft.
6.5 R-Value Insulated White Garage Door
with SQ24 Window

https://www.homedepot.com/p/Clopay-Gallery-Collection-8-ft-x-7-ft-6-5-R-Value-Insulated-White-Garage-Door-with-SQ24-Window-GR1LP-SW-SQ24/204598497

Front View

Left View

Right View

Roof Color: Tesla Solar Tiles

Trims & Wood Pillars Color

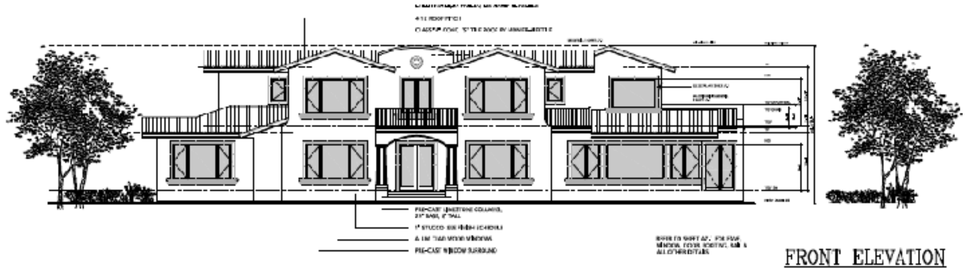
Exterior Wall
Traditional Stucco 20/30 Finish

Rear View

Stacked Stone #25 Mocha
24 in. x 48 in.
Stone Veneer Panel

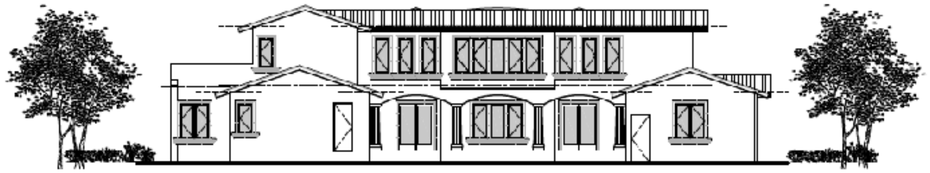
https://www.homedepot.com/p/Urestone-Stacked-Stone-25-Mocha-24-in-x-48-in-Stone-Veneer-Panel-4-Pack-DP2625-25/205406654#overlay

517 Vista Ridge | **Previous Elevation Plan**



FRONT ELEVATION

RIGHT ELEVATION



REAR ELEVATION

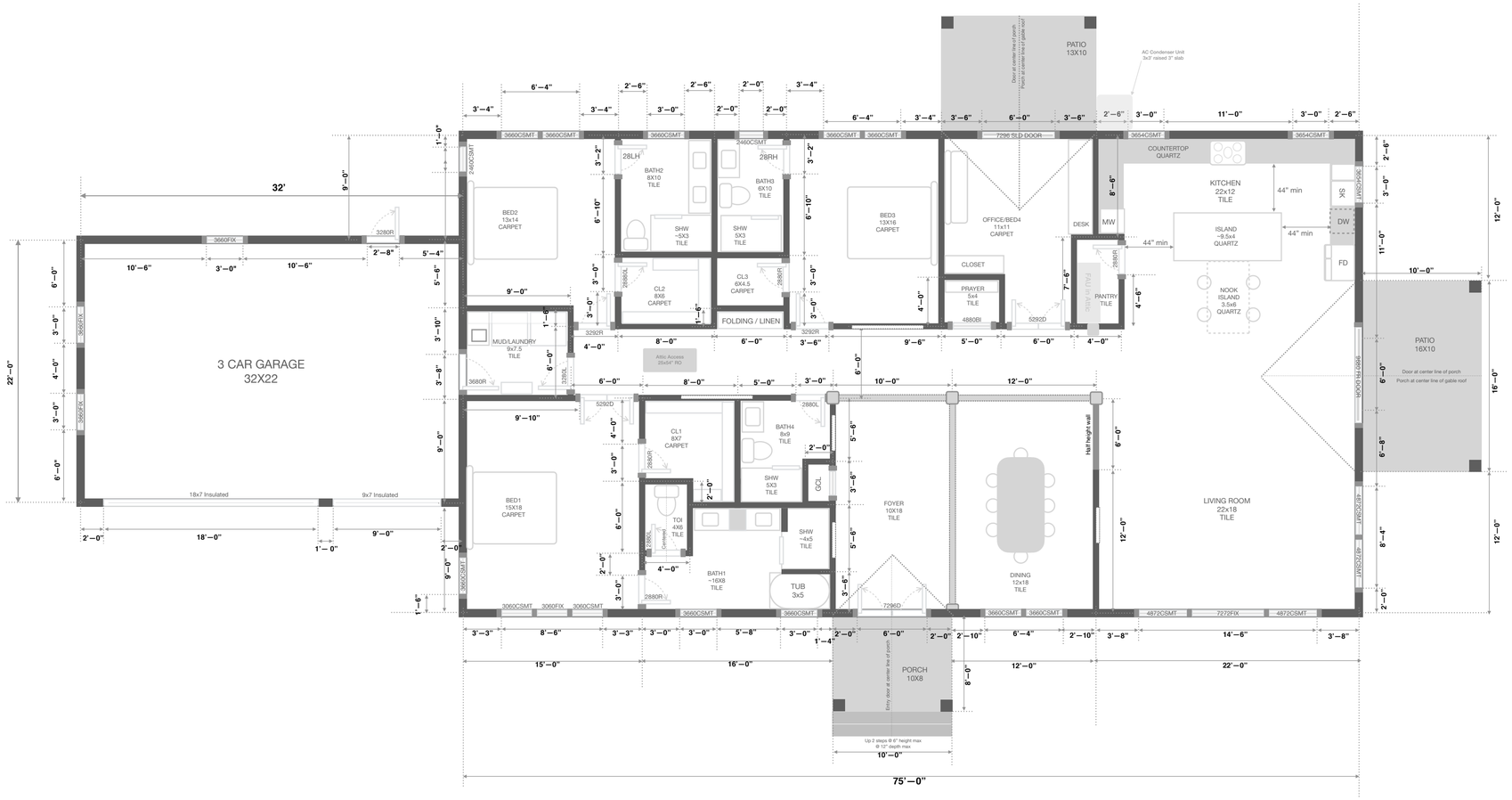
LEFT ELEVATION

FRONT ELEVATION

APN #
Tract #
Lo

Floor Plan

517 Vista Ridge | **Architectural Floor Plan**



Notes

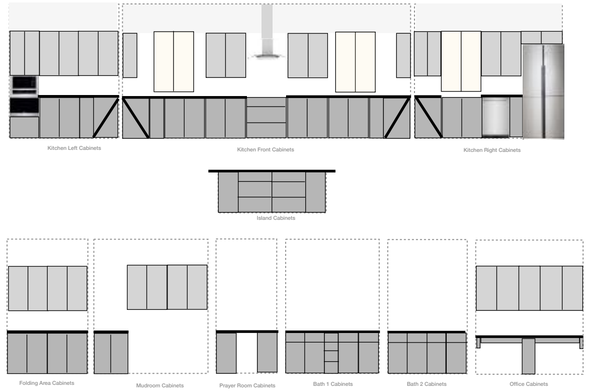
- All exterior walls constructed with 2x6s
- All Interior walls constructed with 2x4s
- Written dimensions shall have precedence over scaled dimensions
- All work performed in accordance with the Prevailing building codes and local applicable codes and ordinances
- Window placements
    - All windows are 2 feet from the top
    - Living and Dinning Room windows are 2 feet above floor
    - Kitchen windows start 42” above the floor
    - Bedroom windows start 36” above the floor
    - Bathroom windows start 36” above the floor
- Door Heights
    - Entry, Bedroom doors to be 92”
    - Bath and Closet doors to be 80”
- Interior wall thickness approximately 6”
- Exterior wall thickness approximately 9”

Windows:
7272FIX - 1
4872CST - 4
3654CST - 3
3660CST - 7
3660FIX - 3
2460CST - 2
3060CST - 2
3060FIX -1

Doors
6X7 French - 1
8X7 French -1
6X8 Entry - 1
Garage EXT - 1
Office DBL - 1
BED1 DBL - 1
36RH - 1
32RH - 1
32LH - 2
28RH - 5
28LH - 4
36 BIFOLD - 1
GARAGE 18’ - 1
GARAGE 9’ - 1

APN #
Tract #
Lot

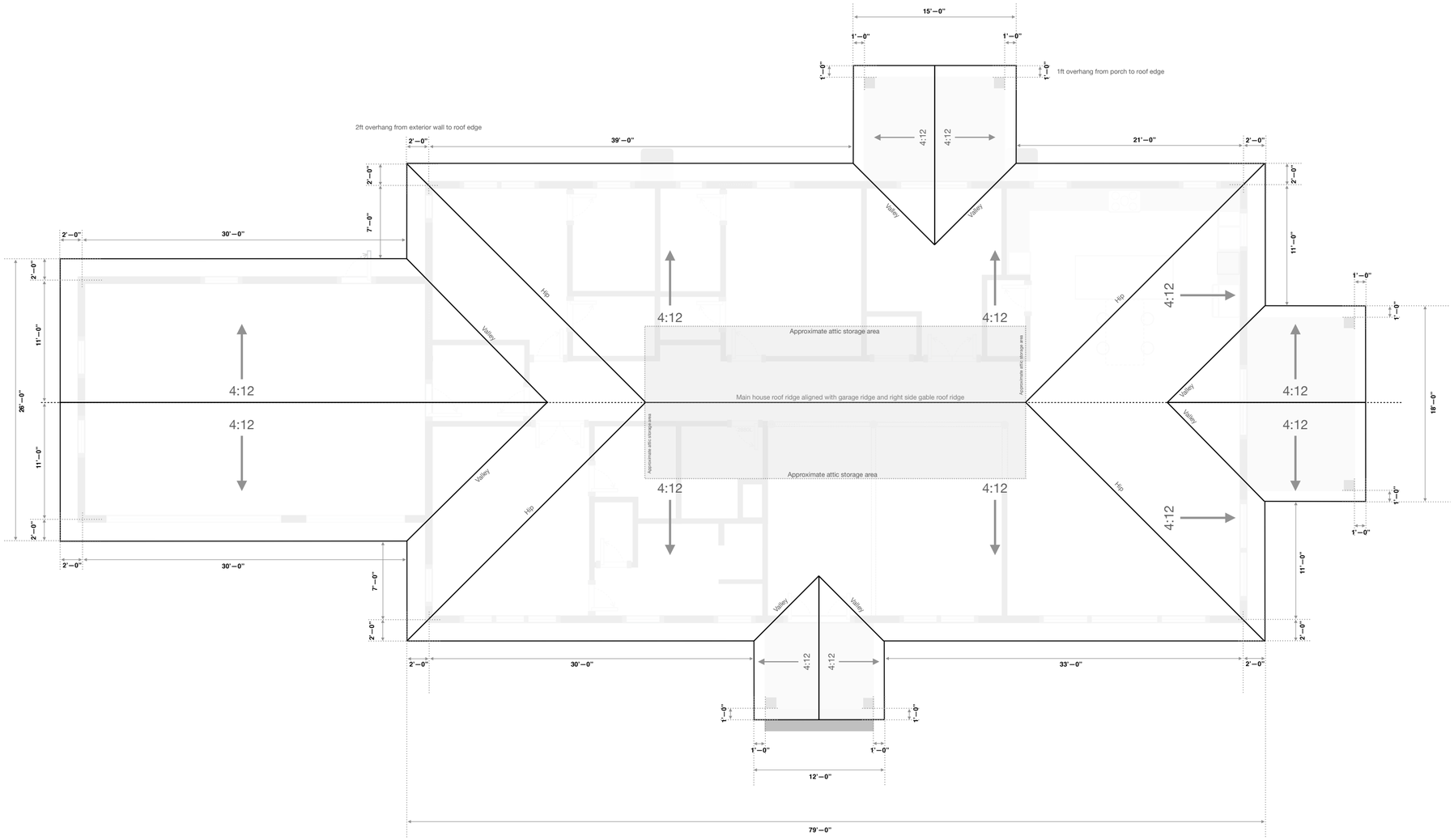
517 Vista Ridge | **Cabinets & Appliance Plan**



APN #
Tract #
Lot

Architectural Roof Plan

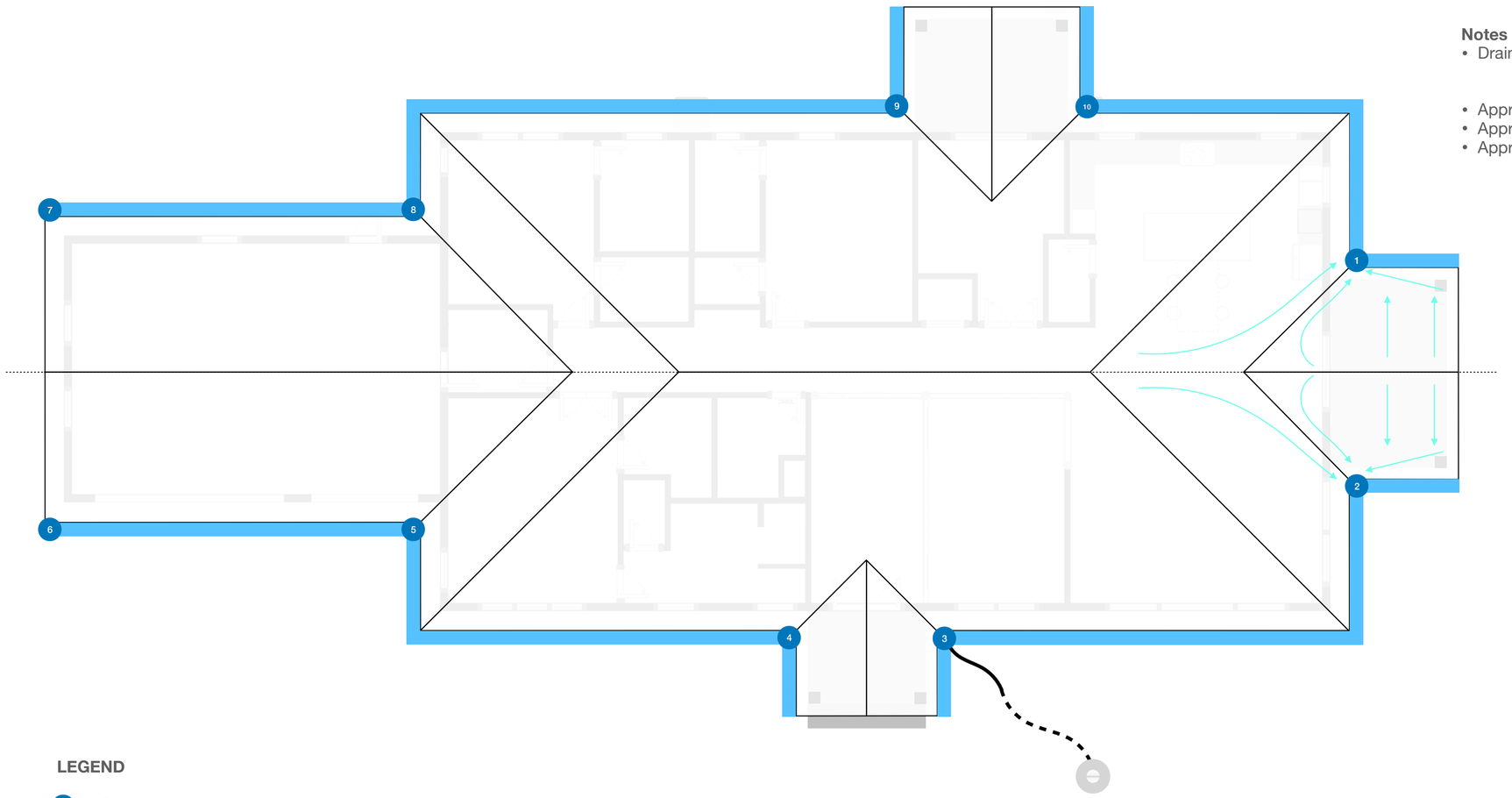
517 Vista Ridge | **Architectural Roof Plan**



Notes

- Roof overhang 2'—0" from center line of exterior wall unless otherwise noted
- Roof overhang 1'—0" from porch or patio edge at gable roof
- Main house ridge aligned with garage ridge and right side gable roof ridge
- All roof pitch fixed to 4:12 unless otherwise specified by structural engineer

517 Vista Ridge | **Roof Drainage Plan**



Notes

- Drainage designed for I_{100} watershed capacity
  - I_{100} = 4.71 inches per hour on hillside (East of Piedmont Rd, 680 Fwy)
  - Based on County of Santa Clara drainage manual, 3rd edition
- Approximate roof area main house 3500sqft
- Approximate roof area of garage roof = 1060sqft
- Approximate roof area of 3x gable roof = 220sqft

LEGEND

- Downspout
- Roof Gutter
- Drywell with vent pipe and cap
- Solid PVC
- Corrugated, perforated PVC
- Watershed on rooftop

https://www.hunker.com/12469994/how-to-calculate-gutter-and-downspout-capacity
http://www.ci.milpitas.ca.gov/_pdfs/engDesignGuidelines/eng_dg_xiii_rainfallIntens[illegible]df

Electrical Plans

517 Vista Ridge | Electrical Plan — Fixtures, Switches, Outlets

Notes:

- All electrical fixture and switch wiring shall use 14-guage non-metallic type with ground — 14/2 NM-B W/G
- Switch plates shall be mounted 54” above finished floor (AFF), unless otherwise noted in drawing
- This drawing shows outlets mounted at switch height
- Kitchen countertop outlets located every 4’
- Any outlet within 6ft of water source (sink, dishwasher, fridge) will be of GFCI type
- Room light switches shall be placed within 2’ of entry door into room
- Combination smoke and carbon monoxide alarms shall be placed in every bedroom, hallway, and foyer. Mounted on ceiling at least 6” away from walls and away from any HVAC vents
- Two grounding electrode rods driven 8’ below grade shall be installed at least 6’ apart from each other and 2’ feet away from the exterior wall of the house

Legend

- — Garage door opener
- — Light/Fixture Switch
- — Standard 120V outlet (GFCI if ‘G’)
- — Fan fixture
- — Exhaust fan
- — LED light fixture
- — Tube light fixture
- — Exterior motion sensor light fixture
- — 220V HV outlet
- — RG6 coax cable outlet
- — Smoke and CO combination alarm

R314.1 Smoke detection and notification.
All smoke alarms shall be listed and labeled in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

R314.3 Location.
Smoke alarms shall be installed in the following locations:
1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

R314.4 Power source.
Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

R314.5 Interconnection.
Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

R315.1 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

517 Vista Ridge | Electrical Plan — Interior and Exterior Outlets

Notes:

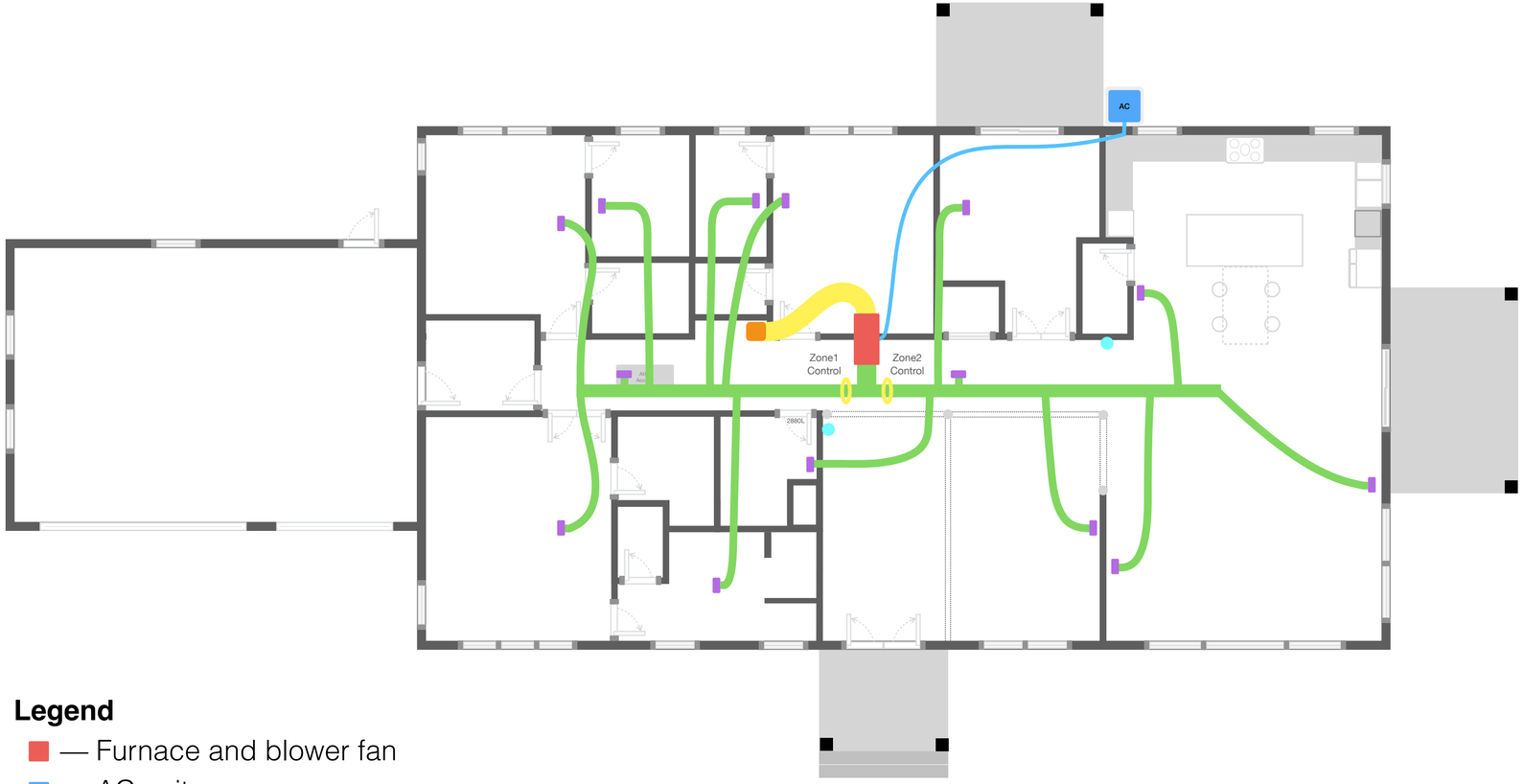
- Outlet placement shall follow the 6ft/12ft rule

Legend

- — Standard 120V outlet (GFCI if ‘G’)
- — 220V HV outlet

Mechanical Plan

517 Vista Ridge | **HVAC Plan — Vents, Ducts, Furnace, Compressor**



Legend

- — Furnace and blower fan
- — AC unit
- — Supply register
- — Supply duct
- — Return register
- — Return duct
- — Thermostat
- — Zone control air valve

- Air ducts in attic
- Air vents on ceiling
- Furnace/blower assembly in attic
- 2-zone system controlled by air dampener valves

Design Criteria

- Choose desired exchange cycle to be **14 minutes** for home, then (CFM = volume / rate)
- Below table calculates CFM needed per room
- One ton ~ 12000 BTU ~ 400CFM
- 1kW ~ 3400 BTUs

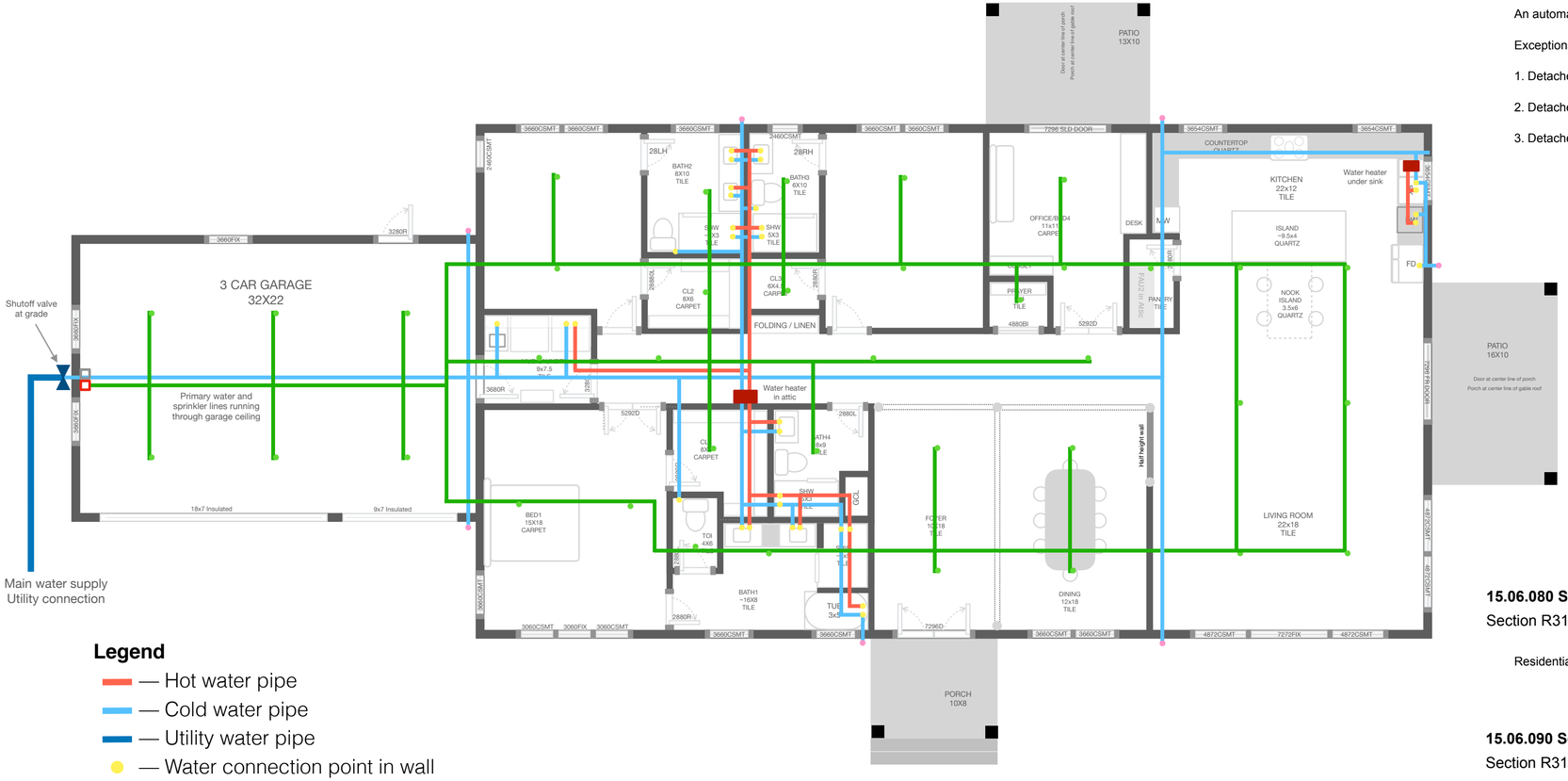
Zone1 Areas	L (ft)	W (ft)	Volume (ft³)	CFM Need
Bed1	15	18	2700	193
Bed2	13	16	2080	149
Bed3	13	16	2080	149
Bath1	8	16	1200	86
Bath2	8	10	800	57
Bath3	6	10	600	43
Hallway Part	40	6	2400	171
Total			11860	847

Zone 2 Areas	L (ft)	W (ft)	Volume (ft³)	CFM Need
Bed4/Office	13	13	1690	121
Bath4	8	9	720	51
Hallway Part	25	6	1500	107
Foyer (12ft)	18	10	2160	154
Dining	18	12	2160	154
Living	22	18	3960	283
Kitchen	22	16	3520	251
Total			15710	1122

- Total need about 2000 CFM
- 5-ton, 16+ Seer
- Two stage variable speed split system with electric heating
- Energy Star complaint

Plumbing Plans

517 Vista Ridge | **Plumbing Plan — Top Out**



Legend

- — Hot water pipe
- — Cold water pipe
- — Utility water pipe
- — Water connection point in wall
- — Electric water heater
- — Exterior hose bib
- — Water softener loop
- — Fire sprinkler system
- — Fire sprinkler water pipe
- — Fire sprinkler head

15.06.040 Section R313.2—One- and two-family dwelling automatic fire system.

Section R313.2 is amended to read as follows:

An automatic sprinkler system shall be installed and maintained in all newly constructed California Residential Code regulated buildings.

Exceptions:

1. Detached Group U occupancies 1,000 sq. ft. or less. Agricultural buildings and private riding arenas as approved by the fire or building code official.
2. Detached pool houses up to 1,000 sq. ft. in floor area within 50 feet of the pool and limited to a single bathroom.
3. Detached Car Ports of non-combustible construction with no habitable space above.

15.06.080 Section R313.4—Residential sprinkler pressure relief.

Section R313.4 is added to read as follows:

Residential fire sprinkler systems must have an NFPA 13D approved pressure relief valve when static pressures are greater than 80 psi.

15.06.090 Section R313.5—Residential freeze protection.

Section R313.5 is added to read as follows:

Residential fire sprinkler systems shall have adequate freeze protection to address outside temperatures below 40 degrees Fahrenheit. This can be achieved by insulating coverings or other reliable means of maintaining a minimum temperature of 40 degrees Fahrenheit.

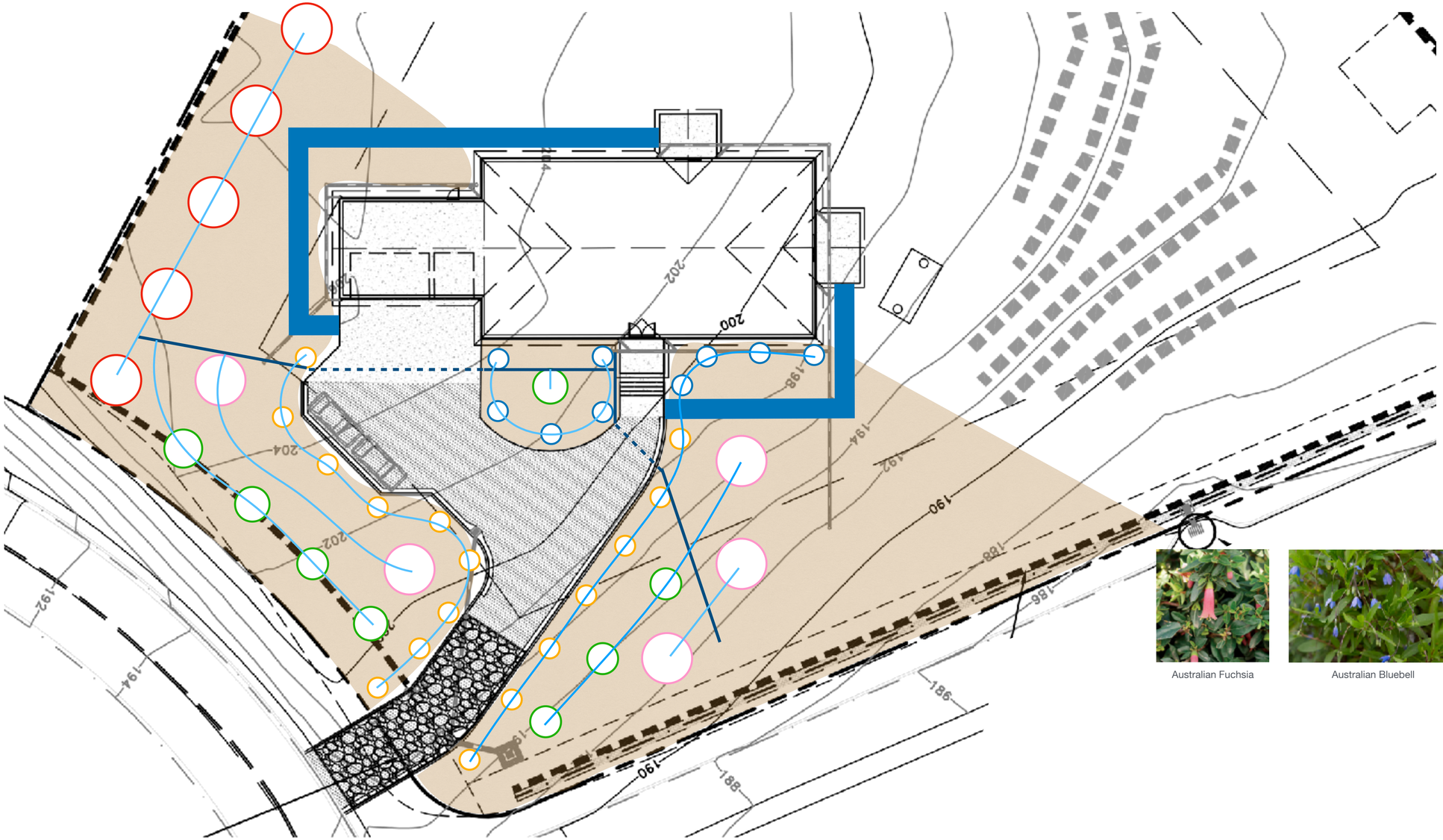
517 Vista Ridge | Plumbing Plan — Rough In Underground

Legend

- — Drain or soil pipe (under slab)
- — Shower or bathtub p-trap (under slab)
- — Washing machine p-trap (in wall above slab)
- — Fixture drain connection point
- — Fixture drain vent connection
- — Drain line clean-out

Landscape Plan

517 Vista Ridge | **Landscaping & Irrigation Plan**



Planting Legend

	Common Name	Botanical Name	Size (gallons)	WUCOLS
	Australian Fuchsia	Correa	3	Low
	Australian Bluebell	Sollya heterophylla	3	Low
	Japanese Boxwood	Buxus microphylla	3	Low
	Ice Plant	Ice Plant	3	Low
	Various Fruit Trees	NA	20	N/A
	PVC Pipe 1”			
	Drip Pipes			

Landscaping Legend

	Cover Material	Type
	River Rocks	Porous Groundcover
	Bark Mulch	Porous Groundcover

Australian Fuchsia

Australian Bluebell

Japanese Boxwood

Ice Plant

River Rocks

Bark Mulch

Civil Plans

See Civil Sheets for Details

Structural Plans

See Structural Sheets for Details and Calculations

PROPOSED SITE PLAN

FOR

517 VISTA RIDGE DR, MILPITAS, CA 95035

SCALE: 1" = 30'

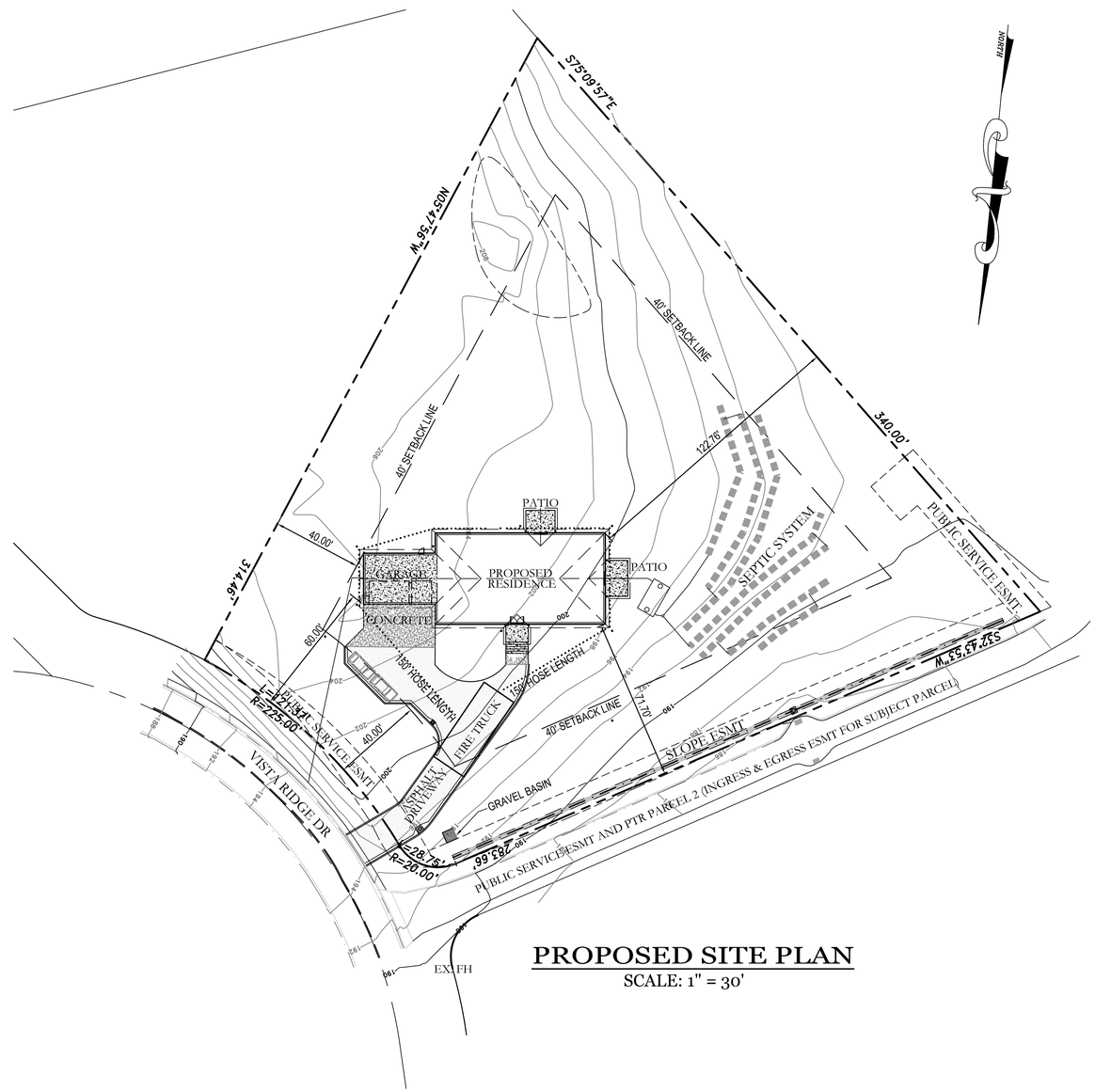
MAY 18, 2021

LEGEND

SYMBOL EXISTING	SYMBOL PROPOSED	DESCRIPTION
		HINGE LINE/TOP/TOE
		CONCRETE V-DITCH
		GRADED SWALE
205	202	CONTOUR LINES
		DAYLIGHT LINE/LIMIT OF GRADING
		PROPERTY LINE/ BOUNDARY / RIGHT-OF-WAY
		EASEMENT LINE
		CENTERLINE (℄)
		FENCE (CHAIN LINK)
		DRIVEWAY
		CURB, GUTTER & SIDEWALK
		RETAINING WALL (AS DESCRIBED) w/ SUB-DRAIN
		CITY STANDARD BARRICADE
8"W	8"W	WATER LINE AND VALVE
8"SS	8"SS	SANITARY SEWER LINE AND MANHOLE OR CLEANOUT
15"SD	15"SD	STORM DRAIN LINE AND MANHOLE
SDCO		4" PERF/SOLID SUBDRAIN WITH CLEANOUTS
WM	WM	WATER LATERAL / METER
	4"SS	SANITARY SEWER CLEANOUT (SSCO)
		AREA DRAIN WITH SUMP BOTTOM (NDS 1212 OR APPROVED EQUAL)
		FLAT DRAIN INLET AS SPECIFIED
		FIRE HYDRANT
	RELOCATED	STREETLIGHT STANDARD WITH MAST ARM AND LUMINAIRE (ELECTROLIER)
		PULL BOX (AS NOTED)
E	E	ELECTRICAL CONDUIT
G	G	GAS MAIN
T	T	TELEPHONE CONDUIT
		STREET MONUMENT
		BOLLARD
		JOINT POLE w/ GUY ANCHOR
		TREE
EX. VAULT		SUB-SURFACE VAULT AS DESCRIBED
	10	CURVE DATA NUMBER
	2%	PERCENT GRADE
		OVERLAND RELEASE PATH
		VERTICAL GRADE BREAK (PROFILE)
	BR #1	BIO-RETENTION AREA NUMBER

ABBREVIATIONS

AB	AGGREGATE BASE	N/B	NORTH BOUND
AC	ASPHALT CONCRETE	P	PAD
AD	AREA DRAIN	PA	PLANTER AREA
BC	BEGIN CURVE	PL, P/L	PROPERTY LINE
BM	BENCHMARK	PCC	POINT OF COMPOUND CURVATURE
BMP	BEST MANAGEMENT PRACTICE	PERF.	PERFORATED
BOT.	BOTTOM	PIEE	PRIVATE INGRESS & EGRESS EASEMENT
BSW	BACK OF SIDEWALK	PRC	POINT OF REVERSE CURVATURE
BVC	BEGIN VERTICAL CURVE	PROJ.	PROJECTED
BW	BOTTOM OF WALL (EXPOSED)	PSDE	PRIVATE STORM DRAIN EASEMENT
CL	CENTER LINE	PUE	PUBLIC UTILITY EASEMENT
CB	CATCH BASIN	PV	PAVEMENT/ASPHALT GRADE
CO	CLEAN OUT	PVI	POINT OF VERTICAL INTERSECTION
CR	CURB RETURN	R=	RADIUS OF CURVE
DI	DRAIN INLET	△=	INCLUDED ANGLE OF CURVE
DS	ROOF DOWN SPOUT	L=	ARC LENGTH OF CURVE
EC	END CURVE	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	RIM	RIM ELEVATION
EP	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
EVC	END VERTICAL CURVE	S	SLOPE
EX	EXISTING	S/B	SOUTH BOUND
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT	SD	STORM DRAIN
FC, F/C	FACE OF CURB	SDCO	STORM DRAIN CLEANOUT
FDC	FIRE DEPARTMENT CONNECTION	SDE	STORM DRAIN EASEMENT
FF	FINISHED FLOOR	SDMH	STORM DRAIN MANHOLE
FG	FINISHED GRADE	SE	SIDEWALK EASEMENT
FH	FIRE HYDRANT	SF	SQUARE FEET
FL	FLOW LINE	S.O.	SIDE OPENING
FOGLN	FOG LINE (WHITE STRIPE)	SS	SANITARY SEWER
GB	GRADE BREAK	SSE	SANITARY SEWER EASEMENT
GI	GREASE INTERCEPTOR	SSCO	SANITARY SEWER CLEANOUT
GM	GAS METER	SSMH	SANITARY SEWER MANHOLE
GR	GRATE ELEVATION	STD	STANDARD
HP	HIGH POINT	TB	TOP OF BERM
IRR	IRRIGATION	TC	TOP OF CURB
JT	JOINT TRENCH	TCM	TREATMENT CONTROL MEASURE
LF	LINEAL FEET	TW	TOP OF WALL
LIP	LIP OF GUTTER	TYP	TYPICAL
LP	LOW POINT	VC	VERTICAL CURVE
MAX	MAXIMUM	W	WATER LINE
MH	MANHOLE	WM	WATER METER
MIN	MINIMUM		



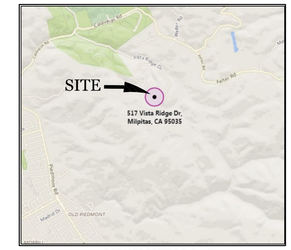
PROPOSED SITE PLAN

SCALE: 1" = 30'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. *ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF MILPITAS STANDARD DETAILS AND SPECIFICATIONS.*
2. *AN ENCROACHMENT PERMIT IS NEEDED FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENTS.*
3. *APPROVAL OF THESE PLANS DOES NOT RELIEVE THE DEVELOPER OF THE RESPONSIBILITY FOR THE CORRECTION OF MISTAKES, ERRORS OR OMISSIONS.*
4. *THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR WORKING CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL NOT BE LIMITED TO NORMAL WORKING HOURS. WORK SHALL NOT BEGIN UNTIL ADEQUATE TEMPORARY BARRICADES, BARRIERS, FENCES, WARNING, AND CONTROL DEVICES ARE IN PLACE.*
5. *THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING IMPROVEMENTS SUCH AS CURB AND GUTTER, PAVEMENT AND FENCES, OR UNDERGROUND UTILITIES DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTORS OR MATERIAL SUPPLIERS, TO THE SATISFACTION OF THE CITY ENGINEER AND OWNER OF THE DAMAGED EXISTING IMPROVEMENTS.*
6. *CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED INSPECTIONS AND SHALL PROVIDE NOTIFICATION 48 HOURS IN ADVANCE TO THE CITY INSPECTOR, CITY ENGINEER, SOILS ENGINEER, AND ANY OTHER REQUIRED PUBLIC AGENCY.*
7. *THE CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS OF PRIVATE PROPERTY ADJACENT TO THE WORK THROUGHOUT THE PERIOD OF CONSTRUCTION.*

SHEET INDEX

SHEET NO.	DESCRIPTION
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C-2	BOUNDARY & TOPOGRAPHIC SURVEY
C-3	GRADING, DRAINAGE & UTILITY PLAN
C-4	GRADING, DRAINAGE & UTILITY PLAN CONTINUED
C-5	EROSION CONTROL PLAN & DETAILS
C-6	DETAILS

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DATE: MAY 18, 2021					
SCALE: AS NOTED					
DRAWN: DSK					
DESIGNED: DSK					
ENGINEER: DSK					
MANAGER: DSK	NO.	BY	DATE	REVISIONS	CITY APPR

PREPARED BY, OR UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER DILIP S. KISHNANI C 51620 STATE OF CALIFORNIA

PREPARED BY:

STERLING CONSULTANTS

46560 FREMONT BOULEVARD, UNIT NO. 205
FREMONT, CA 94538
1sterlingconsultants@gmail.com PHONE: 510.344.8955 x100

PREPARED FOR:

ASHISH & VARSHA GANDHI
517 VISTA RIDGE DRIVE
MILPITAS, CA
TEL: 925-324-3481

APN: 042-30-009 517 VISTA RIDGE DRIVE

TITLE SHEET - PROPOSED SITE PLAN & GENERAL NOTES

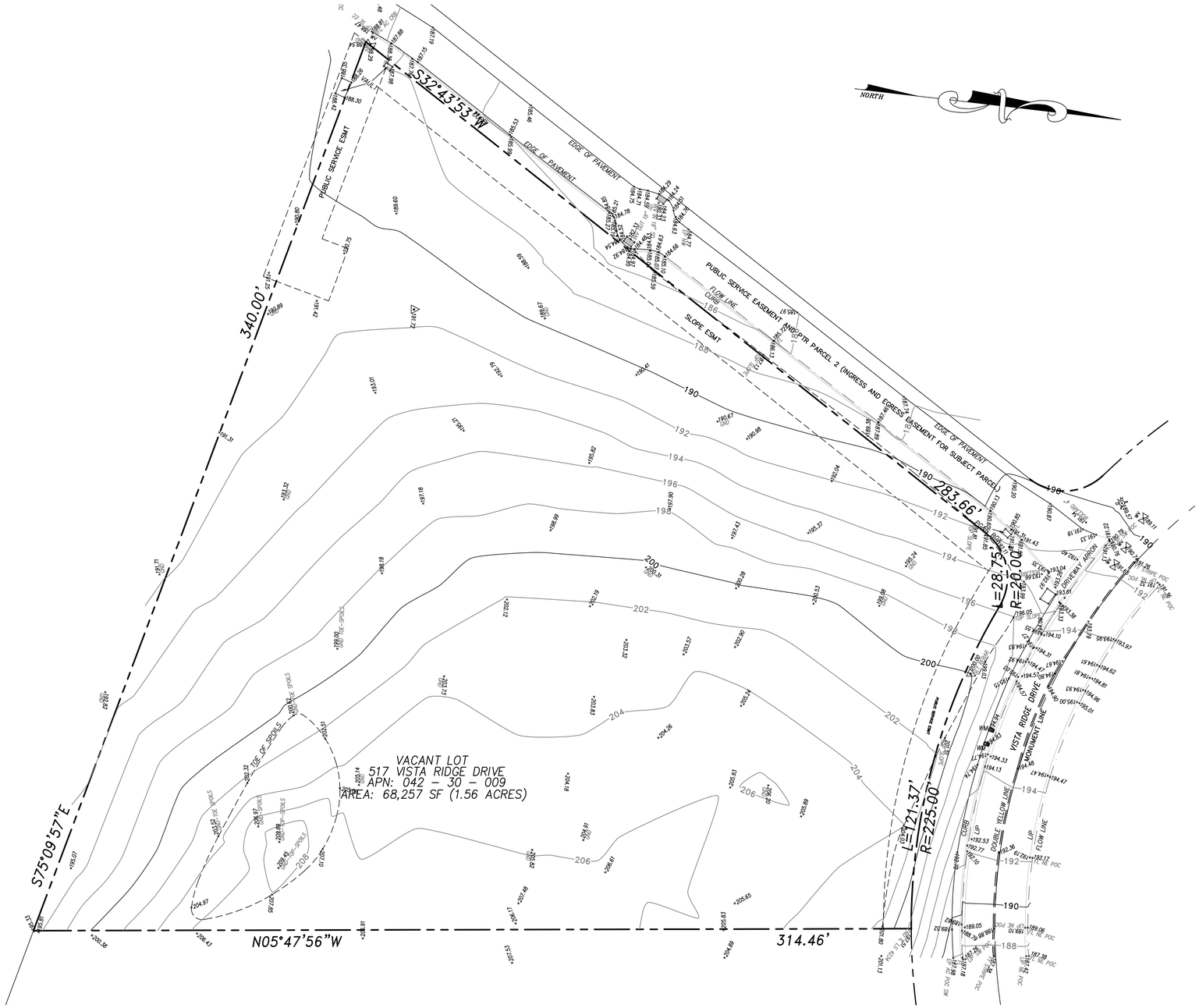
CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-1

1 OF 6 SHEETS

JOB NO. 2017-284

PRINTED: MAY 18, 2021



LEGEND

SYMBOL	DESCRIPTIONS
	BOUNDARY / RIGHT-OF-WAY LINE
	EASEMENT LINE
	CENTERLINE (℄)
	CONCRETE FENCE
	GOOD NEIGHBOR WOOD FENCE
LOW SIDE / HIGH SIDE	RETAINING WALL
— EX. SS —	SANITARY SEWER LINE AND MANHOLE OR CLEANOUT
	DRAIN INLET
2%	PERCENT GRADE
× 607.0	EXISTING GRADE ELEVATION
185	EXISTING CONTOUR w/ ELEVATION
	EXISTING TREE w/ DBH
	EXISTING WATER METER

ABBREVIATIONS	
AC	AIR CONDITIONER UNIT
AD	AREA DRAIN
BSW	BACK OF WALK
BW	BOTTOM OF WALL (EXPOSED FACE)
CONC.	CONCRETE
DBH	DIAMETER AT BREAST HEIGHT
DI	DRAIN INLET
DS	DOWNSPOUT
EP	EDGE OF PAVEMENT
EM	ELECTRIC METER
EX	EXISTING
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE ELEVATION
FL	FLOW LINE ELEVATION
FW	FACE OF WALL
GM	GAS METER
MB	MAIL BOX
O/H	OVERHEAD
PL	PROPERTY LINE
PUE	PUBLIC UTILITY EASEMENT
R=	RADIUS OF CURVE
Δ=	INCLUDED ANGLE OF CURVE
L=	LENGTH OF CURVE
WM	WATER METER

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GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

BENCHMARK: ASSUMED 200.00 @ CONTROL POINT # 101 AS SHOWN.

BASIS OF BEARINGS: N47°42'48"W BETWEEN THE MONUMENT AT VISTA RIDGE DR./VISTA SPRING CT. AND THE MONUMENT AT VISTA RIDGE DR./VISTA NORTE CT. AS SHOWN THE MAP OF TRACT 6744 IN BOOK 505 OF MAPS PAGES 10-15, S.C.C.R.

GROSS AREA: 47,004 SF (1.079 Ac)

BOUNDARY: BOUNDARY BASED UPON FIELD SURVEY PERFORMED BY HELMUT KORSTICK, PLS 7739.

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APN: 042-30-009 517 VISTA RIDGE DRIVE

BOUNDARY & TOPOGRAPHIC SURVEY

CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-2
2 OF 6 SHEETS
JOB NO. 2017-284

PRINTED: MAY 18, 2021

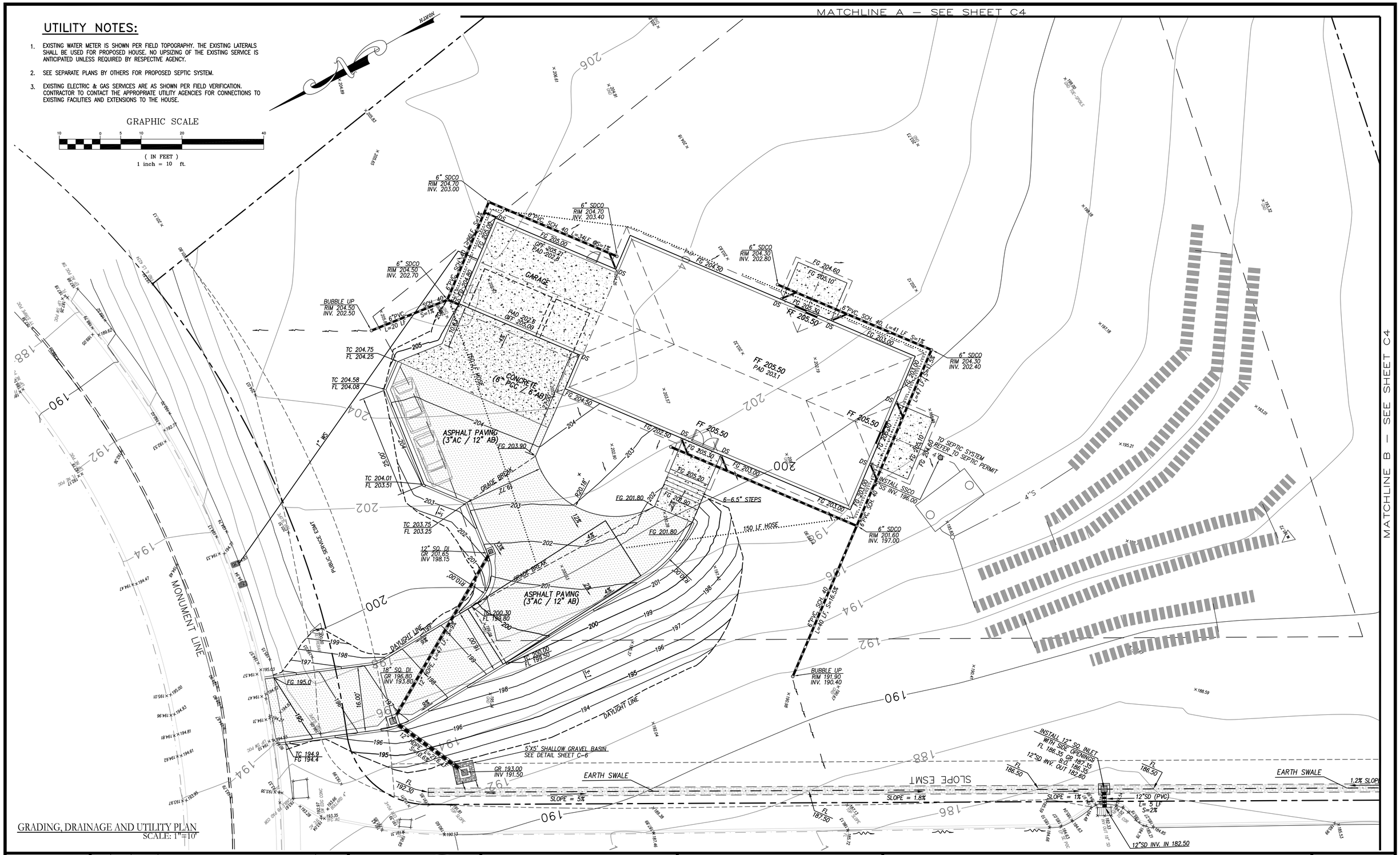
UTILITY NOTES:

1. EXISTING WATER METER IS SHOWN PER FIELD TOPOGRAPHY. THE EXISTING LATERALS SHALL BE USED FOR PROPOSED HOUSE. NO UPSIZING OF THE EXISTING SERVICE IS ANTICIPATED UNLESS REQUIRED BY RESPECTIVE AGENCY.
2. SEE SEPARATE PLANS BY OTHERS FOR PROPOSED SEPTIC SYSTEM.
3. EXISTING ELECTRIC & GAS SERVICES ARE AS SHOWN PER FIELD VERIFICATION. CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY AGENCIES FOR CONNECTIONS TO EXISTING FACILITIES AND EXTENSIONS TO THE HOUSE.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.



GRADING, DRAINAGE AND UTILITY PLAN
SCALE: 1"=10'

DATE: MAY 18, 2021					
SCALE: AS NOTED					
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ENGINEER: DSK					
MANAGER: DSK	NO.	BY	DATE	REVISIONS	CITY APPR

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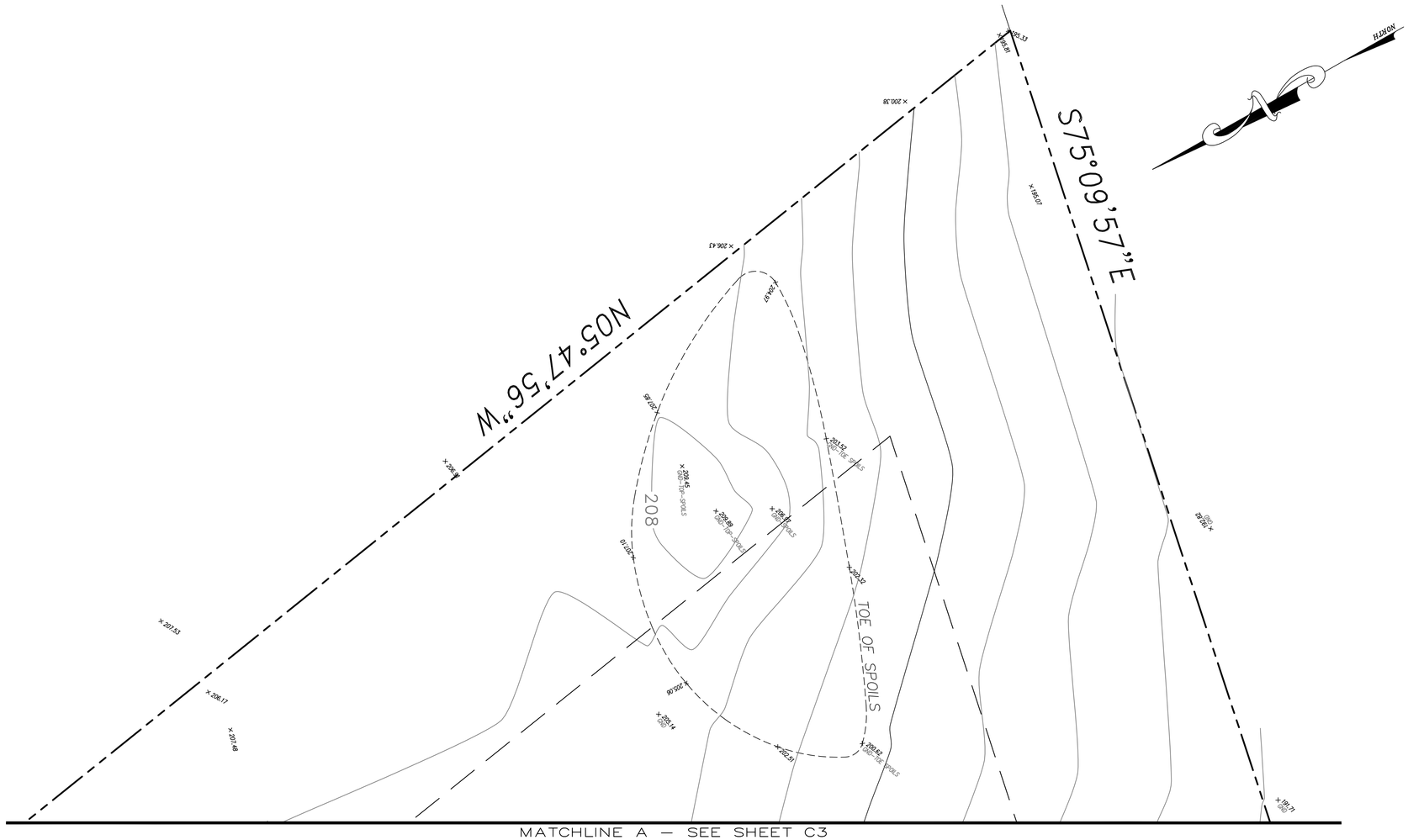
GRADING, DRAINAGE & UTILITY PLAN

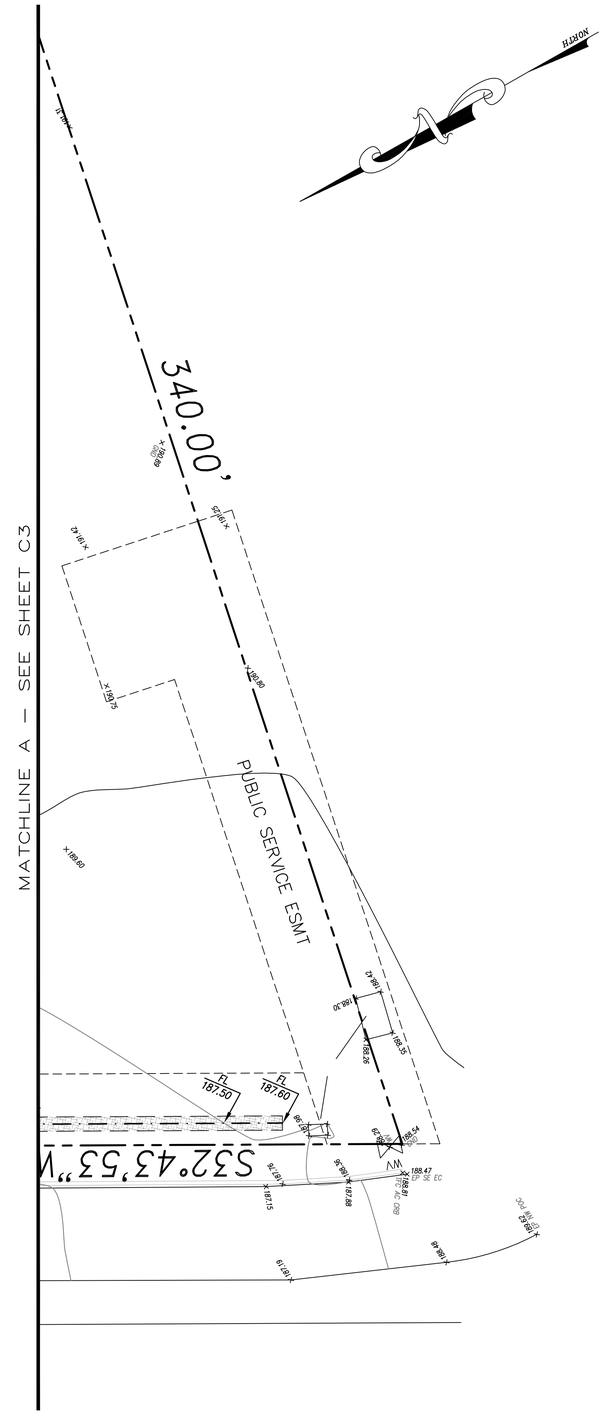
CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-3
3 OF 6 SHEETS
JOB NO. 2017-284

PRINTED: MAY 18, 2021



GRADING, DRAINAGE AND UTILITY PLAN
SCALE: 1"=10'



EARTHWORK SUMMARY

MEASURED RAW CUT :	140	CY
MEASURED RAW FILL :	84	CY
ESTIMATED EXPORT:	**56**	**CY**

EARTHWORK QUANTITIES SHOWN HEREON ARE APPROXIMATE ONLY FOR ESTABLISHMENT OF FEES. CONTRACTORS SHALL BASE BID AND OR CONTRACT AMOUNTS UPON THIER OWN EARTHWORK ESTIMATES FOR COMPLETION OF THE WORK SHOWN HEREON, NOT ON THE QUANTITIES SHOWN ABOVE.

NO ADJUSTMENTS HAVE BEEN APPLIED FOR SHRINK OR SWELL.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
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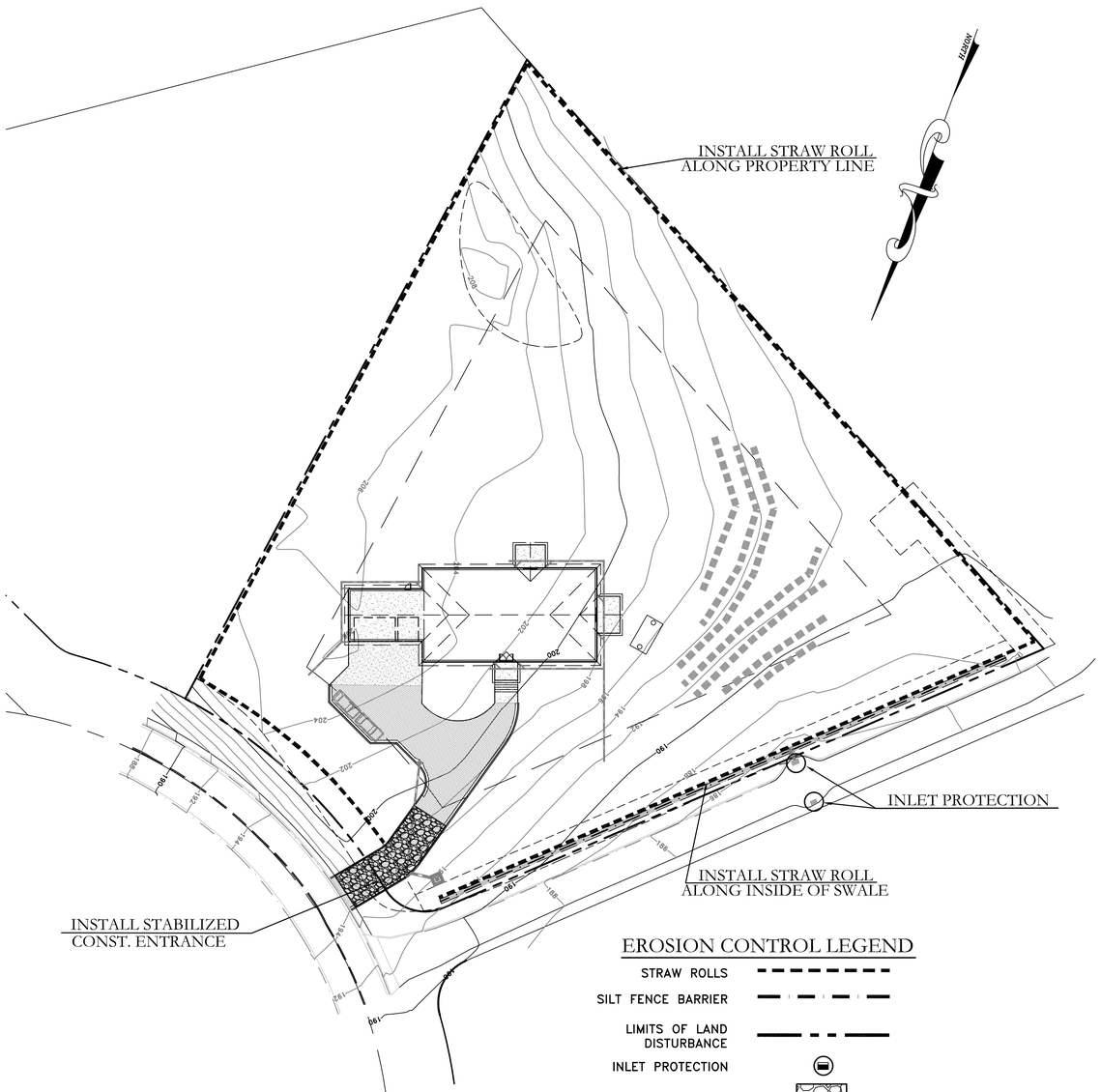
GRADING, DRAINAGE & UTILITY PLAN

CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-4
4 OF 6 SHEETS
JOB NO. 2017-284

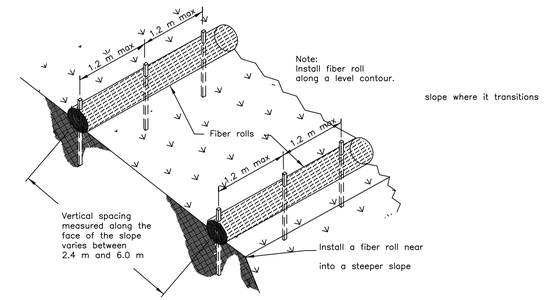
PRINTED: MAY 18, 2021



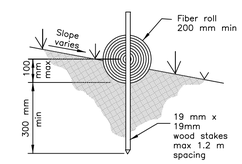
EROSION CONTROL PLAN
SCALE: 1"=30'

EROSION CONTROL LEGEND

- STRAW ROLLS
- SILT FENCE BARRIER
- LIMITS OF LAND DISTURBANCE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE



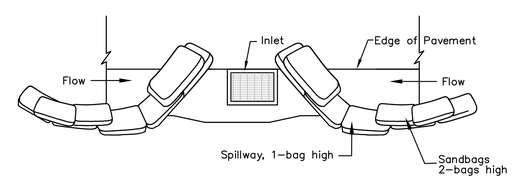
TYPICAL FIBER ROLL INSTALLATION
N.T.S.



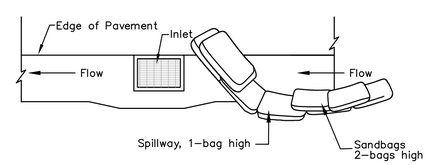
ENTRENCHMENT DETAIL
N.T.S.

EROSION CONTROL NOTES

1. PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY DRAINAGE SWALES, SILT FENCES, EARTH BERMS, STORM DRAIN INLET FILTERS FILTERS AND/OR STRAW BALES USED ONLY IN CONJUNCTION WITH PROPERLY INSTALLED SILT FENCES.
2. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO THE INCEPTION OF ANY WORK ON-SITE, AND SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL LANDSCAPING.
3. STRAW ROLL(S) SHALL BE INSTALLED PRIOR TO THE INCEPTION OF ANY WORK ON-SITE, AND SHALL REMAIN IN PLACE UNTIL THE LANDSCAPING GROUND COVER IS INSTALLED.
4. DRY SWEEPING METHODS SHALL BE USED TO REMOVE ANY DEBRIS AND/ OR SOIL TRACKED ON TO VISTA RIDGE DRIVE. DRY SWEEPING SHALL BE DONE AT THE END OF EACH WORK DAY.
5. THE CONTRACTOR SHALL FOLLOW AND USE BEST MANAGEMENT PRACTICES (BMP) FOR DISCHARGE INTO THE CITY'S STORM WATER SYSTEM DURING SITE STRIPPING, HAULING, EARTH MOVING ACTIVITIES, HEAVY EQUIPMENT OPERATIONS, GENERAL CONSTRUCTION AND SITE SUPERVISION, PAINTING, APPLICATIONS AND USE OF SOLVENTS AND ADHESIVES, LANDSCAPING AND GARDENING.
6. STOCKPILED MATERIAL SHALL BE COVERED WITH VISQUEEN OR A TARPAULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT MAY BE SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.
7. ONCE THE PROPOSED ON-SITE DRAINAGE INLETS HAVE BEEN INSTALLED, THE CONTRACTOR SHALL PROTECT ANY BARE SOIL FROM ENTERING THE INLETS BY INSTALLING FILTER FABRIC UNDER THE INLET GRATES. THE FILTER FABRIC SHALL REMAIN UNTIL NATURAL GROUND COVER IS ESTABLISHED.
8. A WATER HOSE SHALL BE PROVIDED ON SITE FOR DUST CONTROL.
9. IF EROSION DEVELOPS IN A TEMPORARY EROSION PROTECTED AREA OR ANY ESTABLISHED VEGETATED AREA, THE CONTRACTOR SHALL IMMEDIATELY ALLEVIATE AND REMEDY THE PROBLEM AND TAKE PREVENTATIVE MEASURES TO MINIMIZE THE POSSIBILITY OF ITS RE-OCCURRENCE AND ALSO TO PREVENT THE RESULTING FLOW OF SOILS OR WATER WITH SUSPENDED SOILS FROM GETTING INTO THE CITY'S DRAINAGE SYSTEM OR ANY NATURAL DRAINAGE CHANNEL OR DITCH.
10. ALL DISTURBED SOIL SHALL BE "MATTED" AND SEEDED WITHIN TWO (2) WEEKS OF "FINAL DISTURBANCE".

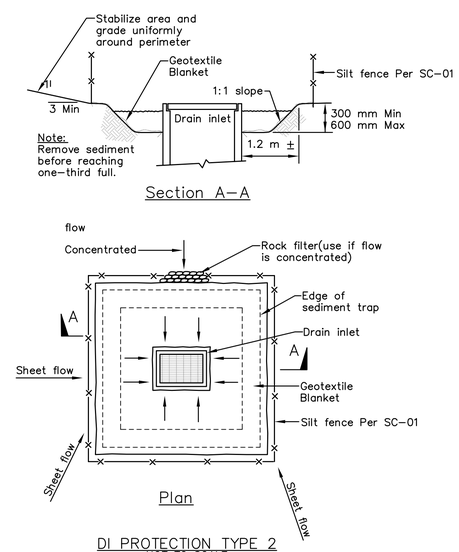


TYPICAL PROTECTION FOR INLET ON SUMP



TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.



DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

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GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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EROSION CONTROL PLAN & DETAILS

CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-5
5 OF 6 SHEETS
JOB NO. 2017-284

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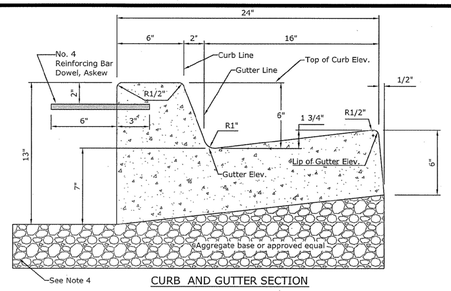
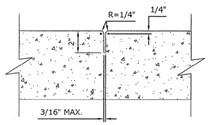


CURB AND GUTTER SECTION



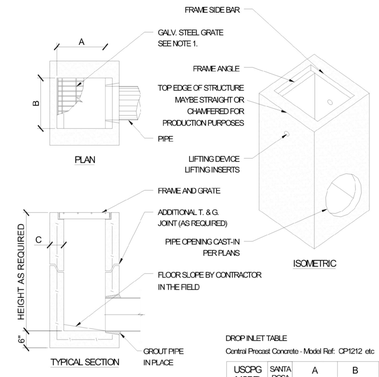
WEAKENED PLANE JOINT

NOTES:

1. Use Portland Cement Concrete containing not less than 564 lbs. of Type I or I/II Portland Cement per cubic yard with a compressive strength of not less than 3000 psi. at 28 days, with a medium broom finish.
2. Dowels shall be used only when the curb is constructed before the contiguous sidewalk (Std. Drawing No's. 425, 426, and 427) and when jointing new curb and gutter to existing concrete curb. Bar spacing shall be 1' each side of the weakened plane joint and on 5' 6" max. centers.
3. Weakened Plane Joints shall be constructed at ends of curb returns, curb inlets, other structures and at 12' intervals except in driveway sections. Joints shall match adjacent improvements.
4. Aggregate base thickness shall be 6" or shall be determined by the extension of the subbase line under the curb, whichever is greater.
5. For curb & gutter replacement; A 1'x1' wdge-cut

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			STANDARD DRAWING
REVISION	DATE	CURB AND GUTTER	NO. 410
1	1991		
2	2001		DATE : 6/15/10
3	2010	APPROVED BY: PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 1 OF 1



DROP INLET TABLE

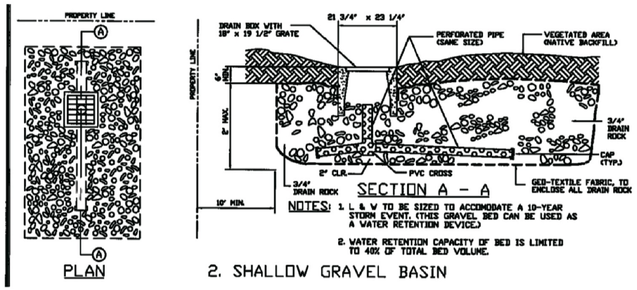
Central Precast Concrete - Model Ref: CP1212 etc

USCPG MODEL No.	SANTA ROSA REF.	A		B		C	
		IN	MM	IN	MM	IN	MM
CB1212	8K	12	300	12	300	4	100
CB1818	0K	18	450	18	450	5	125
CB1824	1K*	18	450	24	600	5	125
CB2424	2K	24	600	24	600	5	125
CB2430	3K	24	600	30	750	5	125
CB3030	5K	30	750	30	750	6	150
CB2436	1L	24	600	36	900	6	150
CB3636	1M	36	900	36	900	6	150
CB2448	3L	24	600	48	1200	6	150
CB3648	3M	36	900	48	1200	6	150
CB4848	1R	48	1200	48	1200	6	150

NOTES:

1. FRAMES AND GRATES MAY BE SPECIFIED FOR PEDESTRIAN OR TRAFFIC LOADING. ALL GRATES ARE BICYCLE PROOF. OPTIONAL GRATE LOCKING DEVICE AVAILABLE ON REQUEST SEE DRAWING ON PAGE 1-7. (2) CLOSED- MESH GRATES OR CAST IRON FRAME AND GRATES ARE AVAILABLE ON REQUEST.
2. FOR SURFACE AND DISCHARGE OPTIONS AVAILABLE SEE DRAWING ON PAGE 1-4, 1-5 & 1-6.
3. FRAMES AND GRATES DETAILS SEE PAGES 1-8, 1-9, AND 1-10. CASTING 1-13, DROP-IN 1-14.
4. WALL THICKNESS ON SOME DROP INLETS CAN BE CHANGED UPON REQUEST. CALL TO VERIFY REQD THICKNESS
5. 18" WIDE D.I.'S REPLACE THE OLD 16" WIDE BOX. 8K & 1K *
6. FOR PIPE / HOLE SCHEDULE SEE PAGE 1-16.

US CONCRETE PRECAST GROUP	3049 Independence Drive, Suite A Livermore, CA 94551 Phone: 925-960-8740 Fax: 925-960-1903	Date: 3/11/2010 Scale: N.T.S. Rev.: 0 DWG: 1-2.dwg	Title: CUSTOM PRECAST	Page: 1-2

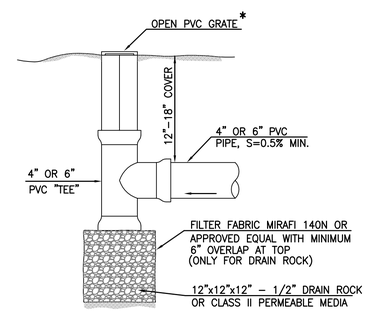


NOTES:
1. L & W TO BE SIZED TO ACCOMODATE A 10-YEAR STORM EVENT. (THIS GRAVEL BED CAN BE USED AS A WATER RETENTION DEVICE.)
2. WATER RETENTION CAPACITY OF BED IS LIMITED TO 40% OF TOTAL BED VOLUME.

2. SHALLOW GRAVEL BASIN

INFILTRATION DEVICE

NOT TO SCALE



* USE FLAT TOP GRATES FOR LAWN AREAS AND DOMED OR ATRIUM GRATES WHERE MOWING OR TRIPPING IS NOT OF CONCERN & CAST IRON GRATES IN PARKING AREAS.

BUBBLE UP DETAIL

NOT TO SCALE

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DETAILS

CITY OF MILPITAS SANTA CLARA COUNTY CALIFORNIA

SHEET NO. C-6

6 OF 6 SHEETS

JOB NO. 2017-284

PRINTED: MAY 18, 2021

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve and Authorize the City Manager to Execute a General Services Agreement with Hanford Applied Restoration & Conservation for Wrigley, Ford, and Wrigley-Ford Creek Maintenance for a total Amount Not-to-Exceed $128,430.00.**
Category:	Public Hearings-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Tony Ndah, Public Works Director, 408-586-2602**
Recommendation:	Approve and Authorize the City Manager to Execute a General Services Agreement with Hanford Applied Restoration & Conservation for Wrigley, Ford, and Wrigley-Ford Creek Maintenance for a total Amount Not-to-Exceed $128,430.00.

Background:

Wrigley Creek, Ford Creek, and Wrigley-Ford Creek run through the northern end of Midtown Milpitas, upstream of Berryessa Creek, alongside Railroad Ave and the Union Pacific Railroad. The City's Wrigley Ford Stormwater Pump Station is located just upstream of the confluence of Wrigley-Ford Creek and Berryessa Creek. During storm events, stormwater from portions of Midtown, Curtis Ave, and areas south of Calaveras along N. Milpitas Blvd. drain into these creeks and eventually out to the San Francisco Bay. These are natural creek areas where overgrown vegetation and sediment accumulation can reduce the flow capacity in the waterways. The City is responsible for maintenance of these creek areas. Work in these areas must be performed in accordance with permits from various regulatory agencies.

Analysis:

On April 15, 2021 the Purchasing Division released an Invitation for Bid (IFB) No. 2527 for flood control maintenance at Wrigley, Ford, and Wrigley-Ford Creeks. The IFB was publicly noticed in accordance with the City's municipal code, advertised on the City's website, email notifications were sent to companies registered with the City via ProcureNow.com, the City's eProcurement system. Upon release, 407 firms received the solicitation notification and 18 firms downloaded the IFB documents. The Purchasing Division received two (2) proposals by the 2:00 p.m. PDT May 19, 2021 deadline in response to the IFB. Hanford Applied Restoration & Conservation is the lowest responsive bidder and was within the City's estimate for these services.

BIDDING CONTRACTOR	BASE BID	ADD/ALTERNATE	TOTAL
1.Hanford Applied Restoration & Conservation	$80,253.00	$48,177.00	$128,430.00
2. Platinum Pipeline Inc.	$318,700.00	$291,000.00	$609,700.00

The flood control maintenance services performed at Wrigley, Ford, and Wrigley-Ford Creeks are essential to remove woody vegetation and herbaceous vegetation in order to prevent pump failures and infrastructure damage, storm overflows and backups, and flooding. This project involves removing or pruning encroaching woody vegetation and trimming herbaceous vegetation from Wrigley, Ford, and Wrigley-Ford Creeks to the extent allowable by existing Federal and State agency permits to maintain 100-year storm event capacity. The project includes trimming trees and removing scrub vegetation on the bottom of the channels.

Staff recommends the City Council award the bid for creek maintenance to Hanford Applied Restoration & Conservation for the base bid and add/alternate item number two, (trimming of herbaceous vegetation). Pending approval of the general services agreement with Hanford Applied Restoration & Conservation, the flood control maintenance work as outlined in the agreement is expected to be completed late summer 2021 along with ongoing regulatory compliance, including biological assessments, environmental awareness training, and biological monitoring during the next year.

Policy Alternatives:

Alternative 1: Direct City staff to provide the required services with in-house resources.

Pros: Increased work options for City staff.

Cons: City staff do not have sufficient resources to provide these services in addition to the ongoing operations and maintenance of the City's infrastructure.

Reason not recommended: The City does not have sufficient resources to perform the creek maintenance work. The City would need to purchase equipment and hire additional staff, which would likely delay this work.

Fiscal Impact:
Sufficient funds for the project are available in CIP 3715 – Storm Drain System Rehabilitation Program. The project balance is $345,953 as of 5/31/2021 and funded by storm drain funds.

California Environmental Quality Act:
The Project was evaluated for conformance with the California Environmental Quality Act (CEQA) in the Mitigated Negative Declaration for Wrigley-Ford Creek Maintenance approved Project. A mitigated environmental impact report for this work was approved by the City Council on March 15, 2011. The City of Milpitas filed a Notice of Determination for the Mitigated Negative Declaration for Wrigley-Ford Creek Maintenance Project with the Santa Clara County Clerk on March 24, 2011 (State Clearinghouse No. 2011012016).

Recommendation:
Approve and Authorize the City Manager to Execute a General Services Agreement with Hanford Applied Restoration & Conservation for Wrigley, Ford, and Wrigley-Ford Creek Maintenance for a total Amount Not-to-Exceed $128,430.00.

Attachments:
1. General Services Agreement with Hanford Applied Restoration & Conservation

CITY OF MILPITAS
AGREEMENT FOR WRIGLEY-FORD CREEK MAINTENANCE SERVICES

1. PARTIES AND DATE.

This Agreement for Wrigley-Ford Creek Maintenance Services ("Agreement") entered into this _____ by and between the City of Milpitas, a municipal corporation organized under the laws of the State of California with its principal place of business at 455 E. Calaveras Boulevard, Milpitas, California 95035 ("City") and **Hanford Applied Restoration and Conservation** a California corporation with its principal place of business at **755 Baywood Drive Suite 380 Petaluma, CA 94954** ("Contractor"). City and Contractor are sometimes individually referred to as "Party" and collectively as "Parties" in this Agreement.

2. RECITALS.

2.1 Contractor.

Contractor desires to perform and assume responsibility for the provision of certain Wrigley-Ford Creek Maintenance services required by City on the terms and conditions set forth in this Agreement. Contractor represents that it is experienced in providing Wrigley-Ford Creek Maintenance services to public clients, is licensed in the State of California, and is familiar with the plans of City.

2.2 Project.

City desires to engage Contractor to render such services for the Wrigley-Ford Creek Maintenance – IFB No. 2527 project ("Project") as set forth in this Agreement.

3. TERMS.

3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Contractor promises and agrees to furnish to City all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the services and advice on various issues affecting the decisions of City regarding the Project and on other programs and matters affecting City ("Services"). The Services are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term.

The term of this Agreement shall be from **July 1, 2021** to **June 30, 2022**, unless earlier terminated as provided herein. The City reserves the right to review the Contractor's performance at the end of each year and cancel all or part of the Agreement.

3.2 Responsibilities of Contractor.

3.2.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Contractor or under its supervision. Contractor will determine the means, methods and details of performing the Services subject to the requirements of this

Agreement. City retains Contractor on an independent contractor basis and not as an employee of City. Contractor retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Contractor shall also not be employees of City and shall at all times be under Contractor's exclusive direction and control. Contractor shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services. Contractor shall perform the Services expeditiously, within the term of this Agreement, and in accordance with the Schedule of Services set forth in Exhibit "B" attached hereto and incorporated herein by reference. Contractor represents that it has the skilled personnel required to perform the Services in conformance with such conditions. In order to facilitate Contractor's conformance with the Schedule, City shall respond to Contractor's submittals in a timely manner. Upon request of City, Contractor shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.3 Conformance to Applicable Requirements. All work prepared by Contractor shall be subject to the approval of City.

3.2.4 Substitution of Key Personnel. Contractor has represented to City that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence and experience upon written approval of City. In the event that City and Contractor cannot agree as to the substitution of key personnel, City shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to City, or who are determined by City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by Contractor at the request of City. The key personnel for performance of this Agreement are as follows: **[reserved]**

3.2.5 City's Representative. City hereby designates **Matt Lambert, Environmental and Regulatory Compliance Specialist**, or their designee, to act as its representative for the performance of this Agreement ("City's Representative"). City's Representative shall have the power to act on behalf of City for all purposes under this Agreement. Contractor shall not accept direction or orders from any person other than City's Representative or his or her designee.

3.2.6 Contractor's Representative. Contractor hereby designates **Will Johnson, Land Management Division Lead**, or their designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of Contractor for all purposes under this Agreement. Contractor's Representative shall supervise and direct the Services, using his or her best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.7 Coordination of Services. Contractor agrees to work closely with City staff in the performance of Services and shall be available to City's staff, contractors and other staff at all reasonable times.

3.2.8 Standard of Care; Performance of Employees. Contractor shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by contractors in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the calling necessary to perform the Services. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the Services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, including any required business license, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Contractor shall perform, at its own cost and expense and without reimbursement from City, any services necessary to correct errors or omissions which are caused by Contractor's failure to comply with the standard of care provided for herein, and shall be fully responsible to City for all damages and other liabilities provided for in the indemnification provisions of this Agreement arising from the Contractor's errors and omissions. Any employee of Contractor or its subcontractors who is determined by City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to City, shall be promptly removed from the Project by Contractor and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.9 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Contractor shall be liable for all violations of such laws and regulations in connection with Services. If Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to City, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold City, its officials, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.2.10 Insurance. Contractor shall not commence work for the City until it has provided evidence satisfactory to the City it has secured all insurance required under Exhibit "D" (Insurance Requirements), attached hereto and incorporated herein by this reference. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until it has secured all insurance required therein.

3.2.11 Safety. Contractor shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, Contractor shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and life saving equipment and procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.3 Fees and Payments.

3.3.1 Compensation. Contractor shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "C" attached hereto and incorporated herein by reference. The total compensation shall not exceed **One Hundred Twenty-Eight Thousand Four Hundred Thirty Dollars and Zero Cents ($128,430.00)** without written approval of City's City Manager. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.

3.3.2 Payment of Compensation. Contractor shall submit to City a monthly itemized statement which indicates work completed and hours of Services rendered by Contractor. The statement shall describe the amount of Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. City shall, within forty-five (45) days of receiving such statement, review the statement and pay all approved charges thereon.

3.3.3 Reimbursement for Expenses. Contractor shall not be reimbursed for any expenses unless authorized in writing by City.

3.3.4 Extra Work. At any time during the term of this Agreement, City may request that Contractor perform Extra Work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Contractor shall not perform, nor be compensated for, Extra Work without written authorization from City's Representative.

3.3.5 California Labor Code Requirements

(a) Contractor is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects ("Prevailing Wage Laws"). If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000.00 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Contractor and all subcontractors to comply with all California Labor Code provisions, which include but are not limited to prevailing wages (Labor Code Sections 1771, 1774 and 1775), employment of apprentices (Labor Code Section 1777.5), certified payroll records (Labor Code Sections 1771.4 and 1776), hours of labor (Labor Code Sections 1813 and 1815) and debarment of contractors and subcontractors (Labor Code Section 1777.1). The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

(b) If the Services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Contractor and all subcontractors performing such Services must be registered with the Department of Industrial Relations. Contractor shall maintain registration for the duration of the Project and require the same of any subcontractors, as applicable. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

(c) This Agreement may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements. Any stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor that affect Contractor's performance of Services, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay and shall not be compensable by the City. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor.

3.4 Accounting Records.

3.4.1 Maintenance and Inspection. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred and fees charged under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

3.5 General Provisions.

3.5.1 Termination of Agreement.

(a) Grounds for Termination. City may, by written notice to Contractor, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Contractor of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Contractor shall be compensated only for those services which have been fully and adequately rendered to City through the effective date of the termination, and Contractor shall be entitled to no further compensation. Contractor may not terminate this Agreement except for cause.

(b) Effect of Termination. If this Agreement is terminated as provided herein, City may require Contractor to provide all finished or unfinished Documents and Data, as defined below, and other information of any kind prepared by Contractor in connection with the performance of Services under this Agreement. Contractor shall be required to provide such document and other information within fifteen (15) days of the request.

(c) Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, City may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Contractor:

Hanford Applied Restoration and Conservation
755 Baywood Drive Suite 380
Petaluma, CA 94954
Attn:

City:

City of Milpitas
455 E. Calaveras Boulevard
Milpitas, California 95035
Attn: Tony Ndah, Director of Public Works

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.4 Attorneys' Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all costs of such action.

3.5.5 Indemnification. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold City, its officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons, including wrongful death, in any manner arising out of or incident to any alleged negligent acts, omissions or willful misconduct of Contractor, its officials, officers, employees, agents, subcontractors and subcontractors arising out of or in connection with the performance of the Services, the Project or this Agreement, including without limitation the payment of all consequential damages, attorneys' fees and other related costs and expenses. Contractor shall defend, at Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against City, its officials, officers, employees, agents or volunteers. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against City or its officials, officers, employees, agents or volunteers, in any such suit, action or other legal proceeding. Contractor shall reimburse City and its officials, officers, employees, agents and/or volunteers, for any and all legal expenses and costs, including reasonable attorneys' fees, incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by City or its officials, officers, employees, agents or volunteers. This Section 3.5.5 shall survive any expiration or termination of this Agreement.

3.5.6 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be supplemented, amended or modified by a writing signed by both Parties.

3.5.7 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Santa Clara County.

3.5.8 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.5.9 City's Right to Employ Other Contractors. City reserves the right to employ other Contractors in connection with this Project.

3.5.10 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.5.11 Assignment or Transfer. Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of City. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.5.12 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Contractor include all personnel, employees, agents, and subcontractors of Contractor, except as otherwise specified in this Agreement. All references to City include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.5.13 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.5.14 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.5.15 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.5.16 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.5.17 Prohibited Interests. Contractor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Agreement. Further, Contractor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.5.18 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to

initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Contractor shall also comply with all relevant provisions of any minority business enterprise program, affirmative action plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.5.19 Labor Certification. By its signature hereunder, Contractor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.5.20 Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.5.21 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.5.22 Employment Adverse to City. Contractor shall notify City, and shall obtain City's written consent, prior to accepting work to assist with or participate in a third-party lawsuit or other legal or administrative proceeding against City during the term of this Agreement.

3.5.23 Conflict of Employment. Employment by Contractor of personnel currently on the payroll of City shall not be permitted in the performance of this Agreement, even though such employment may occur outside of the employee's regular working hours or on weekends, holidays or vacation time. Further, the employment by Contractor of personnel who have been on City's payroll within one year prior to the date of execution of this Agreement, where this employment is caused by and or dependent upon Contractor securing this or related Agreements with City, is prohibited.

3.5.24 Survival. All rights and obligations hereunder that by their nature are to continue after any expiration or termination of this Agreement, including, but not limited to, the indemnification and confidentiality obligations, and the obligations related to receipt of subpoenas or court orders, shall survive any such expiration or termination.

3.5.25 Subcontracting. Contractor shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of City. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

3.5.26 Wage Theft Prevention

(a) Contractor, and any subcontractor it employs to complete work under this Agreement, shall comply with all applicable federal, state and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance.

(b) BY SIGNING THIS AGREEMENT, CONTRACTOR AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY, FINDING IN THE FIVE (5) YEARS PRIOR TO EXECUTING THIS AGREEMENT THAT CONTRACTOR OR ITS SUBCONTRACTORS HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.

CONTRACTOR FURTHER AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) HAS EITHER FULLY SATISFIED EACH JUDGMENT, DECISION OR ORDER, OR, IF ANY JUDGMENT, DECISION OR ORDER HAS NOT BEEN FULLY SATISFIED, CONTRACTOR AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) IS CURRENTLY SATISFYING SAID JUDGMENT, DECISION OR ORDER THROUGH A PAYMENT OR ALTERNATIVE PLAN APPROVED BY THE APPLICABLE COURT/GOVERNMENT AGENCY AND THAT CONTRACTOR OR ITS SUBCONTRACTOR(S) ARE IN COMPLIANCE WITH SAID PLAN AS OF THE DATE OF EXECUTING THIS AGREEMENT.

(c) If at any time during the term of this Agreement, a court or investigatory government agency issues a final judgment, decision or order finding that Contractor or a subcontractor it employs to perform work under this Agreement has violated any applicable wage and hour law, or Contractor learns of such a judgment, decision, or order that was not previously disclosed in its bid/proposal, Contractor shall inform the City no more than fifteen (15) calendar days after the judgment, decision or order becomes final or from the date of learning of the final judgment, decision or order. Contractor or its subcontractor(s) shall, within thirty (30) calendar days after notifying the City, either (i) fully satisfy any such judgment, decision, or order and provide the City with documentary evidence of satisfying said judgment, decision or order; or (ii) provide the City documentary evidence of a payment or other alternative plan approved by the court/government agency to satisfy the judgment, decision or order. If the Contractor or its subcontractor is subject to a payment or other alternative plan, the Contractor or its subcontractor shall continue to submit documentary evidence every thirty (30) calendar days during the term of the Agreement demonstrating continued compliance with the plan until the judgment, decision or order has been fully satisfied.

(d) For purposes of this Section, a "final judgment, decision, or order" refers to one for which all appeals have been exhausted or the time period to appeal has expired. Relevant investigatory government agencies include: the United States Department of Labor, the California Division of Labor Standards Enforcement, the City, or any other governmental entity or division tasked with the investigation and enforcement of wage and hour laws.

(e) Failure to comply with any part of this Section constitutes a material breach of this Agreement. Such breach may serve as a basis for immediate termination of this Agreement and/or any other remedies available under this Agreement and/or law.

(f) Notice provided to the City shall be addressed to: Attention: Finance Director, 455 E. Calaveras Blvd. Milpitas, CA 95035. The Notice provisions of this Section are separate from any other notice provisions in this Agreement and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

SIGNATURE PAGE FOR AGREEMENT
FOR WRIGLEY-FORD CREEK MAINTENANCE SERVICES
BETWEEN THE CITY OF MILPITAS
AND HANFORD APPLIED RESTORATION AND CONSERVATION

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the date first written above.

CITY OF MILPITAS
Approved By:

_____
Steven G. McHarris, City Manager

_____
Date

Approved:

_____
Lauren Lai, CPA, MPA
Finance Director/Risk Manager

Approved As To Form:

_____
Christopher J. Diaz, City Attorney

Approved As To Content:

_____
Tony Ndah
Director of Public Works

Hanford Applied Restoration and Conservation

_____
Signature

_____
Name

_____
Title

_____
Date

EXHIBIT "A"
SCOPE OF SERVICES

Contractor shall furnish labor, equipment, tools, and materials necessary to provide flood control maintenance for the Wrigley, Ford, and Wrigley-Ford Creeks as shown in **Attachment A – Wrigley and Ford Creek Allowed Maintenance Map** and all regulatory compliance including biological assessments, environmental awareness training, and biological monitoring associated with the maintenance activities.

This project involves removing encroaching woody vegetation from Wrigley-Ford Creek and trimming herbaceous vegetation, to the extent allowable by existing Federal and State agency permits to maintain 100-year event capacity. Work will be performed within the bed and banks of Ford Creek (3,064 ft), Wrigley Creek (1,778 ft), their confluence, and the reach just downstream of their confluence known as the Wrigley-Ford Creek (2,217 ft). The project includes trimming trees and removing scrub vegetation on the bottom of the channels. The maximum amount of annual removal for all three creeks is a total of 0.22 acres of riparian vegetation and 0.21 acres of wetland vegetation.

The City has current permits from the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (USACE) for the work described herein. A subcontractor can be used for the biological assessments, environmental awareness training, and biological monitoring associated with the maintenance activities. There will be no independent contracts issued by the City to any other contractor. The contractor will be responsible for adhering to all requirements of the specifications and for the performance of all sub-contractor(s). All work shall be performed according to **Attachment B – Wrigley Ford Vegetation Management Activities and Methods**.

Project Background - MINIMUM QUALIFICATIONS AND STANDARDS

A. The Contractor's staff shall be a licensed landscape professional with a minimum of three (3) jobs completed or on-going within the past 5 years that included riparian restoration site maintenance. The Contractor shall provide project description, location, contact person name with contact phone number and email address as part of response to this IFB.
B. The Contractor shall possess all permits, licenses, and professional credentials necessary to supply product and perform services as specified under this IFB.
C. Herbicides must be approved by the EPA for use in aquatic environments.
D. All Contractors and Sub-Contractors shall be registered on an annual basis with the California Department of Industrial Relations (DIR).

1. SCOPE OF WORK

A. This project involves removing encroaching woody vegetation and trimming herbaceous vegetation to the extent allowable by existing Federal and State agency permits. The Contractor shall be responsible for providing all material, labor, and equipment necessary to perform the work described herein. All work shall be performed according to **Attachment B – Wrigley Ford Vegetation Management Activities and Methods**.
B. Prior to beginning work, the Contractor shall perform the following pre-construction activities:
    a. Flag limits of work.
    b. Pre-construction surveys for special-status wildlife species.
    c. If work is done during the nesting bird season, two surveys for active nests of birds within 14 days prior to the beginning of project construction, with a final survey conducted within 48 hours prior to construction. Nesting seasons are

typically defined as follows: a) February 15 to August 30 for small bird species such as passerines; b) January 15 to September 15 for owls; and c) February 15 to September 15 for other raptors.

a. Prepare and provide a Worker Environmental Awareness Program.

C. The Contractor shall perform the following biological monitoring services:

a. Special-status wildlife species monitoring during vegetation removal.

D. Care will be taken during maintenance work to avoid disturbance to wetland vegetation growing in the channel bottom.

a. Construction Process

i. Woody vegetation maintenance will be accomplished via a combination of mowing, weed whacking, pruning and herbicide treatment. Willow seedlings will be removed, and mature willows will be trimmed.

ii. Herbicide treatment may be used to eradicate woody plant species from those reaches (Upper Ford Creek, Lower Ford Creek, Wrigley Creek outside of the mitigation area and the eastern bank of Wrigley-Ford Creek) where new woody vegetation will not be allowed to colonize.

iii. Herbaceous vegetation maintenance will be accomplished via mowing/weed whacking herbaceous wetland vegetation at the end of the growing season and just prior to the beginning of the rainy season.

iv. Herbicides may also be used on non-native, invasive species such as giant reed. Herbicides must be approved by the EPA for use in aquatic environments.

v. Best Management Practices (BMP) such as silt fence, Environmentally Sensitive Area (ESA) fence, and fiber rolls will be used to keep construction equipment in designated areas and prevent impacts to areas not in the designated construction zone.

b. Equipment and Personnel

i. Equipment will be refueled using BMPs such as not refueling in an area or in such a way that water quality can be affected by spills.

c. Access and Timing

i. Access and staging will occur within the existing City easements. Initial work is planned to take place in August 2021.

E. Upon completion of all work, the Contractor shall be responsible for the disposal of all vegetation removed as part of the scope of work.

2. LOCATION OF WORK

A. The Contractor shall provide flood control maintenance for the Wrigley, Ford, and Wrigley-Ford Creeks as shown in **Attachment A – Wrigley and Ford Creek Allowed Maintenance Map**

3. WORK SEQUENCE

A. Work shall be coordinated with the City's Public Works Department at the initiation of each Task Order Agreement. A schedule for each Task Order shall be submitted to and approved by the City prior to commencing work.

4. CONTRACTOR'S USE OF PREMISES

A. Coordinate each of the premises with the City.

B. Contractor shall assume full responsibility for security of all materials and equipment stored on site.

C. Obtain and pay for use of additional storage or work areas if needed to perform the Work but at no additional cost to the City. If storage areas are obtained/used within the city

limits of the City, then mobilization charges will not be assessed for each Task order. A single mobilization payment will be made.

D. Vehicular access Wrigley Creek, Ford Creek, and the western side of Wrigley-Ford Creek are available via access roads or Railroad Ave. Access to the eastern side of the channel is limited due to the close proximity of the City property boundary, underground utilities, and the railroad right-of-way and may require the Contractor to access areas of the site on foot.

5. REGULATIONS AND STANDARDS

A. All work shall be completed in accordance with the plans and drawings titled, "USACE File #No 011-0097S, Wrigley, Ford, and Wrigley-Ford Creeks Maintenance November 23, 2011, Figure 1 to 4" found in **Attachment E – Wrigley Ford Reaches.**

EXHIBIT "B"
SCHEDULE OF SERVICES

Work shall be coordinated with the City's Public Works Department at the initiation of each Task Order Agreement. A schedule for each Task Order shall be submitted to and approved by the City prior to commencing work.

EXHIBIT "C"
COMPENSATION

Line Item	Description	QTY	Unit of Measure	Unit Cost
1	Mobilization, Bonds, and Insurance	1	LOT	$6,500.00
2	Pre-Construction Survey	1	LOT	$15,299.00
3	Pruning of Woody Vegetation	1	LOT	$36,240.00
4	Biological Monitoring	1	LOT	$22,214.00
5	Trimming of Herbaceous Vegetation	1	LOT	$48,177.00
			Total	$128,430.00

MEASUREMENT AND PAYMENT

1. **Mobilization, Bonds, and Insurance:** Mobilization, bonds, and insurance will be considered a lump sum item for payment. The total lump sum price for this item shall not exceed 5% of the total base bid price.
2. **Pre-Construction Survey:** The pre-construction survey shall be considered a lump sum item for payment. The unit price shall include all labor, equipment, and materials required to perform this task.
3. **Pruning of Woody Vegetation:** Pruning of woody vegetation shall be considered a lump sum item for payment. The unit price shall include all labor, equipment, and materials required to remove willow seedlings and trim mature willows.
4. **Biological Monitoring:** The biological monitoring shall be considered a lump sum item for payment. The unit price shall include all labor, equipment, and materials required to perform this task.
5. **Trimming of herbaceous vegetation:** Trimming of herbaceous vegetation shall be considered a lump sum item for payment. The unit price shall include all labor, equipment, and materials required to remove vegetation through mowing, weed whacking, pruning, and/or application of herbicides.

EXHIBIT "D"

INSURANCE REQUIREMENTS

Please refer to the insurance requirements listed below. **Those that have an "X" indicated in the space before the requirement apply to Contractor's or Consultant's Agreement.**

Contractor or Consultant shall procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor or Consultant, its agents, representatives, employees or subcontractors.

Contractor or Consultant shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements.

Contractor or Consultant shall furnish City with copies of original endorsements affecting coverage required by this Exhibit D. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements and certificates are to be received and approved by City before work commences. City has the right to require Contractor's or Consultant's insurer to provide complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications.

Commercial General Liability (CGL):

___ Coverage at least as broad as Insurance Services Office ("ISO") Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $2,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

_X_ Coverage at least as broad as ISO Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $1,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

___ Coverage at least as broad as ISO Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $5,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

Automobile Liability:

_X_ Coverage at least as broad as ISO Form Number CA 0001 covering, Code 1 (any auto), of if Contractor or Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limits no less than $1,000,000.00 combined single limit for bodily injury and property damage.

___ Coverage at least as broad as ISO Form Number CA 0001 covering, Code 1 (any auto), with limits no less than $5,000,000.00 combined single limit for bodily injury and property damage.

___ Garage keepers' extra liability endorsement to extend coverage to all vehicles in the care, custody and control of the Contractor or Consultant, regardless of where the vehicles are kept or driven.

Professional Liability (Errors and Omissions):

___ Insurance appropriates to the Contractor or Consultant's profession, with limit no less than $1,000,000.00 per occurrence or claim, $2,000,000.00 aggregate.

___ (If Design/Build), with limits no less than $1,000,000.00 per occurrence or claim, and $2,000,000.00 policy aggregate.

___ Insurance appropriates to the Contractor or Consultant's profession, with limit no less than _____ per occurrence or claim, _____ aggregate

Workers' Compensation Insurance:

_X_ Insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000.00 per accident for bodily injury or disease. *(Not required if Contractor or Consultant provides written verification it has no employees)*

The Employer's Liability policy shall be endorsed to waive any right of subrogation as respects the City, its elected and appointed officials, officers, attorneys, agents, and employees.

Builder's Risk (Course of Construction):

___ Insurance utilizing an "All Risk" (Special Perils) coverage form, with limits equal to the completed value of the project and no coinsurance penalty provisions. If the project does not involve new or major reconstruction, at the option of the City, an Installation Floater may be acceptable. For such projects, a Property Installation Floater shall be obtained that provides for the improvement, remodel, modification, alteration, conversion or adjustment to existing buildings, structures, processes, machinery and equipment. The Property Installation Floater shall provide property damage coverage for any building, structure, machinery or equipment damaged, impaired, broken, or destroyed during the performance of the Work, including during transit, installation, and testing at the City's site.

Contractor's or Consultant's Pollution Legal Liability:

___ Contractor's or Consultant's pollution legal liability and/or Asbestos Legal Liability and/or Errors and Omissions (if project involves environmental hazards) with limits no less than $1,000,000.00 per occurrence or claim and $2,000,000.00 policy aggregate.

If the Contractor or Consultant maintains higher limits than the minimums shown above, the City requires and shall be entitled to coverage for the higher limits maintained by the Contractor or Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

Cyber Liability Insurance

___ Cyber Liability Insurance with limits not less than $1,000,000 per claim.

Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor or Consultant in this Agreement and shall include, but not be limited to, claims involving infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, alteration of electronic information, extortion, and network security.

The policy shall provide coverage for breach response costs as well as regulatory fines and penalties, and credit monitoring expenses with limits sufficient to respond to these obligations.

Surety Bonds:

Contractor shall provide the following Surety Bonds:

____ Bid Bond
____ Performance Bond
____ Payment Bond

The Payment Bond and Performance Bond shall be in a sum equal to the contract price. Bonds shall be duly executed by a responsible corporate surety, authorized to issue such bonds in the State of California and secured through an authorized agent with an office in California.

Other Insurance Provisions:

The insurance policies are to contain, or be endorsed to contain the following provisions:

_X_ Additional Insured Status and Primary/Non-Contributory Language:

Contractor's general liability and automobile liability policies shall be primary and shall not seek contribution from the City's coverage and be endorsed to add the City and its officers, officials, employees, and agents as additional insureds under such policies using Insurance Services Office form CG 20 10 (or equivalent) on the general liability policy. For construction projects, an endorsement providing completed operations coverage for the additional insured on the general liability policy, ISO form CG 20 37 (or equivalent), is also required.

The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of City (if agreed to in a written contract or agreement) before the City's own insurance or self-insurance shall be called upon to protect it as a named insured.

___ Loss Payee Status – Builder's Risk/Course of Construction Insurance (applicable to Construction Contracts only)

Contractor or Consultant may submit evidence of Builder's Risk insurance in the form of Course of Construction coverage. Such coverage shall name the City as a loss payee as their interest may appear.

X_ Notice of Cancellation, Suspension or Otherwise Voiding Policies:

Each insurance policy required above shall contain or be endorsed to contain that coverage shall not be suspended, voided, canceled or reduced in coverage or in limits except with thirty (30) days' prior written notice by certified mail, return receipt requested to the City.

_X_ Waiver of Subrogation:

Contractor or Consultant hereby grants to City a waiver of any right to subrogation which any insurer of said Contractor or Consultant may acquire against the City by virtue of the payment of any loss under such insurance. Contractor or Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor or Consultant, its employees, agents and subcontractors.

___ Completed Operations

For Construction Agreements, Contractor shall maintain insurance as required by this Agreement to the fullest amount allowed by law and shall maintain insurance for a minimum of five (5) years following the completion of this project. In the event Contractor fails to obtain or maintain completed operations coverage as required by this Agreement, the City at its sole discretion may purchase the coverage required and the cost will be paid by Contractor.

THE FOLLOWING PROVISIONS APPLY TO ALL AGREEMENTS

Deductibles and Self-Insured Retentions ("SIR"):

Any deductibles or self-insured retentions must be declared to and approved by City. The City may require the Contractor or Consultant to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. At the option of the City, either (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its elected and appointed officials, officers, attorneys, agents, and employees; or (2) the Contractor or Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

All SIRs must be disclosed to Risk Management for approval and shall not reduce the limits of liability.

Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or the City.

City reserves the right to obtain a full-certified copy of any insurance policy and endorsements. Failure to exercise this right shall not constitute a waiver of right to exercise later.

Acceptability of Insurers:

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-:VII, unless otherwise acceptable to City.

Claims Made Policies: (note - should be applicable only to professional liability, see below)

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

2. Insurance must be maintained, and evidence of insurance must be provided for at least five (5) years after completion of contract of work.

3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Contractor or Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of work.

4. A copy of the claims reporting requirements must be submitted to the City for review.

5. If the services involve lead-based paint or asbestos identification/remediation, the Contractor's Pollution Liability Policy shall not contain lead-based paint or asbestos exclusions. If the services involve mold identification/remediation, the Contractors Pollution Liability Policy shall not contain a mold exclusion, and the definition of Pollution shall include microbial matter, including mold.

Subcontractors:

Contractor or Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that City is an additional insured on insurance required from subcontractors.

Subcontractor agrees to be bound to Contractor and City in the same manner and to the same extent as Contractor is bound to City under this Agreement and any other contract documents. Subcontractor further agrees to include the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, with any sub-subcontractor to the extent they apply to the scope of the sub-subcontractor's work. A copy of the City indemnity and insurance provisions will be furnished to the subcontractor upon request.

Verification of Coverage:

Contractor or Consultant shall furnish the City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the City before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor or Consultant's obligation to provide them. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances

City reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage or other special circumstances.

Failure to Comply:

Each insurance policy required above shall contain or be endorsed to contain that any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its elected and appointed officials, officers, attorneys, agents, and employees.

Applicability of Coverage:

Each insurance policy required above shall contain or be endorsed to contain that the Contractor's or Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve Change Order No. 3 in the Amount of $93,826 for the Contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, Increasing the Total Project Not-to-Exceed Amount from $1,989,005 to $ $2,082,831 and approve an appropriation in amount of $253,497 from General Government CIP Fund to CP 3424.**
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	Tony Ndah, 408-586-2602
Recommendation:	1. Approve Change Order No. 3 in the Amount of $93,826 for the Contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, Increasing the Total Project Not-to-Exceed Amount from $1,989,005 to $2,082,831. 2. Approve an appropriation in amount of $253,497 from the General Government CIP Fund to CP 3424.

Background:

As part of the FY 2019 – 2024 Capital Improvement Program, Council approved Project No. 3424 – Citywide Park Rehabilitation ("Project") which provided funding for the rehabilitation of City-owned parks and playgrounds throughout the City.

On February 18, 2020, Council approved a contract with Redwood Construction and Equipment, Inc. ("Contractor") for the rehabilitation of parks playgrounds at fifteen City parks. The Project provides equipment play structure and play surface repairs while updating the playgrounds to current CPSI safety standards. Work under the Project includes repair and/or replacement of sections of failed pour-in-place (PIP) play surfaces, replacing of sand with engineered wood fiber (EWF), and replacement of old playground structures. The Project will be completed in three phases over the next three fiscal years.

On August 16, 2020, the City issued Change Order No. 1 for the Project to add additional funds for the removal of a concrete pad discovered during surface preparation at Foothill park. Change Order No. 1 added $4,512.00 to the contract total for a total not-to-exceed amount of $1,720,164.00 and no time extension.

On October 20, 2020, Council authorized Change Order No. 2 to install poured-in-place (PIP) rubber surfaces in the fall attenuation zones at the base of the play structures located at Foothill Park, Dixon Landing Park, Hillcrest Park, and Oliver Jones Memorial Park. Change Order No. 2 added $268,841 to the contract for a total not-to-exceed total of $1,989,005.

The original scope of work for the Project called for the replacement of play equipment at several parks with pre-existing PIP surface. For those locations, the contractor was to perform spot repairs of damaged sections of the PIP surface. While performing such work at Cardoza Park, the contractor determined that the existing PIP surface cannot be salvaged once the play equipment is removed and replaced. As such, it is necessary to replace the existing PIP surface with new PIP underneath the Cardoza Park's playground structure.

Analysis:
As described above, the original contract and subsequent two change orders revised the scope of work based on in-field findings. Change Order No. 3 will provide for the following additions to the scope of work based on contractor recommendations validated by City staff as a result of further investigation of the existing conditions of the park facilities and equipment.

Location	Description of Rehabilitations and Repairs	Amount
Cardoza Park	Replacement of rubber surfacing instead of spot repairs and resealing after replacement of playground equipment	$ 65,200
Calle Oriente Park	Replacement of rubber surfacing instead of sport repairs and resealing due to unanticipated disrepair of original surface.	$ 28,626
	Total	**$ 93,826**

The attached Change Order No. 3 adds the additional scope as summarized above for a not-to-exceed increase of $93,826, which results in the contract's new not-to-exceed amount of $ $2,082,831. This change order also adds 120 days to the Project to allow for the work outlined in Change Order No. 3 to be performed by the Contractor for a new Project completion date of April 30, 2022.

Fiscal Impact:
The Project is primarily funded by Capital Improvement Project No. 3424 Citywide Park Rehabilitation, which is funded by General Government CIP Fund, Midtown Park Fund and Park Fund. Currently, the balance in CP 3424 is $29,334 as of 6/4/2021. Per the 2022-2026 Capital Improvement Program, this Project will receive a total of $1.8 million in funding, including the Midtown Park Fund appropriation in FY21-22. The total funding for the project, along with the proposed amount for Change Order No. 3 is short of the proposed not-to-exceed amount of $2,082,831 for the project. As discussed above, Council approved Change Order 2 in the amount of $268,841 for the project on October 20, 2020; however, staff did not request an appropriation for this Change Order because sufficient unexpended and unencumbered funds were available in the Project at that time. Due to an administrative oversight, the funds for these change orders #1 and #2 were not encumbered. Therefore, an additional amount of $253,497 is requested to be appropriated from General Government CIP to CP3424 to fully fund the project, make payments for work authorized and provide funds for Change Order #3.

California Environmental Quality Act:
This Project is exempt from CEQA under Class 1 - Section 15301 - Existing Facilities because they relate to the operation, repair, maintenance or minor alterations to a public facility involving no or negligible expansion of use.

Recommendation:
1. Approve Change Order No. 3 in the Amount of $93,826 for the Contract with Redwood Construction and Equipment, Inc. for the Project, Increasing the Total Project Not-to-Exceed Amount from $1,989,005 to $ $2,082,831.
2. Approve appropriation in amount of $253,497 from General Government CIP to CP 3424.

Attachment
1. NIB 2390 Change Order No. 3.
2. Budget Change Form

City of Milpitas
455 E. Calveras Boulevard
Milpitas, California 93035

CONTRACT CHANGE ORDER NO. 3

Date: 15 June 2021

To: Redwood Engineering Construction Inc.

416 D Street

Redwood City, CA 94063

Attn: Ben Cerney, President

Project: NIB 2390 Citywide Parks and Playgrounds Rehabilitation

This Change Order covers changes to the contract as described herein. The Contractor shall construct, furnish equipment and materials, and perform all work as necessary or required to complete the Change Order items for the amount agreed upon between the Contractor and City of Milpitas and set forth herein.

Item No.	Description of Changes	Increase/ (Decrease) in Contract Amount	Contract Time Extension, Days
1	Replacement of rubber surfacing instead of spot repairs and resealing after replacement of playground equipment.	$65,200.00	60
2	Calle Oriente Park -- Replacement of rubber surfacing instead of sport repairs and resealing due to unanticipated disrepair of original surface.	$28,626.00	60
	Totals	**$93,826.00**	**120**

Original Contract Amount:	$1,715,652.00
Change by Previous Change Order(s):	$273,353.00
Contract Price Prior to this Change Order:	$1,989,005.00
Current Change Order Amount:	$93,826.00
Revised Contract Amount including this Change Order:	$2,082,831.00

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The Contract Price and Contract Time shall be adjusted as set forth above. The undersigned Contractor approves the foregoing Change Order as to the changes, if any, in the contract price specified for each item including any and all supervision costs and other miscellaneous costs relating to the change in work, and as to the extension of time allowed, if any, for completion of the entire work on account of said Change Order. The Contractor agrees to furnish all labor and materials and perform all other necessary work, inclusive of the directly or indirectly related to the approved time extension, required to complete the Change order items. This document will become a supplement of the contract and all provisions will apply hereto. It is understood that the Change Order shall be effective when approved by the City.

Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising out of or related to the subject of this Change Order and acknowledges that the compensation (time and cost) set forth herein comprises the total compensation due for the work or change defined in the Change Order, including all impact on any unchanged work. By signing this Change Order, the Contractor acknowledges and agrees that the stipulated compensation includes payment for all Work contained in the Change Order, plus all payment for any acceleration or interruption of schedules, extended overhead costs, delay, and all impact or cumulative impact on all Work under this Contract. The signing of this Change Order acknowledges full mutual accord and satisfaction for the change and that the stated time and/or cost constitute the total equitable adjustment owed the Contractor as a result of the change. The Contractor hereby releases and agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim or request for equitable adjustment of any type, for any reasonably foreseeable cause that shall arise out of, or as a result of, this Change Order and/or its impact on the remainder of the Work under the Contract.

Accepted:

(Signature) Contractor's Authorized Representative	Date

Recommended:

(Signature) Tony Ndah, Director of Public Works	Date

Approved:

(Signature) Steven G. McHarris, City Manager	Date

This Contract Change Order consists of **two (2) pages** and any exhibits attached to this Contract Change Order shall not be part of the Contract Change Order unless specifically initialed by or on behalf of both the Contractor and the City of Milpitas.

Contract Change Order #3

City of Milpitas, California

BUDGET CHANGE FORM

Type of Change	From*		To*	
	Account	Amount	Account	Amount
Check one: ☒ **Budget Appropriation** ❒ **Budget Transfer**	330-2931 331-9513424153899	$275,437 $275,437	330-3999 331951342474800	$275,437 $275,437

Approve Change Order No. 3 in the Amount of $170,000 for the Contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, Increasing the Total Project Not-to-Exceed Amount from $1,905,437 to $2,075,437. Approve appropriation in amount of $275,437 from General Government CIP to CP 3424.

Background:
As part of the FY 2019 – 2024 Capital Improvement Program, Council approved Project No. 3424 – Citywide Park Rehabilitation which provided funding for the rehabilitation of City-owned parks and playgrounds throughout the City.

On February 18, 2020 Council approved a contract with Redwood Construction and Equipment, Inc. (Contractor) for the rehabilitation of parks playgrounds at fifteen City parks. The project provides equipment play structure and play surface repairs while updating the playgrounds to current CPSI safety standards. Work under the Project includes repair and/or replacement of sections of failed pour-in-place (PIP) play surfaces, replacing of sand with engineered wood fiber (EWF), and replacement of old playground structures. The Project will be completed in three phases over the next three fiscal years.

On August 16, 2020, the City issued Change Order No. 1 for the project to add additional funds for the removal of a concrete pad discovered during surface preparation at Foothill park. Change Order No. 1 added $4,512.00 to the contract total for a new not-to-exceed amount of $1,720,164.00 and no time extension.

On October 20, 2020, Council authorized Change Order No. 2 install poured-in-place (PIP) rubber surfaces in the fall attenuation zones at the base of the play structures located at Foothill Park, Dixon Landing Park, Hillcrest Park, and Oliver Jones Memorial Park. Change Order No. 2 added $268,841 to the contract for a new not-to-exceed total of $1,989,005.

The original scope of work for park playground rehabilitation called for the replacement of play equipment at several parks with pre-existing PIP surface. For those locations, the contractor was to perform spot repairs of damaged sections of the PIP surface. While performing such work at Cardoza Park, the contractor determined that the existing PIP surface cannot be salvaged once the play equipment is removed and replaced. As such, it is necessary to replace the existing PIP surface with new PIP underneath the Cardoza Park's playground structure.

Analysis:
A contract with Redwood Construction and Equipment, Inc. was approved at the February 18, 2020 City Council meeting in the amount of $1,715,652. The contract was executed on March 3, 2020 and work began shortly after thereafter.

The original contract and subsequent two change orders revised the scope of work based on in field findings.
Change Order #3 will provide for the following additions to the scope of work based on contractor recommendations as a result of further investigation of the existing conditions of the park facilities and equipment and are consistent with findings identified in a recent park playground safety report:

- Cardoza Park – Replacement of rubber surfacing following replacement of playground equipment.

- Calle Oriente Park – Replacement of rubber surfacing due to unanticipated disrepair of original surface.
- Strickroth Park – Rehabilitation of outdated playground equipment and installation of safety amenities.
- Augustine Memorial Park – Removal and replacement safety hazards.

The attached change order adds the additional scope as summarized above for a not to exceed increase of $170,000, which results in the contract's new not-to-exceed amount of $ $2,075,437. This change order also adds 120 days to the project to allow for the work outlined in Change Order No. 3 to be performed by the Contractor for a new end date of April 30, 2022.

Fiscal Impact:
The park playground repair project is primarily funded by Capital Improvement Project No. 3424 Citywide Park Rehabilitation, which is funded by General Government CIP Fund, Midtown Park Fund and Park Fund. Currently, the balance in CP 3424 is $29,334 as of 6/4/2021. Per the 2021-2026 Capital Improvement Program, this project will receive a total of $1.8 million in funding, including the Midtown Park Fund appropriation in FY21-22. An additional $275,437 will be appropriated from General Government CIP to CP3424 to fully fund Change Order #3.

California Environmental Quality Act:
This Project is exempt from CEQA under Class 1 - Section 15301 - Existing Facilities because they relate to the operation, repair, maintenance or minor alterations to a public facility involving no or negligible expansion of use.

Recommendation:
1. Approve Change Order No. 3 in the Amount of $170,000 for the Contract with Redwood Construction and Equipment, Inc. for the Citywide Parks and Playgrounds Rehabilitation Project, Increasing the Total Project Not-to-Exceed Amount from $1,905,437 to $ $2,075,437.
2. Approve appropriation in amount of $275,437 from General Government CIP to CP 3424.

Attachment
1. NIB 2390 Change Order No. 3.
2. Budget Change Form

☐ **Check if City Council Approval required.** **Meeting Date**: June 15, 2021

Requested by:	**Department Head:** Tony Ndah	**Date:** June 15, 2021
Reviewed by:	**Finance Director:** Lauren Lai	**Date:** June 15, 2021

Date approved by City Council, if required: **Confirmed by:**

FI/24786/V **Form 30-222 (Rev. 1/92)**

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve and Authorize the City Manager to Execute an Agreement with Mark 43 for a Law Enforcement Records Management System (RMS) for a Six Year Software License Agreement for the Not-To-Exceed Amount of $1,049,956**
Category:	Consent Calendar-Public Safety
Meeting Date:	6/15/2021
Staff Contact:	Steven Fox, Police Captain, 408-586-2525 and Chris Schroeder, Purchasing Agent, 408-586-3161
Recommendation:	Approve and Authorize the City Manager to Execute an Agreement with Mark 43 for a Law Enforcement Records Management System (RMS) for a Six Year Software License Agreement for the Not-To-Exceed Amount of $1,049,956 subject to annual appropriations.

Background:
On May 8, 2020, the City released RFP No.242 ("Law Enforcement Records Management System Replacement Project"). The objective of the RFP was to acquire a Commercial-off-the-shelf (COTS) Records Management System (RMS) designed to meet the business needs of the Milpitas Police Department (MPD). The need to replace the existing RMS is primarily driven by outdated technology and functional shortcomings of the existing platform as well as forthcoming compliance requirements of the State of California – specifically the ability to comply with California Incident Based Reporting System (CIBRS) and AB 953 (racial profiling reporting requirements) data collection requirements.

Analysis:
On May 8, 2020, the RFP was publicly posted in accordance with the City's Municipal Code, advertised on the City's website, through the City's eProcurement System ProcureNow and email notifications were sent to companies who provide this service. The City held a non-mandatory pre-proposal conference on May 14, 2020. Proposals were due by June 30, 2020.

The City received five (5) responses from the following firms: CentralSquare; Mark 43, SOMA, Sun Ridge, and Tyler Technologies. The City's Evaluation Committee ("Committee") reviewed proposals based on the merits of the following: 1) Proposer Background, Experience, Financial Qualifications, and Proposer References; 2) System Architecture and Security; 3) Application Software and Integration; 4) System Testing and Acceptance; 5) Implementation; 6) Compliance to Contract Provisions; 7) Customer Support, Warranty, and Maintenance; and 8) Cost. The Evaluation Committee met jointly to discuss the merits of each proposal received; however, scoring was done independently and compiled as a single score. After the initial evaluation, three (3) firms were invited by the Committee to demonstrate their product: Mark 43, SOMA, and Sun Ridge. Each vendor was given identical agendas and allotted the same amount of time to demonstrate their product and answer questions from the Committee.

Following the demonstration, representatives from the Committee conducted reference checks for the three vendors. Upon the conclusion of the reference checks, the Committee re-convened to discuss the demonstrations and reference checks. Following this meeting, members of the Committee updated their initial scoring for the finalist vendors. Upon conclusion of this phase, the Committee determined that additional information was required from the two (2) highest scoring vendors that remained: Mark 43 and Sun Ridge. As such, both Mark 43 and Sun Ridge were invited for an additional virtual question and answer session, allow

each vendor to further discuss their product, pricing, and answer remaining questions from the Committee. The Committee also conducted additional reference checks with local agencies using the proposed products. Following these demonstrations and additional reference checks, the Committee re-convened to discuss these events; following this meeting, each Committee member provided their final scoring. The table below shows the final cumulative evaluation score.

Company	Score
Mark 43	**76.05**
Sun Ridge	73.15
SOMA	61.25
CentralSquare	47.63
Tyler Technologies	46.5

The Committee recommends the City Council approve Mark 43 as the most qualified firm and authorize the City Manager to execute a six (6) year software License Agreement with Mark 43. The Committee makes this recommendation based on Mark 43's presence and success in the State of California, it's modern deployment and system architecture approach, high level of customer satisfaction, and overall ability to meet the business needs of the Milpitas Police Department.

Policy Alternative:

Alternative: Do not authorize the City Manager to execute a contract with Mark 43.

Pros: None.

Cons: In failing to upgrade the current system, the City would not have a plan to meet the forthcoming requirements of the State of California. Failing to comply with the State's mandates puts the City at risk from both a financial and legal perspective.

Reason not recommended: Mark 43 was identified as the most qualified firm by the Committee. Not moving forward on this project puts the City at significant risk.

Fiscal Impact:
The total cost of the agreement over the initial six-year period is $1,049,956. Year 1 Payment is $237,576 and Year 2 through Year 6 payment are fixed at $162,476. Year 1 and Year 2 payments for the total of $400,052 will be paid from funds available in CIP 3423 Police Records Management, with uncommitted balance of $915,312. The project funding sources are: General Fund of $149,712 and General Government CIP of $1,450,000. The annual contractual cost for the subsequent 4 years in the amount of $162,476 will be incorporated in the development of future operating budgets partially offset through expected maintenance cost savings of the current RMS.

Environmental Review:
The proposed action is exempt from environmental review pursuant to the California Environmental Quality Act (CEQA) Guidelines sections 15378(b)(2) and 15378(b)(5) as ongoing administrative or organizational activities to ensure proper record keeping in the Police Department that will not result in direct or indirect physical changes in the environment.

Recommendation:
Approve and authorize the City Manager to execute an agreement with Mark 43 for a Law Enforcement Records Management System subject to annual appropriations.

Attachments:
Mark43 Software License Agreement

RFP No. 2424 – Law Enforcement Records Management System

CITY OF MILPITAS
SOFTWARE LICENSE AND SERVICES AGREEMENT

THIS SOFTWARE LICENSE AND SERVICES AGREEMENT ("**Agreement**") is entered into as of this ___ day of _____, 2021 (the "**Effective Date**") by and between Mark43, Inc., a Delaware corporation with its principal place of business at 250 Hudson Street, 3rd Floor, New York, NY 10013 ("**Licensor**" or "**Mark43**") and the City of Milpitas, a California municipal corporation ("**Licensee**" or "**City**"). This Agreement may refer to Mark43 and City individually as a "party" or jointly as the "parties."

RECITALS

A. In conjunction with the City of Milpitas Police Department operations, the City desires to acquire a law enforcement records management system as detailed in the Request for Proposals (RFP) No. 2424;

B. In its proposal dated June 29, 2020 and submitted in response to the City's RFP (the "**Proposal**"), Mark43 represents that it has the knowledge, experience and expertise in public safety technology, and the desire to provide the City with the law enforcement records management system software solution as set forth in its Proposal; and

C. Mark43 is the owner of its proprietary Mark43 RMS SaaS Software (the "**Software Services**").

D. Mark43/Licensor desires to grant to City/Licensee and City/Licensee desires to obtain from Mark43/Licensor a nonexclusive license to use the Software Services solely in accordance with the terms and on the conditions set forth in this Agreement.

AGREEMENT

THEREFORE, in consideration of the premises, agreements, covenants, representations and warranties herein contained, and for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Licensor and Licensee agree as follows:

1. LICENSE.

1.1 Use of the Software. During the Term, Licensor hereby grants to Licensee such rights and licenses to the Software Services as set forth in Section 2 of Exhibit A of this Agreement.

1.2. Licensor Promotion. Licensee hereby grants to Licensor a non-exclusive, worldwide, royalty-free license to use, reproduce, distribute and publicly display Licensee's name in connection with Licensor's corporate resume. Subject to prior written approval from Licensee, Licensor may issue a press release generally describing the transaction contemplated by this Agreement or otherwise state that Licensee is a user of a Licensor product.

2. INTEGRATION/ADDITIONAL SERVICES. Licensor shall provide such reasonable assistance

as is necessary to integrate the Software Services to operate in the manner contemplated herein. See Exhibit A, Section 4.2, Schedule A, and Schedule B.

3. LICENSE FEES.

3.1 Fees. In consideration of the rights granted in this Agreement, Licensee shall pay to Licensor fees not-to-exceed the amount of **$1,209,596.00** for the Initial Term, as further described in Schedule A of Exhibit A.

3.2 Payment Terms. All payments shall be due within thirty (30) days of the invoice date for so long as this Agreement remains in effect. See Section 5 of Exhibit A.

4. PROPRIETARY RIGHTS. Reserved. See Section 3 of Exhibit A.

5. CONFIDENTIALITY. Reserved. See Section 7 of Exhibit A.

6. WARRANTIES. See Section 8 of Exhibit A.

7. TERM AND TERMINATION.

7.1 TERM.

(a) **Initial Term.** The initial term of this Agreement begins on the Effective Date and will continue for six (6) years, unless and until terminated in accordance with Section 7.2 (the "**Initial Term**").

(b) **Renewal Terms.** Upon expiration of the Initial Term or any Renewal Term, this Agreement will automatically renew for successive one (1) year (each, a "**Renewal Term**") at the rates set forth on Schedule A of Exhibit A, unless either party provides the other with written notice of non-renewal at least thirty (30) days prior to the expiration of the then-current term.

7.2 Temporary Suspension and Termination.

(a) **Termination for Breach by Either Party**. Either party may terminate this Agreement upon written notice to the other party, if the other party breaches a material term of this Agreement and such breach remains uncured for thirty (30) days after the other party's receipt of such notice.

(b) **Suspension of Services**. To the extent permitted by Applicable Law, in addition to any other rights or remedies it may have under this Agreement or by Applicable Law, Licensor may immediately suspend provision of the Software Services without liability to Licensee: (a) if Licensee breaches Section 2.5 (Restrictions on Use) or Section 2.6 (Security Obligations) of Exhibit A; (b) to avoid harm or liability to Licensor, its Affiliates or its other customers, including in the case of denial of service attacks or other disruptions; (c) if required by Applicable Law or legally required by a governmental authority; or (d) if Licensee's account is more than sixty (60) days past due with respect to non-disputed amounts, until paid in full. Licensee shall remain liable for any fees and other amounts payable under this Agreement during any period of suspension. Licensor will use commercially reasonable efforts to restore Licensee's rights to use and access those portions of the Software Services or

accounts that gave rise to the suspension promptly after Licensee has resolved the problem giving rise to the suspension.

(c) **Termination for Non-Appropriation**. Licensee's payment obligation under this Agreement extends only to funds appropriated annually by Licensee's governing body for the purpose of this Agreement. For each succeeding fiscal period covered by this Agreement, Licensee's applicable agency or department responsible for this Agreement agrees to include in its budget request appropriations sufficient to cover the annual financial obligations under this Agreement. Licensee's governing body has no obligation to make appropriations for the Agreement in lieu of appropriations for new or other contracts. If Licensee is appropriated insufficient funds to continue annual payments under this Agreement, Licensee may terminate this Agreement by giving Licensor not less than thirty (30) days' prior written notice. Upon termination under this paragraph, Licensor shall be entitled to compensation for all Software Services rendered prior to the effective termination date. Licensor's assumption of risk of possible non-appropriation is a part of the consideration for the Agreement. This Section controls against any and all other provisions of the Agreement.

(d) **Termination for Convenience**. Licensee may terminate this Agreement at any time without cause upon ninety (90) days' prior written notice to Licensor. No refund of amounts paid by Licensee shall be provided upon termination for convenience.

7.3 Effect of Termination. In the event of any termination or expiration of this Agreement,

(a) Licensee will pay Licensor all amounts payable hereunder as of the termination or expiration date or Licensor shall provide a prorated refund of amounts paid by Licensee where termination occurs for breach by Licensor prior to the first twelve (12) months of the Term;

(b) all rights and licenses granted hereunder to Licensee (as well as all rights granted to any Authorized Users of Licensee) will immediately cease, including but not limited to all use of the SaaS Services; and

(c) Licensor will provide records to Licensee in accordance with its transition assistance services ("**Transition Assistance**") as set forth in Schedule C of Exhibit A.

(d) Licensee will, upon written request of Licensor, either return to Licensor or provide Licensor with written certification of the destruction of, all documents, computer files and other materials containing any Confidential Information of Licensor that are in Licensee's possession or control.

7.4 **Survival**. The following provisions will survive any termination or expiration of this Agreement: Section 7.3 ("Effect of Termination"); Section 8 ("Indemnity"); Exhibit A, Section 3.1 ("Ownership of Subscriber Data"), Exhibit A, Section 4 ("Third-Party Components and Applications"), Exhibit A, Section 7 ("Confidentiality"), Exhibit A, Section 8.3 ("Disclaimer"), Exhibit A, Section 9 ("Limitation of Liability"), Exhibit A, Section 10 ("Indemnification"), Exhibit A, Section 11 ("Miscellaneous"), Exhibit A, Schedule C ("Transition Assistance") and this Section 7.4 ("Survival").

8. INDEMNITY. Licensor shall indemnify Licensee as detailed in Exhibit A, Section 10 (Indemnification). In addition, to the fullest extent permitted by law, Licensor shall defend (with counsel mutually agreeable to both parties, with Licensee's approval not to be unreasonably withheld), indemnify and hold Licensee, its officials, officers, employees, and agents free and harmless from any and all claims,

demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, arising out of any third-party claim in any manner arising out of, pertaining to, or incident to any gross negligence or willful misconduct of Licensor, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Licensor's Services or this Agreement, including without limitation the payment of all damages, expert witness fees and attorney's fees and other related costs and expenses. Licensor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Licensor, Licensee, its officials, officers, employees, agents, or volunteers. FOR THE AVOIDANCE OF DOUBT, LICENSOR'S INDEMNIFICATION OBLIGATIONS SET FORTH IN THIS SECTION 8 SHALL BE SUBJECT TO THE LIABILITY EXCLUSIONS AND LIMITATIONS OF DAMAGES SET FORTH IN SECTIONS 9.1 AND 9.2 OF EXHIBIT A.

9. INSURANCE. Upon execution of this Agreement, Licensor shall provide evidence satisfactory to the Licensee it has all insurance required under ***Exhibit B*** (**Insurance Requirements**), attached hereto and incorporated herein by this reference.

10. VERIFICATION OF EMPLOYMENT ELIGIBILITY. By executing this Agreement, Licensor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subcontractors of any tier to comply with the same.

11. GENERAL

11.1 Force Majeure. Neither party shall be liable hereunder by reason of any failure or delay in the performance of its obligations hereunder on account of strikes, electrical or other shortages, riots, insurrection, fires, flood, storm, explosions, acts of God, war, governmental action, labor conditions, earthquakes, material shortages, or any other cause beyond the reasonable control of such party.

11.2 Independent Contractors. Nothing in this Agreement shall be construed as creating an employer-employee relationship, a partnership, or a joint venture between the parties. Nothing contained herein will be construed to give any party any right or authority to create or assume any obligation of any kind on behalf of any other party. Because the Licensor will be acting as an independent contractor, the Licensee assumes no responsibility for the Licensor's acts.

11.3 Governing Law. This Agreement shall be governed by the laws of the State of California, and without reference to its conflicts of law as though entered into between California residents and to be performed entirely within the State of California, and both Licensee and Licensor consent to jurisdiction and venue in the state and federal courts sitting in the State of California and in particular, within Santa Clara County, California.

11.4 Severability. The unenforceability, invalidity or illegality of any provision(s) of this Agreement shall not render the remaining provisions unenforceable, invalid or illegal.

11.5 Modification and Waiver. No modification to this Agreement, nor any waiver of any rights, will be effective unless assented to in writing by the party to be charged, and the waiver of any breach or default shall not constitute a waiver of any other right hereunder or any subsequent breach or default. No term included in any invoice, estimate, confirmation, acceptance, purchase order or any other similar document in connection with this Agreement will be effective unless expressly stated otherwise in a separate writing signed by Licensee and Licensor.

11.6 Notices. All notices required or permitted under this Agreement will be in writing and delivered by courier or overnight delivery service, or by certified mail to the following or such other addresses as the respective parties may designate by like notice from time to time. In each instance, notice will be deemed given upon receipt or within five (5) days of delivery, whichever is later.

LICENSEE:

City of Milpitas
1265 North Milpitas Blvd.
Milpitas, California 95035
Attn: Mike Luu, IS Director

LICENSOR:

Mark43, Inc.
250 Hudson Street
3rd Floor
New York, NY 10013
Attn: David Jochim
Email: dave@mark43.com

Copy to:

Mark43, Inc.
250 Hudson Street
3rd Floor
New York, NY 10013
Attn: General Counsel
Email: contractnotices@mark43.com

All communications will be sent to the addresses set forth above or to such other address as may be specified by either party to the other in accordance with this Section. Either party may change its address for notices under this Agreement by giving written notice to the other party.

11.7 Assignment. Neither party shall be permitted to assign or otherwise transfer this Agreement intentionally or by operation of law or otherwise, in whole or in part, without the prior written consent of the other party, provided, however, that a party may, without the consent of the other party, but upon written notice to the other party, assign or otherwise transfer this Agreement to any of its affiliates or to an entity with or into which it is merged or consolidated or to which it sells its stock or other equity interests or all or substantially all of its assets.

11.8 Organization. Within five (5) business days of the Effective Date, Licensor shall assign a Project Manager who shall be authorized to act on Licensor's behalf under this Agreement. The Project Manager shall not be removed from this Agreement or reassigned without the prior written consent of the Licensee, which consent shall not be unreasonably withheld or delayed.

11.9 Third Party Rights. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the Licensee and the Licensor.

11.10 Equal Opportunity Employment. Licensor represents that it is an equal opportunity employer and that it shall not discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, sex, age or other interests protected by the State or Federal Constitutions. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

11.11 Successors. This Agreement shall be binding upon and shall inure to the benefit of the successors in interest, executors, administrators and assigns of each party to this Agreement.

11.12 Prohibited Interests. Licensor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Licensor, to solicit or secure this Agreement. Further, Licensor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Licensor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, Licensee shall have the right to rescind this Agreement without liability. For the term of this Agreement, no director, official, officer or employee of Licensee, during the term of his or her service with Licensee, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

11.13 Wage Theft Prevention.

a. Licensor, and any subcontractor it employs to complete Services under this Agreement, shall comply with all applicable federal, state and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance.

b. BY SIGNING THIS AGREEMENT, LICENSOR AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY, FINDING IN THE FIVE (5) YEARS PRIOR TO EXECUTING THIS AGREEMENT THAT LICENSOR OR ITS SUBCONTRACTORS HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS. LICENSOR FURTHER AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) HAS EITHER FULLY SATISFIED EACH JUDGMENT, DECISION OR ORDER, OR, IF ANY JUDGMENT, DECISION OR ORDER HAS NOT BEEN FULLY SATISFIED, LICENSOR AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) IS CURRENTLY SATISFYING SAID JUDGMENT, DECISION OR ORDER THROUGH A PAYMENT OR ALTERNATIVE PLAN APPROVED BY THE APPLICABLE COURT/GOVERNMENT AGENCY AND THAT LICENSOR OR ITS SUBCONTRACTOR(S) ARE IN COMPLIANCE WITH SAID PLAN AS OF THE DATE OF EXECUTING THIS AGREEMENT.

c. If at any time during the term of this Agreement, a court or investigatory government agency issues a final judgment, decision or order finding that Licensor or a subcontractor it employs to perform work under this Agreement has violated any applicable wage and hour law, or Licensor learns of such a judgment, decision, or order that was not previously disclosed in its bid/proposal, Licensor shall inform the Licensee no more than fifteen (15) calendar days after the judgment, decision or order becomes final or from the date of learning of the final judgment, decision or order. Licensor or its subcontractor(s) shall, within thirty (30) calendar days after notifying the Licensee, either (i) fully satisfy any such judgment, decision, or order and provide the Licensee with documentary evidence of satisfying said judgment, decision or order; or (ii) provide the Licensee documentary evidence of a payment or other alternative plan approved by the court/government agency to satisfy the judgment, decision or order. If the Licensor or its subcontractor is subject to a payment or other alternative plan, the Licensor or its subcontractor shall continue to submit documentary evidence every thirty (30) calendar days during the term of the Agreement demonstrating continued compliance with the plan until the judgment, decision or order has been fully satisfied.

d. For purposes of this Section, a "final judgment, decision, or order" refers to one for which all appeals have been exhausted or the time period to appeal has expired. Relevant investigatory government agencies include: the United States Department of Labor, the California Division of Labor Standards Enforcement, the Licensee, or any other governmental entity or division tasked with the investigation and enforcement of wage and hour laws.

e. Failure to comply with any part of this Section constitutes a material breach of this Agreement. Such breach may serve as a basis for immediate termination of this Agreement and/or any other remedies available under this Agreement and/or law.

f. Notice provided to the Licensee shall be addressed to: Attention: Finance Director, 455 E. Calaveras Blvd. Milpitas, CA 95035. The Notice provisions of this Section are separate from any other notice provisions in this Agreement and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

11.14 Entire Agreement. This Agreement, with its exhibits, represents the entire understanding of Licensee and Licensor as to those matters contained herein, and supersedes and cancels any prior or contemporaneous oral or written understanding, promises or representations with respect to those matters covered hereunder. Each party acknowledges that no representations, inducements, promises or agreements have been made by any person which are not incorporated herein, and that any other agreements shall be void. This Agreement may not be modified or altered except in writing signed by both parties hereto. This is an integrated Agreement.

11.15 Order of Precedence. In the event of a conflict in the provisions of the Agreement, the following shall prevail in the order set forth below:

(a) Agreement

(b) Agreement Exhibits A (and associated **Schedules A through F**), B and C attached hereto and incorporated herein by reference**,** and

(c) Licensor's Proposal, which is incorporated herein and made a part of this Agreement by this reference, except Sections 2 (System Architecture), Section 3, Form D (Interface Identification), Section 4 (System Testing and Acceptance), Section 5 (Implementation Approach), Section 8 (Cost Proposal).

11.16 Headings. The titles and headings contained in this Agreement are for reference purposes only and shall not in any manner limit the construction or interpretation of this Agreement.

11.17 Counterparts. This Agreement may be executed, including by electronic signature, in two or more counterparts, each of which shall be an original and all such counterparts together shall constitute one and the same instrument. Electronically executed or electronically transmitted (including via facsimile transmission) signatures have the full force and effect of original signatures.

[*Signatures on following page*]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

CITY OF MILPITAS
Approved By:

_____
Steven G. McHarris
Interim City Manager

_____
Date

Approved As To Form:

_____
Christopher J. Diaz
City Attorney

Approved:

_____
Lauren Lai; CPA, MPA
Risk Manager/Director of Finance

Approved As To Content:

_____
Jared Hernandez
Acting Chief of Police

MARK43, INC.

_____
Signature

_____
Name

_____
Title

_____
Date

Exhibit A

SOFTWARE LICENSE AND SERVICES
ADDITIONAL TERMS

(See attached)

EXHIBIT A:
SOFTWARE LICENSE AND SERVICES
ADDITIONAL TERMS
FOR LAW ENFORCEMENT RECORDS MANAGEMENT SYSTEM
(RFP NO. 2424)

1. DEFINITIONS. For purposes of this Exhibit A, and all Schedules attached hereto, the following terms shall have the meanings set forth below:

1.1 "**Affiliate**" means, with respect to any entity, any other entity who, directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such entity. The term "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of an entity, whether through the ownership of voting securities, by contract or otherwise.

1.2 "**Affiliated Agency**" means any other government agency to which Subscriber is legally or contractually bound to share information.

1.3 "**Applicable Law(s)**" means, with respect to any party, any federal, state or local statute, law, ordinance, rule, administrative interpretation, regulation, order, writ, injunction, directive, judgment, decree or other requirement of any international, federal, state or local court, administrative agency or commission or other governmental or regulatory authority or instrumentality, domestic or foreign, applicable to such party or any of its properties, assets or business operations.

1.4 "**Applications**" means the applications purchased by Subscriber as described in Schedule A.

1.5 "**Authorized Users**" means employees of Subscriber and any Affiliated Agency who are authorized to access and use the Applications through the applicable security designation(s), pursuant to which full or limited access to the applicable Applications may be granted.

1.6 "**Documentation**" means the user guides and user manuals for the SaaS Services that Mark43 provides to Subscriber.

1.7 **"Go Live"** means the date of cutover to each respective Mark43 Application.

1.8 **"Integrated Application"** means a third-party product, database or application requested by Subscriber and approved by Mark43 that will be installed, linked or enabled by Subscriber for use in connection with the SaaS Services (e.g. NCIC).

1.9 "**Integrated Application Data**" means all data, information, content and other materials stored on an Integrated Application.

1.10 "**Integrated Application Provider**" means any third party, including other vendors, state agencies and local agencies, that control products and/or databases with which Mark43 SaaS Services are to be interfaced.

1.11 "**Intellectual Property Rights**" means all intellectual and industrial property rights, whether now existing or existing in the future, including without limitation, (i) all patent rights, including any rights in pending patent applications and any related rights; (ii) all copyrights and other related rights throughout the world in works of authorship, including all registrations and applications therefor; (iii) all trademarks, service marks, trade dress or other proprietary trade designations, including all registrations and applications therefor (iv) all rights throughout the world to proprietary know-how, trade secrets and other confidential information, whether arising by law or pursuant to any contractual obligation of non-disclosure; and (v) all other rights covering industrial or intellectual property recognized in any jurisdiction.

1.12 "**Professional Services**" means any implementation, training, project management, consulting and other services (outside the scope of the Support Services) that are described in a Statement of Work.

1.13 "**SaaS Services**" means the Applications, Software, and related software-as-a-service, hosting, maintenance and/or support services made available by Mark43 for remote access and use by Subscriber, including any Documentation thereto.

1.14 **"Services**" means the services provided or required to be provided by or through Mark43, including without limitation, SaaS Services and Professional Services.

1.15 **"Software**" means the object code version of Mark43's computer software and all Updates made available by Mark43 to Subscriber under this Agreement.

1.16 **"Statement of Work**" means a detailed plan of work to be agreed by the Parties in conjunction with this Agreement and attached to this Agreement as Exhibit C.

1.17 "**Subscriber**" means the City of Milpitas.

1.18 "**Subscriber Data**" means all data, information, content and other materials stored or transmitted by Subscriber and any Authorized User through the SaaS Services (i) in their user accounts; and (ii) on any Integrated Application, excluding any Third-Party Data and any Mark43 Data.

1.19 "**Term**" means the Initial Term and any Renewal Terms.

1.20 **"Third-Party Component"** means a third-party application incorporated in, integrated with or accessed through the SaaS Services (e.g. a mapping provider).

1.21 **"Third-Party Data"** means any data, information, content and other materials made available by any third party, including without limitation through a Third-Party Component.

1.22 "**Updates**" means any and all new releases, new versions, patches and other updates for the SaaS Services that Mark43 makes generally available without additional charge to its other subscribers of the SaaS Services.

1.23 "**Website**" means any Internet website through which Mark43 provides the SaaS Services under this Agreement.

1.24 "**Work Product**" means all materials, software, tools, data, inventions, works of authorship and other innovations of any kind that Mark43, or personnel working for or through Mark43, may make, conceive, develop or reduce to practice, alone or jointly with others, in the course of performing Professional Services or as a result of such Professional Services, whether or not eligible for patent, copyright, trademark, trade secret or other legal protection.

2. PROVISION OF THE SERVICES AND SOFTWARE.

2.1 **SaaS Services**. Subject to the terms of this Agreement, and during the Term, Mark43 hereby grants a non-exclusive, non-transferable, non-sublicensable license to Subscriber and its Authorized Users to access and use the SaaS Services through the Website for Subscriber's internal purposes and in accordance with the terms and conditions of this Agreement. Mark43 will be responsible for hosting the Website, and Subscriber and its Authorized Users will be responsible for obtaining internet connections and other third-party software, hardware and services necessary for it to access the Website through the Internet, including without limitation as set forth in Schedule D. Subscriber will be responsible to Mark43 for compliance with the restrictions on use and other terms and conditions of this Agreement by any of its Authorized Users.

2.2 **Professional Services**. Mark43 offers Professional Services in connection with the SaaS Services as further described on Schedule A and the Statement of Work. To the extent any Professional Services involve the development of any customization or configuration to the SaaS Services, all Intellectual Property Rights to such customization or configuration will be solely owned by Mark43 and will be deemed to be included in the definition of SaaS Services and licensed to Subscriber on the terms set forth herein.

2.3 **Access to Documentation**. Mark43 will provide Subscriber via the Website or other means with access to the Documentation, as may be updated from time to time. Subscriber may print copies of, use, and permit its Authorized Users to use, the Documentation solely in connection with the use of the SaaS Services.

2.4 **Support Services**. Subject to the terms and conditions of this Agreement, Mark43 will provide to Subscriber the support services detailed on Schedule B (the "**Support Services**").

2.5 **Restrictions on Use.** Subscriber and its Authorized Users will not (and will not permit any third party to): (i) share Subscriber's or any Authorized User's login credentials; (ii) reverse engineer, decompile, disassemble, or otherwise attempt to discern the source code, underlying ideas, algorithms, file formats, or interface protocols of the SaaS Services or of any files contained in or generated by the SaaS Services; (iii) copy, modify, adapt or translate the SaaS Services or the Third-Party Data, or otherwise make any use, resell, distribute or sublicense the SaaS Services or the Third-Party Data other than in connection with this Agreement; (iv) make the SaaS Services available on a "service bureau" basis or allow any third parties to use the SaaS Services; (v) disclose the SaaS Services or any of its components to third parties; (vi) remove or modify any proprietary marking or restrictive legends placed on the SaaS Services or the Third-Party Data; (vii) use the SaaS Services or the Third-Party Data in violation of any Applicable Law; (viii) use the SaaS Services to create or augment

any mapping-related dataset (including a mapping or navigation dataset, business listings database, mailing list, or telemarketing list) for use in an implementation that is not connected to the Services; (ix) introduce into the Services any viruses, worms, defects, Trojan horses, malware, or any items of a destructive nature; (x) use the Services to post advertising or listings; (xi) use the Services to defame, abuse, harass, stalk, or threaten others; (xii) permit access or use of the Services by any individual outside the United States; (xiii) hide or obscure any Authorized User's location; (xiv) attempt to gain access to the Services or Software or their related systems or networks in a manner not set forth in the Documentation. Subscriber and its Authorized Users will not access the SaaS Services if in direct competition with Mark43, and will not allow access to the SaaS Services by any party who is in direct competition with Mark43, except with Mark43's prior written consent. Subscriber shall comply with additional restrictions on use of the Services in accordance with the Third-Party Component Terms.

2.6 **Security Obligations.** Subscriber agrees it and its Authorized Users shall securely manage their respective password(s) for access to the SaaS Services. Subscriber agrees it shall notify Mark43 promptly in the event it becomes aware of any unauthorized access or use of the SaaS Services, or of any of its or its Authorized Users passwords or accounts. Unless expressly stated otherwise in this Agreement, a single username or password may not be used by more than one (1) Authorized User. In addition, Authorized Users may log into the SaaS Services from only one location at any given time; concurrent usage (or sign in) under a single username is prohibited, unless Subscriber has a business justification for concurrent usage, in which case Subscriber is responsible for providing approval for such usage to the applicable Authorized Users. Subscriber is responsible for all activities conducted within user accounts in use of the SaaS Services. Subscriber shall comply with all applicable local, state, federal and regional or other laws and regulations applicable in connection with use of the SaaS Services, including all those related to data privacy and the transmission of technical or personal data. Subscriber agrees to (a) provide true, accurate, current and complete registration data for each account it creates via the SaaS Services, and (b) maintain and promptly update the registration data to keep it true, accurate, current and complete.

2.7 **Changes to Services**. Mark43 may make changes and Updates to its Services, provided that it does not materially derogate the overall quality of the Services. Mark43 does not guarantee that the Services are or will remain compatible with any particular third-party software or equipment not supplied by Mark43 under this Agreement, and may, upon written notice, terminate its support for, any software or equipment of Subscriber that Mark43 determines are incompatible with the operation of the Services.

2.8 **Data Sharing**. Mark43 will allow Subscriber to grant other agencies specified levels of access to Subscriber Data pursuant to an executed data-sharing agreement between agencies, and with permissions subject to the parameters laid out in the relevant data-sharing agreement. Subscriber shall provide Mark43 with a copy of the executed data-sharing agreement prior to allowing any such data-sharing. As between Mark43 and Subscriber, Subscriber will be solely responsible for any liabilities that arise as a result of such data-sharing.

3. PROPRIETARY RIGHTS; SUBSCRIBER DATA.

3.1 **Ownership of Subscriber Data.** As between Mark43 and Subscriber, Subscriber owns the Subscriber Data. During the Term and to the extent required for Mark43 to provide transition services thereafter, Mark43 will have, and Subscriber hereby grants and agrees to grant to Mark43, a royalty-free, worldwide, transferable, sublicensable, irrevocable license to use the Subscriber Data to configure and/or provide the SaaS Services, Software, Support Services and Professional Services to Subscriber, and/or to prevent or address service or technical problems, in accordance with this Agreement and the Documentation, or otherwise in accordance with Subscriber's requests or instructions. Mark43 may also use Subscriber Data in anonymized and/or aggregated form to develop analytics that may be used to provide products and services to Subscriber and/or to other Mark43 customers, provided that: (a) Mark43 makes available to Subscriber functionality and services based on anonymized data obtained from other Mark43 customers that are similar to the functionality and services provided to such other customers based on the anonymized data; and (b) Mark43 may not sell or offer for sale any Subscriber Data, whether in Subscriber identifiable, or anonymized and aggregated form. Mark43 shall comply with its obligations under all Applicable Laws in its provision of the Services and use of Subscriber Data.

3.2 **Ownership and Reservation of Rights to Mark43 Intellectual Property.** As between Mark43 and Subscriber, Mark43, its Affiliates and/or its licensors own all right, title and interest in and to the Services, Software, Work Product and all related technology and Intellectual Property Rights. Subject to the limited rights expressly granted hereunder, and except with respect to Third-Party

Components, Mark43 reserves all rights, title and interest in and to the Services, Software, and Work Product, including all related technology and Intellectual Property Rights. No rights are granted to Subscriber hereunder other than as expressly set forth in this Agreement or as required by Applicable Law.

3.3 **Subscriber Feedback**. Subscriber and its Authorized Users may elect to provide Mark43 with suggestions, enhancement requests, recommendations and other feedback concerning the SaaS Services, Software, Support Services or Professional Services (the "**Subscriber Feedback**"). Subscriber hereby assigns and agrees to assign all Subscriber Feedback to Mark43 without lien or encumbrance and agrees that Subscriber Feedback will be the sole property of Mark43 and that Mark43 may use Subscriber Feedback in its discretion without obligation to Subscriber. Mark43 has no obligation to make Subscriber Feedback an Improvement. For the avoidance of doubt, Subscriber Feedback does not constitute Confidential Information of Subscriber hereunder.

3.4 **Usage Data**. Mark43 may collect certain information in connection with Subscriber's access to or use of the Services, such as access records, date and time stamps, transaction and activity records and system performance data ("**Usage Data**"). Mark43 may use Usage Data to deliver and manage its products and services, perform maintenance and support, and develop, test, analyze, and improve the Services and other Mark43 products and services, and generate statistical data about usage of its products and services. As between Mark43 and Subscriber, Mark43 owns the Usage Data, excluding any Usage Data that constitutes personally identifiable information.

3.5 **Data Security**. Terms applicable to the privacy and security of Subscriber Data are set forth in the Data Processing Addendum attached as Schedule F hereto (the "**Data Processing Addendum**").

4. THIRD-PARTY COMPONENTS AND INTEGRATED APPLICATIONS.

4.1 **Third-Party Components.** Third-Party Components may be made available to Subscriber through the SaaS Services. In connection with the functionality provided by and/or through Third-Party Components, Subscriber hereby accepts and agrees to be bound by the terms and conditions set forth in Schedule E, which may be updated from time to time upon notice to Subscriber (the "**Third-Party Component Terms**"). In the event of any inconsistency or conflict between the Third-Party Component Terms and the terms of this Agreement, the Third-Party Component Terms shall govern with respect to Subscriber's access to and use of the applicable Third-Party Component.

4.2 **Integrated Applications**. To the extent Subscriber installs, links to or enables any Integrated Application for use with the SaaS Services, Subscriber grants and agrees to grant (and will cause the applicable Integrated Application Provider to grant) to Mark43 permission to access, retrieve, view, store, copy, modify and process Integrated Application Data from Subscriber's existing account(s) on each such Integrated Application to the extent necessary to facilitate the interoperation of such Integrated Application with the SaaS Services. To the extent Subscriber requires an Integrated Application Provider's assistance to install, link to or enable any Integrated Application for use with the SaaS Services, Subscriber shall separately contract with each such Integrated Application Provider for any such assistance. In no event will Mark43 be responsible for any Integrated Application or Integrated Application Data, or for any failure of an Integrated Application to properly interoperate with the Mark43 Solution; provided, however, to the extent that Mark43 creates, pursuant to the Statement of Work, an interface for an Integrated Application hereunder, Mark43 shall be responsible for such interface only, subject to the terms and conditions of this Agreement and the applicable Statement of Work. Mark43 may at any time, in its sole reasonable discretion, including upon the request of an Integrated Application Provider or due to an actual or potential security threat, disable any connection between an Integrated Application and the Applications, and any access, retrieval and viewing of Integrated Application Data via the Applications. For the avoidance of doubt, Subscriber's access to and use of Integrated Applications and Integrated Application Data shall be subject to the terms and conditions of Subscriber's agreement(s) with the applicable Integrated Application Provider.

5. FEES AND PAYMENT TERMS.

5.1 **Fees for the Services**. Subscriber will pay Mark43 fees as stated in Schedule A (the "**Fees**") attached hereto in accordance with the payment schedule set forth in Schedule A. All Fees due hereunder will be due and payable by Subscriber within thirty (30) days of the invoice date. All payments of Fees are non-refundable. All amounts stated in this Agreement or on any invoice are in U.S. dollars, and all payments will be made in U.S. dollars.

5.2 **Overdue Payments**. Any payment not received from Subscriber by the due date shall accrue late charges at the rate of 1.5% of the outstanding balance per month, or the maximum rate permitted by Applicable Law, whichever is lower, from the date such payment was due until the date paid.

5.3 **Taxes.** Subscriber will pay all taxes, including sales, use, excise, and other governmental fees, duties, and charges (and any penalties, interest, and other additions thereto) that are imposed on Subscriber or Mark43 with respect to the transactions and payments under this Agreement (excluding taxes based on Mark43's income or employment) ("**Indirect Taxes**"). All Fees are exclusive of Indirect Taxes. If any such taxes are required to be withheld on any payment, Subscriber will pay such additional amounts as are necessary so that the net amount received by Mark43 is equal to the amount then due and payable under this Agreement.

6. RESERVED.

7. CONFIDENTIALITY.

7.1 **Definition of Confidential Information.** For the purposes of this Agreement, "**Confidential Information**" means: (a) with respect to Mark43, the SaaS Services, and any and all source code relating thereto, as well as Documentation and non-public information or material regarding Mark43's legal or business affairs, financing, customers, properties or data, and (b) with respect to Subscriber, any non-public information or material regarding Subscriber's legal or business affairs, financing, customers, properties or data, including all Subscriber Data. Notwithstanding any of the foregoing, Confidential Information does not include information which: (i) is or becomes public knowledge without any action by, or involvement of, the party to which the Confidential Information is disclosed (the "**Receiving Party**"); (ii) is documented as being known to the Receiving Party prior to its disclosure by the other party (the "**Disclosing Party**"); (iii) is independently developed by the Receiving Party without reference or access to the Confidential Information of the Disclosing Party and is so documented; or (iv) is obtained by the Receiving Party without restrictions on use or disclosure from a third person who did not receive it, directly or indirectly, from the disclosing party.

7.2 **Use and Disclosure of Confidential Information.** The Receiving Party will, with respect to any Confidential Information disclosed by the Disclosing Party before or after the Effective Date: (i) use such Confidential Information only in connection with the Receiving Party's performance of this Agreement; (ii) subject to Section 7.4 below, restrict disclosure of such Confidential Information within the Receiving Party's organization to only those of the Receiving Party's employees and independent contractors who have a need to know such Confidential Information in connection with the Receiving Party's performance of this Agreement and (iii) except as provided herein, not disclose such Confidential Information to any third party unless authorized in writing by the Disclosing Party to do so.

7.3 **Protection of Confidential Information.** The Receiving Party will protect the confidentiality of any Confidential Information disclosed by the Disclosing Party using at least the degree of care that it uses to protect its own confidential information (but no less than a reasonable degree of care).

7.4 **Employee and Independent Contractor Compliance.** The Receiving Party will, prior to providing any employee or independent contractor access to any Confidential Information of the Disclosing Party, inform such employee or independent contractor of the confidential nature of such Confidential Information and require such employee or independent contractor to comply with the Receiving Party's obligations hereunder with respect to such Confidential Information.

7.5 **Compelled Disclosure**. A disclosure by one party of Confidential Information of the other party to the extent required by Applicable Law will not be considered a breach of this Agreement, provided the party so compelled promptly provides the other party with prior notice of such compelled disclosure (to the extent legally permitted) and provides reasonable assistance, at the other party's cost, if the other party wishes to contest the disclosure.

7.6 **Public Records**.

(a) For purposes of this Section 7 (Confidentiality), the term "**Public Records Request**" shall mean any request for the disclosure of records pursuant to a state public records law or "sunshine" law, federal Freedom of Information Act or other comparable law.

(b) To the extent Subscriber is subject to a Public Records Request that seeks the disclosure of any information or materials provided by Mark43 to Subscriber prior to or during the Term, Subscriber shall, prior to any disclosure, promptly notify Mark43 of such Public Records Request (to the extent legally permitted to do so) and provide reasonable assistance, at Mark43's cost, if Mark43

wishes to contest the disclosure. Subscriber shall also identify for Mark43 the information or materials it intends to disclose, and provide Mark43 at least ten (10) days to review prior to disclosure, or if such time is not available or permitted under Applicable Law, at least as much time as would be reasonable to allow Mark43 to meaningfully review and seek appropriate relief. For the avoidance of doubt, and without limiting the foregoing, Subscriber hereby acknowledges that Mark43 shall have no implicit or explicit obligation to challenge, oppose or defend against any request described herein.

(c) Mark43 may charge Subscriber for all reasonable time spent by Mark43 personnel assisting Subscriber in responding to a Public Records Request seeking the disclosure of any Subscriber Data or other information collected or maintained by Mark43 in connection with the SaaS Services.

7.7 CJIS Standards; Employee Background Checks.

(a) Subscriber understands and agrees that Mark43 utilizes third-party vendors (each, a "**Hosting Provider**") to host the SaaS Services. As of the Effective Date of this Agreement, Mark43 utilizes Amazon Web Services (AWS) as its Hosting Provider for the SaaS Services. Mark43 agrees that all personnel and subcontractors shall be subject to Mark43's background and security screening process.

(b) Subscriber may request reasonable records from Mark43 from time to time to assess Mark43's adherence to requirements of the applicable CJIS Security Policy promulgated by the FBI. For the avoidance of doubt, Subscriber may need the consent of Hosting Provider to obtain any records or information from Hosting Provider.

(c) Subscriber, or if Subscriber is located in the State of California, Mark43's CLETS host agency, will have the opportunity to run background checks on Mark43 employees that will have direct access to Subscriber Data in the production environment (such employees, the "**Covered Employees**"), provided that Mark43 may assume that a Covered Employee has been cleared by Subscriber if Mark43 does not receive an adverse response from Subscriber within thirty (30) days of a submission of a background check request. Covered Employees not meeting Milpitas Police Department standards, and for which Subscriber provides notice of such non-approval to Mark43 during the time periods set forth in this Section, shall not have access to Subscriber Data or other Confidential Information of Subscriber.

8. REPRESENTATIONS AND WARRANTIES.

8.1 Power and Authority. Each party represents and warrants that it has the full right, power and authority to enter into this Agreement and to discharge its obligations hereunder and that the person signing this Agreement on behalf of the party has the authority to bind that party. Subject to annual budget approval and appropriation by the legislative body of Subscriber, Subscriber represents and warrants that it has obtained, and shall have, all necessary approvals, consents, and authorizations necessary for procurement under this Agreement.

8.2 SaaS Services and Software Warranty. Mark43 warrants to Subscriber, for Subscriber's benefit only, that during the Term the SaaS Services and Software (excluding the Third-Party Components and Integrated Applications) will perform substantially in accordance with the then-current and applicable Documentation.

8.3 Disclaimer. USE OF THE APPLICATIONS IS NOT, AND IS NOT INTENDED TO BE, A SUBSTITUTE FOR THE PROFESSIONAL JUDGMENT OF AUTHORIZED PARTIES, INCLUDING DISPATCHERS, LAW ENFORCEMENT OFFICERS, INVESTIGATORS OR FIRST RESPONDERS. THE APPLICATIONS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND THE DATA PROVIDED BY MARK43 THEREIN (INCLUDING ANY THIRD-PARTY DATA) SHOULD NOT REPLACE OTHER EMERGENCY INFORMATION AND SHOULD NOT BE EXCLUSIVELY RELIED-UPON IN AN EMERGENCY SCENARIO. SUBSCRIBER SHALL BE RESPONSIBLE FOR ALL ITS OWN ACTIONS OR FAILURE TO ACT IN CONNECTION WITH LAW ENFORCEMENT OPERATIONS, INCLUDING WITH RESPECT TO COMPLIANCE WITH APPLICABLE LAWS, AND MARK43 ASSUMES NO RESPONSIBILITY OR RISK FOR SUBSCRIBER'S USE OR MISUSE OF, OR FAILURE TO USE, THE INFORMATION PROVIDED THROUGH THE APPLICATIONS. CUSTOMER ACKNOWLEDGES THAT THE APPLICATIONS DO NOT PROVIDE LEGAL ADVICE.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, MARK43 MAKES NO OTHER WARRANTIES OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, AND SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTIES

OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE APPLICATION. MARK43 DOES NOT WARRANT THAT THE SERVICE WILL BE ERROR FREE OR UNINTERRUPTED OR THAT SUBSCRIBER DATA WILL BE SECURE OR NOT LOST OR DAMAGED. THE LIMITED WARRANTIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE WARRANTIES PROVIDED TO SUBSCRIBER IN CONNECTION WITH THE PROVISION OF THE SERVICES. MARK43 SHALL NOT BE LIABLE FOR DELAYS, INTERRUPTIONS, SERVICE FAILURES OR OTHER PROBLEMS INHERENT IN USE OF THE INTERNET AND ELECTRONIC COMMUNICATIONS OR OTHER SYSTEMS OUTSIDE ITS REASONABLE CONTROL, INCLUDING ANY HARM OR DAMAGES CAUSED BY ITS HOSTING PROVIDERS. MARK43 MAKES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER WITH RESPECT TO ANY THIRD-PARTY DATA, THIRD-PARTY COMPONENT, INTEGRATED APPLICATION, OR ON BEHALF OF ANY INTEGRATED APPLICATION PROVIDER.

9. LIMITATION OF LIABILITY.

9.1 Liability Exclusion. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER SIMILAR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE, OR FAILURE OF THE SERVICES, THE THIRD-PARTY COMPONENTS OR THE THIRD-PARTY DATA PROVIDED UNDER THIS AGREEMENT, INCLUDING WITHOUT LIMITATION, PERSONAL INJURY, DEATH, DAMAGE TO PROPERTY, ENVIRONMENTAL DAMAGE, LOSS OF PROFITS, REVENUES, ANTICIPATED SAVINGS, CUSTOMERS, OPPORTUNITIES, DAMAGE TO PRIVACY, REPUTATION OR GOODWILL OR UNAVAILABILITY OF THE SERVICES, REGARDLESS OF WHETHER THE PARTY LIABLE OR ALLEGEDLY LIABLE WAS ADVISED, HAD OTHER REASON TO KNOW, OR IN FACT KNEW OF THE POSSIBILITY THEREOF.

9.2 Limitation of Damages. EACH PARTY'S MAXIMUM LIABILITY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE SERVICES PROVIDED HEREUNDER, REGARDLESS OF THE CAUSE OF ACTION (WHETHER IN CONTRACT, TORT, BREACH OF WARRANTY OR OTHERWISE), WILL NOT EXCEED THE AGGREGATE AMOUNT OF THE FEES PAID AND PAYABLE TO MARK43 BY SUBSCRIBER DURING THE TWENTY-FOUR (24) MONTH PERIOD PRECEDING THE DATE ON WHICH THE CLAIM ARISES. NEITHER PARTY SHALL HAVE ANY LIABILITY ARISING OUT OF OR RELATING TO THE THIRD-PARTY COMPONENTS OR THE THIRD-PARTY DATA. THE FOREGOING LIMITATION SHALL NOT BE DEEMED TO PLACE ANY LIMITATION ON SUBSCRIBER'S OBLIGATION TO MAKE PAYMENTS UNDER THIS AGREEMENT.

9.3 Exceptions. NOTWITHSTANDING THE FOREGOING, THE EXCLUSIONS AND LIMITATIONS OF LIABILITY SET FORTH IN SECTION 9.1 AND SECTION 9.2 SHALL NOT APPLY TO DAMAGES ARISING FROM EITHER PARTY'S INDEMNITY OBLIGATIONS UNDER SECTION 10 BELOW OR EITHER PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

10. INDEMNIFICATION.

10.1 Indemnification by Mark43. Mark43 shall indemnify Subscriber, and its employees, officers, and directors against any third-party claim alleging that Subscriber's use of the Services in the form provided by Mark43 and when used in accordance with the Documentation and in compliance with this Agreement infringes that third party's U.S. copyright, U.S. patent issued as of the Effective Date, or U.S. trademark, and shall pay the amount of any adverse final judgment or settlement to which Mark43 consents. Mark43 shall have no obligation or liability under this Section 10.1 (Indemnification by Mark43) to the extent the third-party claim arises from: (a) Subscriber's or its Affiliates' failure to incorporate a software or other update or upgrade made available by Mark43 that would have avoided the alleged infringement; (b) modification of the Services, any Application, Software or Hardware by anyone other than Mark43; (c) specifications, instructions, features, functions or designs or other elements provided by or requested by Subscriber or its Affiliates; (d) use of the Services, any Application or Software in combination with any other product, service, process or material not provided by Mark43 (including, without limitation, Integrated Applications, Integrated Application Data and Subscriber Data); or (e) use of the Services, any Application or Software in a manner not contemplated by this Agreement. If the Services are (or Mark43 believes are likely to become) the subject of a claim for which Mark43 would be obligated to defend and indemnify pursuant to this Section, then Mark43 may, at its sole option, obtain for Subscriber the right to continue use of the Services or replace or modify the Services, as applicable, provided there is no material loss of functionality. If neither of the foregoing options is reasonably available to Mark43, in its judgment, then use of the Services may be terminated at the option of Mark43 and Mark43's sole

liability will be to refund any prepaid fees for the Services applicable to periods following the effective date of termination. The remedies provided in this Section 10.1 (Indemnification by Mark43), are Subscriber's sole and exclusive remedies for any third-party claims of infringement or misappropriation of Intellectual Property Rights by the Services.

10.2 **Indemnification by Subscriber**. To the extent consistent with Applicable Law, Subscriber shall indemnify Mark43, its Affiliates, and their respective employees, officers, and directors against any third-party claim arising out of or related to (a) Subscriber's breach of Section 2.5 (Restrictions on Use), Section 2.6 (Security Obligations) or Section 3.2 (Ownership and Reservation of Rights to Mark43 Intellectual Property); (b) Subscriber Data, including any third-party claim alleging that Subscriber Data infringes or misappropriate the rights of a third party or violates any Applicable Law, and shall pay the amount of any adverse final judgment or settlement to which Subscriber consents; (c) Mark43's disabling a connection to an Integrated Application at Subscriber's request, and (d) Integrated Applications, except to the extent of Mark43's failure to abide by specifications, instructions or other elements requested by the Integrated Application provider or Subscriber that would have avoided the claim, and except to the extent that Mark43 installs any malware, tracking software or disabling devices in the relevant Integrated Application.

10.3 **Procedures**. Each party shall give the other party prompt notice of any claim to which an indemnification obligation under this Section 10 (Indemnification) may apply and shall reasonably cooperate with the indemnifying party, at its expense, in the defense or settlement of any claim. An indemnifying party's payment obligations under this Section 10 (Indemnification) will be diminished to the extent that it is materially prejudiced by the indemnified party's non-compliance with the foregoing procedures.

11. MISCELLANEOUS.

11.1 **Dispute Resolution**. Prior to the initiation of any legal proceeding other than one for equitable relief as described in subsection (d) below, the parties shall first attempt to resolve their dispute informally, as follows:

(a) Within five (5) business days following the written request of a party, designated individual(s) from Mark43 and Subscriber shall meet to resolve such dispute.

(b) The representatives referred to in paragraph (a) shall meet as often as the parties reasonably deem necessary in order to gather and furnish to the other all information with respect to the matter at issue that the parties believe to be appropriate and germane in connection with its resolution. The representatives shall discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of formal legal proceedings. The specified format for the discussions will be left to the discretion of the designated representatives, but may include the preparation of agreed upon statements of fact or written statements of position.

(c) If the representatives referred to in paragraph (a) above are unable to resolve the dispute within thirty (30) business days after the dispute is escalated to them, then either party may escalate the dispute to the Chief Operating Officer of Mark43 and the Chief or Sheriff or comparable Subscriber official, for their review and resolution.

(d) The provisions of this Section 9.4 shall not be construed to prevent a party from instituting, and a party is authorized to institute, judicial or other proceedings either to (i) seek injunctive relief or (ii) avoid the expiration of any applicable legal or contractual limitations period.

11.2 **Amendment**. No modification, change or amendment to this Agreement shall be effective unless in writing signed by Subscriber and Mark43. No term included in any invoice, estimate, confirmation, acceptance, purchase order or any other similar document in connection with this Agreement will be effective unless expressly stated otherwise in a separate writing signed by Subscriber and Mark43.

11.3 **Subcontractors**. Except as otherwise set forth in Schedule F, Mark43 may draw on the resources of (and subcontract to) its Affiliates and third-party contractors and subcontractors, within or outside of the United States (each, a "**Mark43 Vendor**") for internal, administrative and compliance purposes or in connection with the hosting or provision of the Service and other products and services to be provided by Mark43 pursuant to this Agreement. Subscriber agrees that Mark43 may provide information, data and materials that Mark43 receives in connection with this Agreement (including Subscriber Data) to the Mark43 Vendors for such purposes. Mark43 shall be permitted to subcontract its obligations under this Agreement to the Mark43 Vendors identified on Schedule E as "Subcontractors" or such other subcontractors as approved in advance by Subscriber (each, a "**Subcontractor**"). Mark43 shall be responsible in accordance with the terms of this Agreement for

performance failures by such Subcontractors that cause Mark43 to breach its obligations under this Agreement.

11.4 **Cumulative Remedies**. All remedies for breach of this Agreement are cumulative, and may be exercised concurrently or separately, and the exercise of any one remedy shall not be deemed an election of such remedy to the exclusion of other remedies.

11.5 **Export Compliance**. In connection with this Agreement, Mark43 will comply with all applicable import, re-import, export, and re-export control laws and regulations, including the Export Administration Regulations, the International Traffic in Arms Regulations, and country-specific economic sanctions programs implemented by the Office of Foreign Assets Control.

11.6 **Compliance with Laws**. Each party shall comply with all Applicable Laws relating or pertaining to the use and provision of the Services. Subscriber shall ensure that its use of all Subscriber Data complies with all Applicable Laws relating to the privacy of third parties or the protection of their personal data promulgated by any governmental, municipal, or legal authority having jurisdiction over Subscriber or the Subscriber Data covered by this Agreement. Each party shall comply with local anti-bribery laws as well as the U.S. Foreign Corrupt Practices Act, as well as any other Applicable Laws and regulations. In connection with its performance under this Agreement, neither party shall directly or indirectly: (A) offer, pay, promise to pay, or authorize the payment of any money, gift or other thing of value to any person who is an official, agent, employee, or representative of any government or instrumentality thereof or to any candidate for political or political party office, or to any other person while knowing or having reason to believe that all or any portion of such money, gift or thing of value will be offered, given, or promised, directly or indirectly, to any such official, agent, employee, or representative of any government or political party, political party official or candidate; (B) offer, promise or give any person working for, or engaged by, the other party a financial or other advantage to (i) induce that person to perform improperly a relevant function or activity; or (ii) reward that person for improper performance of a relevant function or activity; or (C) request, agree to receive or accept any financial or other advantage as an inducement or a reward for improper performance of a relevant function or activity in connection with this Agreement. Each party represents and warrants that it shall be responsible for compliance with this provision by all third parties engaged by it to perform services related to this Agreement and shall require that such third parties agree to comply with all legal requirements required of such party under this Agreement.

11.7 **Supporting Documents**.

The following documents are, by this reference, expressly incorporated into this Exhibit A and are collectively referred to herein as the “Supporting Documents:”

- Schedule A: Services Schedule
- Schedule B: Support Services
- Schedule C: Transition Assistance
- Schedule D: Technical Requirements
- Schedule E: Third-Party Component Terms / Subcontractors
- Schedule F: Data Processing Addendum

This Exhibit A and the Supporting Documents shall be construed to be mutually complementary and supplementary whenever possible. In the event of a conflict that cannot be resolved, the provisions of this Exhibit A itself shall control over any conflicting provisions in any of the Supporting Documents.

SCHEDULE A

Services Schedule

1. **Services**. The Services covered by this Agreement consists of the following:

   a. **Professional Services:** Professional Services are detailed in the Statement of Work.

   b. **SaaS Services:**

      i. The Applications to be provided are as follows:

         A. ANALYTICS (ANA) SKUs:

ANA 1: ANALYTICS BI SUITE VIEWER
Mark43's Analytics BI Suite Viewer includes the following capabilities:

- Interactive dashboards that update visualizations based on filters and legends.
- Drill into data points on visualizations for additional details and analysis.
- Mark43 RMS clients will be able to link from the interactive dashboards directly to Mark43 RMS reports and cases.
- Segment (Pivot) and Filter by any available data explorer field to narrow down queries.
- Visualize lat/long coordinates with pin and heat mapping functionality.
- Visualize data with tables, column graphs, bar graphs, scatter plots, line graph, area graph, pie chart, single value, funnel, timeline and donut graphics.
- Save dashboards for future access.
- Share dashboards with other Analytics Viewer and Explorer users at the department.
- Export data into a variety of formats (Text, Excel, CSV, JSON, HTML, Markdown and PNG).
- Data from RMS/CAD modules is available in near-real-time
- Analytics Viewer licenses provide licensees the ability to view and export business intelligence (BI) dashboards that are either (a) provided in Mark43's default BI suite or (b) created and shared by an Analytics Explorer of Subscriber. The number of user licenses for Analytics Viewers will be specified below.

ANA 1 SPECIFICATIONS/FEATURES:

- View/export business intelligence dashboards provided by Mark43
- View/export business intelligence dashboards created and shared by a Subscriber Analytics Explorer user.

ANA 2: ANALYTICS BI SUITE EXPLORER
Mark43's Analytics BI Suite (Explorer) includes the following capabilities:

- Interactive dashboards that update visualizations based on filters and legends.
- Drill into data points on visualizations for additional details and analysis.
- Mark43 RMS clients will be able to link from the interactive dashboards directly to Mark43 RMS reports and cases.
- Segment (Pivot) and Filter by any available data explorer field to narrow down queries.
- Visualize lat/long coordinates with pin and heat mapping functionality.
- Visualize data with tables, column graphs, bar graphs, scatter plots, line graph, area graph, pie chart, single value, funnel, timeline and donut graphics.
- Save dashboards for future access.
- Share dashboards with other Analytics Viewer and Explorer users at the department.
- Export data into a variety of formats (Text, Excel, CSV, JSON, HTML, Markdown and PNG).
- Data from RMS/CAD modules is available in near-real-time
- Analytics Explorer licenses provide licensees the ability to perform all the actions of a Analytics View user plus the ability to create, modify and delete business intelligence dashboards. Analytics Explorer users can share their business intelligence dashboards with all of the Analytics Viewer and Analytics Explorer users of Subscriber. Analytics Explorer users can explore the data from any Data Explorer based Dashboard. The number of user licenses for Analytics Explorer Users will be specified below.

ANA 2 SPECIFICATIONS/FEATURES:

- Analytics Explorer users can perform all the actions of an Analytics View user plus the ability to create, modify and delete business intelligence dashboards.
- Analytics Explorer users can share their business intelligence dashboards with all of the Analytics Viewer and Analytics Explorer users of Subscriber.
- Analytics Explorer users can explore the data from any Data Explorer based Dashboard.

Subscriber understands and agrees that third-party service providers may impose additional license, warranty and other terms on Subscriber. Subscriber agrees to enter into additional agreements as reasonably required by such third parties and Mark43, including, without limitation, a different warranty/SLA addressing uptime and maintenance.

B. COMPUTER AIDED DISPATCH (CAD) SKUs

N/A

C. DATA LAKE (DLK) SKUs

Mark43 Data Lake is a Microsoft SQL Server (MSSQL) Database that allows the Subscriber to access department data directly via SQL. This database is a near real-time replica of the live Mark43 database. Functionality of this product requires CAD 1: CAD Dispatch or RMS 1: RMS Core.

<u>DLK 1: DATA LAKE - BASE</u>
Provision and support for Data Lake to be used for data backups and Mark43-developed integrations.

DLK 1 PRODUCT SPECIFICATIONS/FEATURES:

- Shared Read-Only Data Lake access
- 2 SQL user/svc accounts
- 2 active connections

Subscriber understands and agrees that third-party service providers may impose additional license, warranty and other terms on Subscriber. Subscriber agrees to enter into additional agreements as reasonably required by such third parties and Mark43, including, without limitation, a different warranty/SLA addressing uptime and maintenance.

D. RECORDS MANAGEMENT SYSTEM (RMS) SKUs

<u>RMS 1: RMS CORE</u>
Mark43 Core Platform supports advanced functionality around report writing; data sharing; locations, persons, and entity management; and field-based reporting. RMS Core includes Mark43 Records Compliance functionality, which enables records personnel to efficiently generate compliance-related information required by governing LE authorities. The Records Compliance module seamlessly generates the CIBRS validations for officers, enabling workflows that ensure low error rates for submission, keep track of submissions, and generate the submission file from the data within the RMS).

RMS 1 PRODUCT SPECIFICATIONS/FEATURES:

- Arrest Reporting
- Case Management
- Case Supplemental Reporting
- Configurable Fields, Codes, and Validation Rules
- Field-Based Reporting
- Field Interviews / Racial profiling reporting
- File Attachments and Multimedia
- Gang Tracking
- Incident Reporting
- Location Verification / Resolution

- Master Entities / Name Index (Locations, Persons, Property, Organizations, and Vehicles)
- Missing Persons Reporting
- Multi-Agency Data Sharing
- Notifications and Agency-wide BOLO/Alerts
- PDF and CSV Exports
- Quick Search / Advanced Search
- Records Privacy (Sealing, Purging, and Expunging)
- Shapefile Management
- System Auditing
- Use of Force Reporting
- Tow / Impound Vehicle Reporting
- User Management
- Compliance code mapping for automated data capture
- View and create queue of reports needing records review
- Data validation during report submission to ensure compliant reporting
- Configurable fields and validation rules
- Ability for administrators to override automated SRS or NIBRS coding
- Automatically generate monthly SRS and NIBRS submissions
- Task & Request Tracking
- Records without a REN
- Behavior Crisis Report
- Flexible Report Configurations for custom report types (e.g. Permits, Registrations, False Alarm Reports, etc.)
- NIBRS workspace features:
    - View history of previous NIBRS submissions and re-download previous submissions
    - Submission summary statistics to understand number of reports, number or reports with errors, and current error rates
    - Interactive dashboard allowing users to directly access reports that contain submission errors and require updates
    - Customized error message for improved usability and step-by-step instructions for resolving errors

RMS 2: RMS CASE MANAGEMENT MODULE

The Mark43 Case Management module enables detectives to seamlessly use the RMS to manage their cases. Incidents that require further investigation or follow-up may be referred to an investigator before they are closed or submitted to the prosecutor for a charging decision. Depending on the department's size and policies, the assignment may be made to a patrol officer, generally the officer who responded to the original incident, or the department's investigative unit. Functionality of this module requires RMS 1: RMS Core.

RMS 2 PRODUCT SPECIFICATIONS/FEATURES:

- View and create case assignment and routing queues
- Assign lead investigator, supervisors, and assigned unit
- Configurable case due dates and reminders
- Create and assign tasks and set due dates
- Create case notes for internal activity tracking
- View and download case associated files and multimedia
- Export case information to PDF
- Search and sort cases by a number of criteria, including date, assignee, investigative unit, status, and more
- Configurable case type templates
- Configurable role-based Case Management permissions and abilities
- Robust audit logs and activity tracking
- View case history from initial assignment through final disposition
- Separate statuses for compliance reporting (UCR/NIBRS) and internal case status tracking
- Seamless integration between Case Management and RMS reporting and master entity profiles modules

- Availability of Case Management data in Analytics BI Suite for robust reporting capabilities
- Case review and approval workflows
- Automated triggered notifications and alerts
- Link related cases to one another

RMS 3: RMS PROPERTY AND EVIDENCE MANAGEMENT MODULE

Mark43 Property and Evidence Management Module and accompanying mobile application that supports the intake, management, auditing, and dispositioning of in-custody property and evidence. Includes: barcode and label generation; tracking chain-of-custody; configuration of storage locations; configuration of chain-of-custody workflows; configuration of retention policies; ability to integrate with signature pads. Functionality of this module requires RMS 1: RMS Core.

RMS 3 PRODUCT SPECIFICATIONS/FEATURES:

- Seamless integration and data transfer between Property and Evidence Management Module with RMS reporting and master entity profiles
- Robust property and vehicle data collection including NIBRS and UCR mapped fields
- Cross-reference existing property and vehicles during data collection
- Item thermal label printing and barcode scanning for property and storage locations
- Chain-of-custody tracking and workflows
- Bulk evidence movement and processing
- Mobile evidence application for barcoding scanning, chain-of-custody updates, inventory/auditing, and more (Android and iOS supported)
- Signature pad hardware integration, as well as electronic signature capture through mobile evidence application
- Audit and inventory tools and reporting across storage locations and responsible personnel
- Configurable retention policies based on linked offense codes and reason for police custody of property
- Automated disposition requests upon retention policy expiration and release timers
- Automated triggered notifications and alerts
- Configurable notification routing for disposition requests and approvals
- Split items while maintaining integrity of chain-of-custody
- Property staff remarks
- Search and sort evidence across a variety of criteria
- Configurable storage location schema with up to ten layers of sub-locations
- Configurable role-based evidence permissions and abilities
- Support for unlimited property file and multimedia attachments
- Configurable evidence label export format
- CSV and PDF template exports available including receipts and pull-sheets

RMS 4: RMS WARRANTS MODULE

RMS module that enables warrant administrators to actively log and track warrants within the Mark43 RMS. For an additional fee, the customer can select to include an integration with a message switch provider (see SKU PAR 4: Message Switch Integration). Functionality of this module requires RMS 1: RMS Core.

RMS 4 PRODUCT SPECIFICATIONS/FEATURES:

- Track warrants within your jurisdiction
- Track internal records workflows
- Track and update warrant service activities
- Automated warrant status updates
- File and multimedia attachments
- Search and sort warrants across a variety of criteria
- Active warrant alerts on person profiles
- Configurable role-based warrant permissions and abilities
- Exporting abstracts, notices (letters), and warrant activities

- Entry and cancellation of warrants in external databases (State-run databases or NCIC) with purchase of DEX 2: RMS Data Exchange and PAR 3: Message Switch Integration)
- Seamless integration between Arrest/Booking modules, and the Warrants module
- Integrated and cross-referenced master entity profiles (Persons, Property, Organizations, and Vehicles)
- Automated warrant creation via integration, and capability to hand-enter warrant data
- Availability of Warrant data in Analytics BI Suite for robust reporting capabilities

RMS 5: RMS HANDHELD MOBILE COLLECTION
RMS module that enables warrant administrators to actively log and track warrants within the Mark43 RMS. Functionality of this module requires RMS 1: RMS Core.

RMS 5 PRODUCT SPECIFICATIONS/FEATURES:

- Touch ID and Face ID login
- Capture and view photos
- Create notes using speech-to-text
- Scan driver's licenses (select State support)
- Set current location on map using phone GPS
- Search and view integrated master entity profiles (Persons, Property, Organizations, and Vehicles)
- Search and view RMS reports
- Archive capability
- Seamless sync of data between mobile and web RMS applications
- Create and pre-fill RMS report using mobile collection data

RMS 7: RMS FILLABLE PDFs
The Mark43 Fillable PDFs feature enables an agency to create a custom, fillable PDF template that populates information mapped from supported fields in a standard Mark43 RMS report type. Requires department license to Adobe Pro.

RMS 7 PRODUCT SPECIFICATIONS/FEATURES:

- Export custom, fillable PDF template based on non-Mark43 templates
- Populate the fillable PDF template with the information entered in the linked Mark43 report type
- Configure which supported fields populate the fillable PDF using Adobe Pro
- Support export templates that are not natively supported in the Mark43 RMS

RMS 8: QUICKCRASH REPORTING
Mark43's QuickCrash Reporting module allows for seamless and mobile data collection, documentation and reporting on vehicle collisions.

RMS 8 PRODUCT SPECIFICATIONS/FEATURES:

- MMUCC (Model Minimum Uniform Crash Criteria) Compliant Data Capture
- License Scanning
- Drag and Drop Diagram Builder
- Crash Data Sharing and Syncing between Devices
- License Plate Lookup
- Satellite Map with GPS Coordinates
- Narrative/Templates
- Narrative Dictation
- Media/Photos Section
- In-App Messaging
- PDF Rendering (email, send, print)
- In-App Feedback

2. **Fees:** For the Initial Term, the following Fees will apply:

Recurring Fees:

Mark43 SaaS Services Recurring Fees	Qty (if applicable)	List Price	Price to Subscriber
ANA 1: Analytics BI Suite Viewer	Not to exceed 10 licenses	$1,200.00	$1,200.00
ANA 2: Analytics BI Suite Explorer	Not to exceed 2 licenses	$960.00	$960.00
DLK 1: Data Lake Base	1	$10,000.00	$10,000.00
RMS 1: RMS Core	Not to exceed 93 sworn	$111,600.00	$89,280.00
RMS 2: RMS Case Management	Not to exceed 93 sworn	$44,640.00	$35,712.00
RMS 3: RMS Property and Evidence Management	Not to exceed 93 sworn	$44,640.00	$0.00
RMS 4: RMS Warrants	Not to exceed 93 sworn	$44,640.00	$15,624.00
RMS 5: Mobile Field Collection	Not to exceed 93 sworn	$44,640.00	$0.00
RMS 7: RMS Fillable PDFs	Included	$7,000.00	$4,900.00
RMS 8: QuickCrash Reporting	Not to exceed 93 sworn	$11,160.00	$0.00
Subtotal - Mark43 SaaS Services		$320,480.00	$157,676.00
Mark43 Professional Services Recurring Fees	Qty (if applicable)	List Price	Price to Subscriber
Support & Maintenance - Interfaces	1	$2,000.00	$0
Subtotal - Mark43 Professional Services		$2,000.00	$0
Partner Products and Services Recurring Fees	**Qty (if applicable)**	**List Price**	**Price to Subscriber**
PAR 2: Third-Party Terminal (via CLIPS)	Not to exceed 10 device licenses	$4,800.00	$4,800.00
Subtotal - Partner Products and Services		$4,800.00	$4,800.00
Total Recurring Fees		**$327,280.00**	**$162,476.00***

*****For the avoidance of doubt, this is the recurring fee that will serve as the baseline for the recurring fees to be charged during any Renewal Term. Additional increases may be applied at any time during the Initial Term if required quantities increase.

One-Time Fees:

Mark43 Implementation Tenant – One-Time Fees	**Qty (if applicable)**	**List Price**	**Price to Subscriber**
Implementation Tenant (provisioning environments for configuration, testing, & training during Implementation Period)	1	$309,320.00	$157,676.00
Subtotal – Implementation Tenant		$309,320.00	$157,676.00

Mark43 Professional Services – One-Time Fees	Qty (if applicable)	List Price	Price to Subscriber
IMP 2: Implementation	n/a	$90,000.00	$63,000.00
Interface Development: CLETS/NCIC (see Partner Products and Services fees)	n/a	See Partner Fees	See Partner Fees
Interface Development: Coplink	n/a	$0	$0
Interface Development: TriTech CAD	n/a	$15,000.00	$10,500.00
Interface Development: SWITRS/Crossroads	n/a	$0	$0
Interface Development: Coplogic	n/a	$0	$0
Subtotal - Professional Services		$105,000.00	$73,500.00
Partner Products and Services – One-Time Fees	Qty (if applicable)	List Price	Price to Subscriber
Implementation Services for PAR 2: Third-Party Terminal (via CLIPS)	3 days training, 2 days install/cutover	$6,400.00	$6,400.00
Subtotal - Partner Products and Services		$6,400.00	$6,400.00
Total One-Time Fees		**$420,720.00**	**$237,576.00**

Contractor will notify Subscriber of any changes to the fees for any Renewal Term at least forty-five (45) days prior to the start of the Renewal Term. Any increase to the fees for any Renewal Term may not exceed the lower of three percent (3%) or the local CPI (Series ID: CUURS49BSA), year over year.

3. <u>Payment Schedule</u>.

a. Initial Term: Subscriber will pay the Fees detailed in Section 2 above according to the following schedule during the Initial Term.

Year	Details of Payments and Due Dates	Amount Due
1	Year 1 Payment, due according to the following schedule:	$237,576.00
	- Upon Approval of Project Plan	*$23,757.60*
	Upon Completion of Hardware & Software Installation	*$35,636.40*
	- Upon Completion of Functional Testing	*$35,636.40*
	- Upon Completion of Training	*$35,636.40*
	- Upon Completion of Go-Live	*$47,515.20*
	- Upon Final System Acceptance	*$35,636.40*
	- Upon 3 months Successful NIBRS/CIBRS Submission (Submission error rate <3%)	*$23,757.60*

2	Year 2 Payment, due on the first anniversary of the Effective Date.	$162,476.00
3	Year 3 Payment, due on the second anniversary of the Effective Date.	$162,476.00
4	Year 4 Payment, due on the third anniversary of the Effective Date.	$162,476.00
5	Year 5 Payment, due on the fourth anniversary of the Effective Date.	$162,476.00
6	Year 6 Payment, due on the fifth anniversary of the Effective Date.	$162,476.00
	6 YEAR TOTAL	**$1,049,956.00**

b. Renewal Term: Fees for any Renewal Term will be paid in full in advance on the first day of the Renewal Term.

SCHEDULE B

Support Services

1. **Support Services**.

a. **Error Reporting**

When reporting a failure of the Services to perform substantially in conformance with the Agreement (an "**Error**"), Subscriber shall use the phone number, email address, or Mark43 Support Portal URL identified in the Agreement (or otherwise provided to Subscriber by Mark43 from time to time, including by email) during the hours of support set forth herein.

Subscriber personnel submitting support requests must be reasonably trained in the use and functionality of the Services and familiar with the Agreement and, before submitting a support request to Mark43 hereunder, must use reasonable efforts to ensure a perceived Error is not due to a problem with Subscriber's (or its other third-party providers') equipment, systems, software or connectivity or due to improper, non-conforming or unauthorized use of the Services by or on behalf of Subscriber.

Subscriber will include with each support request, further detailed in Section D below: (i) Subscriber's initial assessment of the Response Priority (including identification of the Error and the approximate percentage of Authorized Users impacted); (ii) sufficient information to enable Mark43 to identify and replicate the Error; and (iii) contact information for Subscriber personnel familiar with the Error who will be available to Mark43 to assist with resolution of the Error on an ongoing basis until the Error is resolved.

b. **Response Priority Determination**

Mark43 will validate Subscriber's Response Priority designation, or notify Subscriber of its Response Priority designation if it is different than Subscriber's. If requested, Mark43 will provide Subscriber with the basis of its determination. In the event of a conflict regarding the appropriate Response Priority designation, each party shall promptly escalate such conflict for resolution by the parties' management, during which time the parties shall continue to handle the support issue in accordance with the Mark43 Response Priority designation. In the rare case that a conflict requires a management discussion, both parties shall be available within one hour of the escalation.

c. **First Response, Resolution, and Updates**

Upon notification by Subscriber of an Error in accordance with this Exhibit and subject to Mark43's identification and replication of the Error, Mark43 will respond to each case in accordance with the First Response Times and Communication Commitments described in the charts below. First Response Time is the period from the time the Error was logged with the Mark43 Support Team until Mark43 responds to Subscriber (and escalates within Mark43, if appropriate). A first response is defined as a non-automatic means where an agent will reach out to gather additional details and may not include a solution or workaround. Because of the widely varying nature of issues, it is not possible to provide specific resolution commitments. Actual resolution time will depend on the nature of the case and the resolution itself. Resolution methods are defined below. A resolution may consist of a fix, workaround, delivery of information, or other commercially reasonable solutions to the issue.

d. **Subscriber's Obligations**

Mark43's provision of the support services described in this Exhibit is subject to Subscriber cooperating fully and on a timely basis with reasonable requests of Mark43 for accurate information and access to Subscriber personnel with sufficient availability and knowledge to enable Mark43 to provide the support services, including accurate information and assistance reasonably required to detect, replicate, and correct Errors. In the event Mark43's response, resolution, or update times are negatively impacted by delayed responses by Subscriber personnel or Subscriber's failure to otherwise comply with its obligations under this Exhibit, timeframes will be extended.

First Response Commitment

Red	Orange	Yellow

1 hour 24/7	2 hours 8am - 8pm EST, 7 days	8 hours 8am - 8pm EST M-F

Communication Commitment

	Red	Orange	Yellow
Status page updates	A status update will be posted as soon as Mark43 is notified and updated every 30 minutes thereafter until resolved.	n/a	n/a
Email/phone updates	After initial Mark43 response, within 1 hour of any additional client questions about the same issue until resolved.	After initial Mark43 response, within 1 business day of any additional client questions until issue is resolved. Client will receive notification via email once the issue fix has been scheduled and again when the issue has been fixed.	After initial Mark43 response, within 2 business days of any additional client questions until issue is resolved. Client will receive notification via email once the issue has been fixed.

Priority Definitions

- *Red* - An Error due to Mark43's systems that results in the inoperability or substantial impairment of a core function for the majority of Subscriber's Authorized Users, provided there is no feasible workaround. Examples include: Authorized Users cannot access the Application; CAD units cannot be dispatched; reports cannot be created.
- *Orange* - An Error due to Mark43's systems that results in the inoperability or substantial impairment of a critical workflow for the majority of Subscriber's Authorized Users, provided there is no feasible workaround. Examples include: significant lagging/slowness; inability to process persons in custody; inability to export reports or cases for same or next day court deadlines; inability to submit reports.
- *Yellow* - An Error due to Mark43's systems for which a reasonable workaround is available.
- *None* - There are a number of low-impact issues, how-to questions, and feature requests that do not fall into one of the categories above and are not subject to the outlined First Response or Communication Commitments.

Issue Escalation & Resolution Methods: Customer-reported issues are escalated within Mark43 by a well-defined internal process. Mark43 works to resolve issues based on the issue severity/impact, by employing one or more of the following methods:

- Providing client with a reasonable workaround
- Adjusting system/hosting configurations or setup
- Direct database modifications
- Releasing a fix out-of-cycle (patching)
- Releasing a fix as part of the regular release cycle
- Other commercially reasonable solution

Subscriber will be notified of status changes either through Mark43's status page and/or via email updates in a support ticket.

2. **Service Level Agreement**. Mark43 shall provide the Applications in accordance with the following service levels ("**SLA**"). For purposes of this section, "**Regular Usage Period**" for any Application commences upon the occurrence of Go Live for that Application.

   a. **Monthly Uptime Commitment**.

Following Cutover to the applicable In-Scope Mark43 Application, Mark43 will use commercially reasonable efforts to make the In-Scope Mark43 Application available with the Monthly Uptime Percentage corresponding to that Application (the "**Uptime Commitment**"), as follows:

> *RMS Application Availability*: *During any calendar month of a Regular Usage Period, the RMS shall be available to users no less than 99.9% of the time on a 24x7 basis, excluding scheduled maintenance of the RMS ("RMS Scheduled Downtime"); provided, however, that Mark43 is not responsible for any downtime of the RMS caused by Third Party Data services (e.g. Department of Motor Vehicles license plate database), or Third Party Components, and such Third Party downtime will not count against the service levels promised herein; provided, further, that Mark43 shall be responsible for any downtime of RMS caused by Integrated Third Party Software (as defined below) solely to the extent specified in Section 7I below ("Service Levels for Integrated Third Party Software"). Mark43 shall provide Subscriber with prompt notification as soon as it becomes aware of any actual or potential unscheduled downtime (defined below) of the RMS, as well as continual periodic updates during the unscheduled downtime regarding Mark43's progress in remedying the unavailability and the estimated time at which the RMS shall be available.*

For each In-Scope Mark43 Application, the "Monthly Uptime Percentage" is calculated as set forth below by subtracting from 100 percent the percentage of minutes during the month in which the In-Scope Mark43 Application experienced Downtime.

Monthly Uptime Percentage = (100) – ((minutes of Downtime * 100) / (total minutes in month))

b. **Service Credit Calculation**.

RMS Service Credits. In the event that Mark43 fails to make the RMS available at least 99.9% of the time in any given month during the Regular Usage Period due to RMS Unavailability (as defined below), Mark43 will credit the Subscriber's account for the unavailable RMS as follows:

RMS Availability (Monthly)	Credit Percentage
Above 99.9%	0%
99.8 – 99.0%	10%
98.9 – 98.0%	20%
Below 97.9%	30%

"RMS Unavailability" is defined as the percentage of minutes per month in which the RMS is completely and generally unavailable for Subscriber's use (but not the use of any one Authorized User), provided that RMS Unavailability does not include any unavailability attributable to: (a) RMS Scheduled Downtime for maintenance (whether by Mark43, by a vendor, or by Subscriber); (b) acts or omissions of Subscriber or any Subscriber user of the RMS; (c) server downtime related to connectivity issues resulting from Third Party-managed VPN access to hosted server or Subscriber internal network problems; (d) defects or bugs in the Applications or Software caused by Subscriber, any Authorized User, or any Affiliate, employee, agent or independent contractor of Subscriber; or (e) any other cause(s) beyond Mark43's reasonable control, including but not limited to those caused by Third Party Data services (*e.g.* Department of Motor Vehicles license plate database), Third Party Components, overall internet congestion or a force majeure. Subscriber will be responsible for immediately notifying Mark43 of all Third Party-managed VPN access and internal or external (e.g. internet service provider) network problems that arise.

"Credit Percentage" means the applicable percentage of the portion of the Fees attributable to Services in the calendar month in which the RMS Unavailability occurs. For example, if Subscriber has paid Mark43 $1,000 for one year of a Regular Usage Period, and the RMS Availability falls to 99.5% during any calendar month in that year, then Mark43 will owe Subscriber a ten percent (10%) credit on that month's portion of the Fee, or: $1,000/12 = $83.33 per month, and 10% of $83.33 = $8.33. In this example, Mark43 would owe Subscriber $8.33 in credit for the month in which RMS Availability fell to 99.5%.

In order to receive this credit, Subscriber must notify Mark43 in writing within fifteen (15) days following the end of the month the RMS Unavailability occurred. All claims are subject to review and verification by Mark43 prior to any credits being granted. Mark43 will acknowledge credit requests within fifteen (15) business days of receipt and will inform Subscriber whether such claim request is approved or denied. The issuance of RMS Service Credit by Mark43 hereunder is Subscriber's sole and exclusive remedy for any failure by Mark43 to satisfy the service levels set forth in this Section 2(b).

c. **Requesting Service Credits**.

In order to receive a Service Credit, Subscriber must notify Mark43 in writing at 250 Hudson Street, 3rd Floor, New York, NY 10013, Attn: Accounting, with a copy to accounting@mark43.com, or such other address provided by Mark43 from time to time, within fifteen (15) days following the end of the month in which the Downtime occurred. Claims must include the words "SLA Credit Request" in the subject line; the dates and times of each Downtime incident that Subscriber is claiming occurred; and any documentation to corroborate Subscriber's claim of Downtime, ensuring removal or redaction of any confidential or sensitive information in these logs. All claims are subject to review and verification by Mark43 prior to any Service Credits being granted. Mark43 will acknowledge requests for Service Credits within fifteen (15) business days of receipt and will inform Subscriber whether such claim request is approved or denied.

If Mark43 confirms that the Uptime Commitment has not been met in the applicable calendar month, Subscriber will be issued a Service Credit within one billing cycle following the month in which Subscriber's request is confirmed by Mark43. Subscriber's failure to provide the request and other information as required above will disqualify Subscriber from receiving a Service Credit. Service Credits will not entitle Subscriber to any refund or other payment from Mark43 and are non-transferable. The parties acknowledge and agree that Service Credits are intended as genuine pre-estimates of loss that may be suffered as a result of any failure to achieve Uptime Commitments and will not be deemed to be penalties. To the extent legally permitted, the issuance of a Service Credit by Mark43 hereunder is Subscriber's sole and exclusive remedy for any failure by Mark43 to satisfy the Uptime Commitment.

d. **Additional Definitions**.

"**Downtime**" with respect to any single In-Scope Application means time in which the Application is not accessible or available to Subscriber for reasons other than those resulting directly or indirectly from an SLA Exclusion. For the avoidance of doubt, slow performance does not constitute lack of accessibility or availability and shall not count as Downtime, unless there is a total loss of ability for the substantial majority of Authorized Users to perform any one of the In-Scope Application Features so as to constitute a total loss of service of that Application, in each case in Mark43's reasonable discretion. The concurrent loss of service of two or more In-Scope Application Features within the same Application will count as a single Downtime event. At the end of each month, Mark43 adds "Downtime" periods together to calculate the overall monthly "Downtime."

"**In-Scope Mark43 Application**" means the web-accessible Applications identified in subsection (a) above, provided that Subscriber has purchased a subscription for the Applications and signed a valid Agreement with Mark43. Under no circumstance shall any reference to an Application that Subscriber has not purchased a subscription and signed an Agreement for be construed to entitle Subscriber to use such Application. For the avoidance of doubt, In-Scope Mark43 Applications do not include mobile versions or Applications that are in beta testing.

"**In-Scope Application Features**" means:

- For RMS Application: (i) the ability to login to the Mark43 RMS; (ii) the ability to view and edit reports and names, property, and vehicles; (iii) the ability to view and edit cases; and (iv) the ability to search for entities within the RMS.

"**Monthly Uptime Percentage**" has the meaning set forth in Section 1 of this SLA.

"**Scheduled Maintenance**" means scheduled work related to the Mark43 Application or the hosting environment, which may cause inaccessibility or unavailability of the Mark43 Application. Except as set forth below, Mark43 shall provide at least seven (7) days' advance notice of Scheduled Maintenance whenever practicable, and in no circumstances less than three (3) days' advance notice. In the event that Mark43 determines it is appropriate to perform emergency work related to the Mark43 Application or emergency work is performed related to the hosting environment, such work will be deemed Scheduled Maintenance, provided Mark43 uses reasonable efforts under the circumstances to provide Subscriber with notice at least twenty-four (24) hours prior to such emergency work. Notice of Scheduled Maintenance may be provided by email and, in the case of emergency work, may also be provided by telephone.

e. **SLA Exclusions**. The Uptime Commitment does not apply to any inaccessibility or unavailability of an Application (the "**SLA Exclusions**"):

- That is not an In-Scope Mark43 Application;
- That occurs prior to Cutover;
- That results from Scheduled Maintenance;

- That results from a suspension or remedial action, as described in the Agreement;
- Caused by factors outside of Mark43's reasonable control, including any force majeure event, Internet access, or problems beyond the demarcation point of the Mark43 cloud environment;
- That results from actions or inactions of Subscriber or any third party;
- That is attributable to Subscriber's own computer equipment or devices, or failure of any software, hardware or service not supplied by Mark43 pursuant to the Agreement, including, without limitation, issues related to network connectivity, internet connectivity or network performance issues at any Subscriber locations, server downtime related to connectivity issues resulting from third-party-managed VPN access to a hosted server or Subscriber's internal network problems, or Software (including interfaces) that is not supplied or maintained by Mark43;
- That results from any Integrated Application, Third-Party Data, or any Subscriber-provided application or program; or
- That results from the failure by Subscriber, its Affiliates, or any Authorized User to incorporate a Software or Service update or upgrade made available by Mark43.

SCHEDULE C

Transition Assistance

1. **Preparation**.

   a. Subscriber will provide the desired cutoff date of the SaaS Services (the "**Cutoff Date**") to Mark43, at which time all existing user accounts will be terminated.

   b. For one (1) year following the Cutoff Date, Mark43 will provide one (1) transition account for Subscriber to access the Applications and retrieve all Subscriber Data as further detailed below

2. **Content**.

   a. Upon Subscriber's request, Mark43 will deliver and make available Subscriber Data to Subscriber within four (4) weeks of the Cutoff Date. Subscriber Data will be delivered as follows:

      - Searchable PDFs: Mark43 will create searchable PDFs of each record (each, a "**Record**") and provide them to the Subscriber for download. Subscriber may request, and Mark43 will consider, other formats in which to create the Records, but the final format of all Records will be determined in Mark43's sole discretion. Records can be uploaded to Subscriber's new system by the Subscriber or its new vendor.
      - Database Export: Subscriber Data will be provided to Subscriber as an export of Mark43's Microsoft SQL Server Data Lake database. To use the data, Subscriber will need to have access to its own Microsoft SQL Server database.
      - Document/File Export: Documents/file attachments stored within the Mark43 system will be provided to the Subscriber in a zipped folder. Within the folder the Subscriber will find all files with a unique ID appended to the filename. A csv file will be provided to relate the unique file ID with the attached entity type and Mark43 ID.

   b. If files are too large for practical internet transmission, an encrypted hard drive will be provided.

3. **Support**.

   a. Mark43 will maintain Subscriber Data in the Mark43 Applications for up to one (1) year following the Cutoff Date.

   b. Mark43 will resolve any issues it deems to be the result of errors in the Mark43 platform or export process for a period of six (6) months after the Cutoff Date.

   c. No less than two (2) years after the Cutoff Date, Mark43 will delete Subscriber Data from all Mark43 online systems (e.g. primary database, replica databases, search databases, application caches, etc.) other than database backups, audit logs and server system logs.

   d. Within six (6) months from the date of deletion of Subscriber Data from all Mark43 online systems, all Subscriber Data will be erased from database backups.

   e. Notwithstanding the foregoing, Mark43 reserves the right to retain Subscriber Data on audit logs and server system logs and in support tickets, support requests and direct communications with Mark43.

4. **Additional Services**.

   a. Ongoing Web Access: Subscriber may elect to purchase a read-only tenant of the Mark43 system. This service enables Subscriber to utilize a single user log-in to view and access data entered into the Mark43 system up to the date of termination or expiration of this Agreement. Under this service, Subscriber will not have permission to change, modify or update any Subscriber Data.

   b. Additional Professional Services: If the Subscriber requires additional Professional Services, these will be billed according to the current market rate for such Services.

5. **Fees**. In the event that any Fees have not been paid as required under this Agreement, Mark43 may decline to provide the support outlined in this Schedule C until such Fees are paid in full.

SCHEDULE D

Technical Requirements

This Schedule lists the minimum technical requirements required for Mark43's RMS, CAD, Evidence Management and Data Exchange applications. This also describes the requirements for Mark43 interface servers. Integrated Application Providers and subcontractors may have additional requirements that are not listed here.

1. MARK43 RMS

1.1 RMS Workstation Requirements

Item	Minimum	Recommended
Operating System	Windows 7+, Mac OS X 10.X	Windows 10, Mac OS 10.X
Processor	1x dual-core processor	1x quad-core processor or greater
Architecture	x64 / x86	x64
Memory	4 GB	6 GB+
Network Card	1x 2 Mbps+ NIC	1x 10 Mbps+ NIC
Display(s)	1x 1024x768	1x 1920x1080
Hard Drive	1 GB available space	5 GB available space
Graphics Card	N/A	N/A
Bandwidth	2 Mbps	5 Mbps+

1.2 RMS Workstation Site Internet Requirements

Mark43 RMS operates as a single-page application where most of the heavy download load is needed only on initial page load for each user. For RMS, Mark43 recommends an overall internet bandwidth connection of 1+ Mbps per concurrent user using that connection. Actual performance and usage may vary depending on user usage of other internet-connected applications and your ISP.

1.3 RMS Mobile Data Terminal Requirements

Item	Minimum	Recommended
Operating System	Windows 7+, Mac OS X 10.X	Windows 10, Mac OS 10.X
Processor	1x dual-core processor	1x dual-core processor or greater
Architecture	x64 / x86	x64
Memory	2 GB	4 GB+
Network Card	2 Mbps (4G LTE)	5 Mbps+ (4G LTE)
Display(s)	1x 1024x768	1x 1024x768+
Hard Drive	1 GB available space	5 GB available space
Graphics Card	N/A	N/A
Bandwidth	2 Mbps (4G LTE)	5 Mbps+ (4G LTE)

1.4 RMS Browser Requirements

Mark43 RMS is web-based and requires a modern web browser to access the system. Mark43 RMS supports the following browser versions that receive technical support and security updates from the browser vendor.

- Google Chrome (latest)
- Microsoft Edge (latest)
- Mozilla Firefox (latest)

1.5 RMS Smartphone Mobile Application Requirements

The Mark43 RMS Smartphone Mobile Application is available on iOS.

Item (iOS)	Supported	Recommended
Operating System	Apple iOS 10, 11, 12	Apple iOS 12
Device	iPhone 6, 6 Plus, 6S, 6S Plus iPhone SE iPhone 7, 7 Plus iPhone 8, 8 Plus iPhone X, XS, XS Max, XR iPad Air 2, 3rd gen iPad Mini 3, 4, 5th gen iPad Pro 1st gen, 2nd gen, 3rd gen iPad 5th gen, 6th gen	iPhone XS iPad gen 6

1.6 Evidence Smartphone Mobile Application Requirements

The Mark43 Evidence Smartphone Mobile Application is available on iOS and Android.

Item (iOS)	Supported	Recommended
Operating System	Apple iOS 10, 11, 12	Apple iOS 12
Device	iPhone 6, 6 Plus, 6S, 6S Plus iPhone SE iPhone 7, 7 Plus iPhone 8, 8 Plus iPhone X, XS, XS Max, XR iPad Air 2, 3rd gen iPad Mini 3, 4, 5th gen iPad Pro 1st gen, 2nd gen, 3rd gen iPad 5th gen, 6th gen	iPhone XS iPad gen 6

Item (Android)	Supported	Recommended
Operating System	Android 5+	Android 9
Device	Samsung Galaxy S7+	Samsung Galaxy S10

1.7 Evidence Barcode Printer Requirements

The Mark43 RMS Property and Evidence module requires a barcode printer to optimize the evidence management process. Mark43 integrates seamlessly with Zebra barcode printing hardware and requires the following printer:

- ZD420 model number ZD42043-C01E00EZ
- 2000T label
- 5095 Premium Resin ribbon (05095CT11007)
    - Ribbon roll-only (05095GS11007)

Deviating from this hardware configuration will lead to smeared, stretched or otherwise incorrectly printed barcode labels. For departments with multiple printers, Mark43 recommends purchasing the same model for all locations.

1.8 Evidence Printer Server Requirements

In order for Mark43 RMS to communicate with the barcode printers, an intermediate server to route printing requests is required. This machine can be the same machine as the Interface Servers specified below or standalone in which case it will need the following specifications:

Item	Minimum	Recommended

Processor	2x 2.0+ GHz processors	2x 2.0+ GHz processors
Memory	2 GB	4 GB+
Hard Drive	32 GB HDD storage	64 GB HDD storage

1.9 RMS Fillable PDF Software Requirements

In order for the Subscriber to utilize Mark43 RMS 7 (RMS Fillable PDFs), the Subscriber must have at least one (1) Adobe Professional license.

2. MARK43 CAD

2.1 CAD Call Taker / Dispatcher Workstations

Mark43 recommends solely using the Mark43 CAD installed desktop application for CAD call takers and dispatchers. The installed application allows for multi-window functionality and a more seamless user experience for power-users of the CAD application.

Item	Minimum	Recommended
Operating System	Windows 8+	Windows 10
Processor	1x dual-core processor	2x quad-core processor or greater
Architecture	x64	x64
Memory	8 GB	16 GB+
Network Card	1x 5 Mbps+ NIC	1x 10 Mbps+ NIC
Display(s)	1x 1024x768 monitor	2x+ 1920x1080 monitors
Hard Drive	10 GB available space	20 GB available space
Graphics Card	Dedicated video card with 128MB+ memory	2x 512MB NVIDIA Quadro NVS 310, 4 MON
Bandwidth	2 Mbps per concurrent dispatcher	5 Mbps+ per concurrent dispatcher

2.2 CAD Call Taker / Dispatcher Workstation Site Internet Requirements

For CAD, Mark43 recommends an overall internet bandwidth connection of 2+ Mbps per concurrent user using that connection and a backup ISP connection with automatic failover. Actual performance and usage may vary depending on user usage of other internet-connected applications and your ISP.

2.3 CAD First Responder Mobile Data Terminal Requirements

Item	Minimum	Recommended
Operating System	Windows 8+	Windows 10
Processor	1x dual-core processor	1x dual-core processor or greater
Architecture	x64	x64
Memory	2 GB	4 GB+
Network Card	2 Mbps (4G LTE)	5 Mbps+ (4G LTE)
Display(s)	1x 1024x768	1x 1024x768+
Hard Drive	10 GB available space	20 GB available space
Graphics Card	128MB of video memory	256MB+ video memory
Bandwidth	2 Mbps+ (4G LTE)	5 Mbps+ (4G LTE)

Mark43 CAD also requires installing a Windows Service on First Responder MDTs to query message switches, track GPS, monitor performance, and more. This Windows Service requires:

- Powershell installed with Windows 8+

- .NET Core v2.1+
- .NET Framework v4.5+
- A service account with “Log in as service” and administrative permissions
- Completion of all recommended Windows Updates from Microsoft

2.4 CAD Browser Requirements

Mark43 CAD is also web-based and requires a modern web browser to access the system. Mark43 CAD is only supported on the latest version of Google Chrome.

2.5 GPS Tracking

Mark43 CAD First Responder MDTs support tracking GPS from the following hardware:

- Getac machines with internal GPS (BAUD rate of 96k)
- BU-353S4 receivers that plug in
- Cradlepoint routers

GPS Tracking also requires:

- GPS Receiver using NMEA standard (e.g. $GPxxx messages)
- Dedicated COM port on machines that use external USB GPS devices
- External Antenna strongly recommended
- DIS (a windows service that can capture GPS data in the following formats: a) Sent over a COM port in the NMEA 1 format or b) via UDP in the NMEA 1 format

3. MARK43 ANALYTICS

3.1 Data Lake Requirements

Mark43 Data Lake is a Microsoft SQL Server Database and requires a database client that receives technical support and security updates from the vendor. Mark43 recommends using Microsoft SQL Server Management Studio.

3.2 Business Intelligence Suite Requirements

Mark43 Business Intelligence Suite runs embedded within Mark43 RMS and therefore has the same browser requirements as Mark43 RMS.

4. MARK43 DATA EXCHANGE

The Mark43 Data exchange functionality is enabled through either the RMS or CAD applications. Additional interface servers may be required to support Mark43 Data Exchange data flows, depending on the department’s size and complexity.

5. MARK43 INTERFACE SERVERS

5.1 Server Requirements

Interface servers are on-premise servers that Mark43 uses to run interfaces developed by Mark43. These servers allow Mark43 interfaces to access on-premise Subscriber systems and/or run custom interfaces developed by Mark43. Mark43 supports these servers from the VM up and ensures that interfaces running on these servers are maintained and monitored. The table below outlines Mark43’s minimum required and recommended server specifications for an interface server setup.

Item	Minimum	Recommended
Number of servers	1	2+
Operating System	Ubuntu 20.04 LTS, CentOS 8, or Red Hat Enterprise Linux 8	Ubuntu 20.04 LTS
Processor	1x quad-core processor	2x quad-core processor
Architecture	x64	x64
Memory	8 GB	16 GB+
Network Card	1x 100 Mbps NIC	2x 1 Gbps+ NICs
Display(s)	N/A	N/A
Disk	128 GB available space	128 GB available space
Graphics Card	N/A	N/A
Bandwidth	10 Mbps	100+ Mbps

5.2 Support

Subscriber provisions these servers and maintains them from hardware/VM up to and including the operating system. Mark43 will maintain the application software installed on this server, which consists of:

- Docker, which runs all the application software in an easily manageable way
- Kubernetes, a container orchestration technology, which allows Mark43 to deploy, update, and monitor the Docker containers running the application software

Subscriber may choose to install other software (e.g. monitoring software) on this server as long as it does not interfere with the operation of the Mark43 provided applications.

5.3 Releases

The Docker containers running on the interface servers are updated as part of the normal Mark43 release cycle. This is to apply updates to interface applicate code and ensure compatibility with any API changes made to the internal Mark43 API.

5.4 Maintenance

If Subscriber needs to apply patches to the interface server this can be done safely by rotating servers in and out. Subscriber does not need to notify Mark43 when this happens, unless the interface servers are expected to be down for more than 15 minutes, or if Subscriber has only one interface server.

5.5 Networking/Firewall Setup

Inbound:

SSH / Port 22	Originating from within the Subscriber's VPN For Mark43 SSH access
HTTPS / Port 443	Originating from within the Subscriber's VPN For Kubernetes API server communication and evidence labeling printing software (if applicable for Subscriber)
TCP Port 6443	Originating from within the Subscriber's VPN For Kubernetes API server communication
TCP Port 10250	Originating from within the Subscriber's VPN For Kubernetes node metrics

* All IPs and ports inbound from the public internet should be closed.

Outbound:

HTTPS / Port 443	To all network interfaces – 0.0.0.0/0
TCP Port 6443	Originating from within the Subscriber's VPN For Kubernetes API server communication

VPN:

- Mark43 will SSH to this server over the Subscriber VPN to install Docker and Kubernetes, and perform any troubleshooting actions or maintenance tasks that can't be completed via the normal release process

User Accounts:

- Mark43 will need a service account with sudo access on the interface servers

Assigning Static IP Addresses:

- Subscriber will need to take the following steps:

1. Log in to the server with the username and password.
2. Enter the following command *sudo nano /etc/network/interfaces*
3. Delete the line *iface eno1 inet dhcp*
4. Add the following lines. Replace the text in <> with your network appropriate information. If no on-site DNS servers are available, we recommend using 8.8.8.8 and 8.8.4.4 for your DNS server:
   iface eno1 inet static
   address <IP address>
   netmask <subnet mask>
   gateway <default gateway>
   dns-search <DNS search domain>
   dns-nameservers <DNS server> <optional secondary DNS server>
5. Type *control+x* to exit
6. Press *y* to save
7. Press *enter* to confirm the name /etc/network/interfaces.
8. Type *sudo reboot* to restart the server.

SCHEDULE E

Third-Party Component Terms / Subcontractors

Google: Users are bound by the Google Maps/Google Earth Additional Terms of Service (including the Google Privacy Policy), available by following these links:

Google Maps Terms: https://maps.google.com/help/terms_maps.html
Google Privacy Policy: https://policies.google.com/privacy?hl=en&gl=us
Acceptable Use: https://enterprise.google.com/maps/terms/universal_aup.html

Amazon:

Universal Service Terms: https://aws.amazon.com/service-terms/
Acceptable Use: https://aws.amazon.com/aup/

Auth0 (if elected):

Acceptable Use: https://cdn.auth0.com/website/legal/files/aup-19.pdf

RapidSOS (if elected): Subscriber must sign up and accept the terms contained within the following link:

https://info.rapidsos.com/rapidsos-integrations-signup

CommSys (if elected): CommSys End User License Terms and Conditions are attached hereto.

Subcontractors (if any): N/A

CommSys End User License Terms and Conditions

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(e) You shall promptly notify Mark43 of any actual or suspected use or disclosure of the CommSys Products or Confidential Information and shall provide reasonable assistance in the investigation and prosecution of such uses or disclosures.

(f) You shall destroy all CommSys Products and Confidential Information if: (i) you cease to use the CommSys Products; (ii) the License Agreement terminates; or (iii) your rights to use the CommSys Products is terminated.

(g) You shall not, directly or indirectly, nor cause or allow any other person to: (i) modify or translate into any other format or language any portion of the CommSys Products or Confidential Information; (ii) use any Confidential Information to create any item which is substantially similar to, competitive with, or performs the functions of any of the CommSys Products; (iii) reverse engineer, disassemble, decompile, or otherwise attempt to derive the source code for or other Confidential Information with respect to, any of the CommSys Products or Confidential Information; or (iv) modify, copy, reproduce, manufacture, adapt, create derivative works of, translate, localize, or port any of the CommSys Products or the Confidential Information, or allow any employee, representative, consultant, agent, or other third party to engage in such conduct.

(h) You agree that any item resulting from any actions under (g) above shall be the sole and exclusive property of CommSys. You agree that all of the CommSys Products and Confidential Information are highly valuable to CommSys, and that any breach of the CommSys Terms and Conditions would severely damage CommSys, the extent of which damage would be difficult to ascertain, and therefore CommSys, as a third party beneficiary of these CommSys Terms and Conditions is entitled to seek, among other remedies, immediate injunctive and other equitable relief for any such breach.

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SCHEDULE F

Data Processing Addendum

1. **Definitions.** For purposes of this this Data Processing Addendum ("**DPA**"), "**Subprocessor**" means a Mark43 Affiliate or other third party engaged by Mark43 for the purpose of hosting, storing or otherwise processing Subscriber Data as authorized by the Agreement or otherwise in writing by Subscriber. Terms not otherwise defined in this DPA have the meaning set out in this Agreement.

2. **Subscriber Data.** The obligations in this Exhibit apply to Subscriber Data in the custody or control of Mark43 and its Subprocessors. They do not apply to Subscriber Data in the custody or control of any other party, including Subscriber Data under Subscriber's custody or control outside of the Services or Subscriber Data maintained by an Integrated Application Provider or transmitted or accessed on or through an Integrated Application.

3. **Disclosure.** Mark43 will not disclose Subscriber Data to any third party except: (i) to Authorized Users; (ii) as permitted under the Agreement; (iii) to its Subprocessors, provided that each Subprocessor agrees to protect Subscriber Data in a manner substantially in accordance with this DPA; or as provided by this DPA with respect to any Disclosure Request. Notwithstanding the foregoing or anything in this DPA to the contrary, Subscriber acknowledges and agrees that (a) Mark43 utilizes major providers of cloud-based services for processing certain Subscriber Data through the Services (each, a "**Cloud Provider**") (including, as of the Effective Date of the Agreement, Amazon Web Services for hosting and Google for mapping and geolocation services), (b) each Cloud Provider has its own data protection practices that are applicable to its delivery of services to its customers, and (c) Cloud Providers will not agree to separate data protection practices on a customer-by-customer basis; therefore, Cloud Providers will not be required to comply with the obligations in this DPA to the extent that they are inconsistent with each Cloud Provider's own data protection practices, but Mark43 will use reasonable efforts to assess that each Cloud Provider complies with its own data protection practices, which may include periodic examination of SOC 2 reports or comparable reports made available by Cloud Provider.

4. **Information Security Program.** Mark43 will implement and maintain a written information security program that contains reasonable administrative, technical and physical safeguards intended to protect Subscriber Data from unauthorized access, disclosure, use, modification, loss or destruction.

5. **Access.** Mark43 will maintain appropriate access controls to Subscriber Data, including limiting access to Subscriber Data only to personnel who require such access in order for Mark43 to provide Services to Subscriber or to otherwise exercise Mark43's rights or perform Mark43's obligations under the Agreement. Mark43 will require its personnel to protect Subscriber Data in accordance with the requirements of this DPA and will provide its personnel with appropriate information security training.

6. **Information Security.**
    a. Mark43 maintains its information security program and applicable safeguards at all Mark43 sites at which an information system that stores or otherwise processes Subscriber Data is located.
    b. Mark43 maintains network security using commercially available equipment and industry standard techniques, including firewalls, router access control lists, intrusion detection and/or prevention systems, penetration testing, vulnerability scanning, and patch management tools.
    c. Mark43 will encrypt, using industry-standard encryption tools, all Subscriber Data that Mark43: (i) transmits or sends wirelessly or across public networks; (ii) stores on laptops or removable storage media; and (iii) stores on portable devices. Mark43 will safeguard the confidentiality and availability of all encryption keys associated with encrypted Subscriber Data.
    d. Mark43 installs and maintains endpoint security measures such as anti-virus and malware protection software intended to protect Subscriber Data from malicious code.
    e. Mark43 undertakes appropriate logging and monitoring to enable recording of information security-related actions and identification of anomalous events.
    f. Mark43 develops software used to deliver the Services in accordance with secure software development principles.

7. **Security Incident Management.** Unless otherwise prohibited by law, Mark43 will notify Subscriber promptly (and in any event within 72 hours) in the event Mark43 reasonably believes that there has been any unauthorized access, acquisition, disclosure, use, modification, loss or destruction of Subscriber Data ("**Security Incident**"). Mark43 will promptly investigate the Security Incident, will take necessary steps to eliminate or contain the exposure of Subscriber Data, and will keep Subscriber informed of the status of the

Security Incident. Mark43 will provide reasonable assistance and cooperation requested by Subscriber or Subscriber's designated representatives to correct, remediate, or investigate the Security Incident or to mitigate potential damage resulting from it, including any notification that Subscriber may determine appropriate to send to affected individuals, regulators or third parties.

8. **Business Continuity.** Mark43 implements appropriate disaster recovery and business continuity plans and reviews and updates such plans regularly. Back-up copies of critical business information and software are created regularly and tested to verify their integrity.

9. **Audits.** Upon Subscriber's request, Mark43 will make available to Subscriber up to once per year a copy of a third-party assessment, such as a SOC 2 report or comparable report ("**Third-Party Report**"), if Mark43 has obtained such a Third-Party Report for the Services; or if Mark43 has not obtained a Third-Party Report for the Services, Subscriber may provide to Mark43 a security assessment questionnaire related to the Services, which Mark43 will accurately and promptly complete. Such a questionnaire must be reasonable in scope and may include questions seeking verification of compliance with the terms and conditions of this DPA. All Third-Party Reports or information accessed by or otherwise disclosed to Subscriber in connection with any such review will be considered Confidential Information of Mark43.

10. **Return/Disposal.** Upon termination or expiration of the Agreement, Mark43 will cease handling Subscriber Data and will take reasonable steps to return or destroy Subscriber Data according to the timeframes set out in Schedule C of the Agreement. If Mark43 has any legal obligation to retain Subscriber Data beyond the periods otherwise specified by Schedule C, Mark43 will notify Subscriber in writing of that obligation, to the extent permitted by applicable law, and will return or destroy the Subscriber Data in accordance with this DPA as soon as possible after that legally required retention period has ended. If Mark43 disposes of any paper, electronic or other record containing Subscriber Data, Mark43 will take all reasonable steps to do so by: (a) shredding; (b) permanently erasing and deleting; (c) degaussing; or (d) otherwise modifying Subscriber Data in such records to make it unreadable, unreconstructable and indecipherable.

11. **Location of Subscriber Data.** Subscriber Data stored or transmitted through the SaaS Services in Subscriber's user accounts shall be hosted by a Cloud Provider in the United States. Mark43 currently uses AWS Govcloud region as Cloud Provider to host Subscriber Data. Information about AWS' commitment to support customers' CJIS compliance requirements is available here: https://aws.amazon.com/compliance/cjis/.

Exhibit B

INSURANCE REQUIREMENTS

Please refer to the insurance requirements listed below. **Those that have an "X" indicated in the space before the requirement apply to Contractor's or Consultant's Agreement.**

Contractor or Consultant shall procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor or Consultant, its agents, representatives, employees or subcontractors.

Contractor or Consultant shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements.

Contractor or Consultant shall furnish City with copies of original endorsements affecting coverage required by this Exhibit XX. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements and certificates are to be received and approved by City before work commences. City has the right to require Contractor's or Consultant's insurer to provide complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications.

Commercial General Liability (CGL):

X Coverage at least as broad as Insurance Services Office ("ISO") Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $2,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

___ Coverage at least as broad as ISO Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $1,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

___ Coverage at least as broad as ISO Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than $5,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.

Automobile Liability:

X Coverage at least as broad as ISO Form Number CA 0001 covering, Code 1 (any auto), of if Contractor or Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limits no less than $1,000,000.00 combined single limit for bodily injury and property damage.

___ Coverage at least as broad as ISO Form Number CA 0001 covering, Code 1 (any auto), with limits no less than $5,000,000.00 combined single liit for bodily injury and property damage.

___ Garage keepers' extra liability endorsement to extend coverage to all vehicles in the care, custody and control of the Contractor or Consultant, regardless of where the vehicles are kept or driven.

Professional Liability (Errors and Omissions):

X Insurance appropriates to the Contractor or Consultant's profession, with limit no less than $1,000,000.00 per occurrence or claim, $2,000,000.00 aggregate.

___ (If Design/Build), with limits no less than $1,000,000.00 per occurrence or claim, and $2,000,000.00 policy aggregate.

___ Insurance appropriates to the Contractor or Consultant's profession, with limit no less than _____ per occurrence or claim, _____ aggregate

Workers' Compensation Insurance:

X Insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000.00 per accident for bodily injury or disease. *(Not required if Contractor or Consultant provides written verification it has no employees)*

The Employer's Liability policy shall be endorsed to waive any right of subrogation as respects the City, its elected and appointed officials, officers, attorneys, agents, and employees.

Builder's Risk (Course of Construction):

___ Insurance utilizing an "All Risk" (Special Perils) coverage form, with limits equal to the completed value of the project and no coinsurance penalty provisions. If the project does not involve new or major reconstruction, at the option of the City, an Installation Floater may be acceptable. For such projects, a Property Installation Floater shall be obtained that provides for the improvement, remodel, modification, alteration, conversion or adjustment to existing buildings, structures, processes, machinery and equipment. The Property Installation Floater shall provide property damage coverage for any building, structure, machinery or equipment damaged, impaired, broken, or destroyed during the performance of the Work, including during transit, installation, and testing at the City's site.

Contractor's or Consultant's Pollution Legal Liability:

___ Contractor's or Consultant's pollution legal liability and/or Asbestos Legal Liability and/or Errors and Omissions (if project involves environmental hazards) with limits no less than $1,000,000.00 per occurrence or claim and $2,000,000.00 policy aggregate.

If the Contractor or Consultant maintains higher limits than the minimums shown above, the City requires and shall be entitled to coverage for the higher limits maintained by the Contractor or Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

Cyber Liability Insurance

X Cyber Liability Insurance with limits not less than $1,000,000 per claim.

Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor or Consultant in this Agreement and shall include, but not be limited to, claims involving infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, alteration of electronic information, extortion, and network security.

The policy shall provide coverage for breach response costs as well as regulatory fines and penalties, and credit monitoring expenses with limits sufficient to respond to these obligations.

Surety Bonds:

Contractor shall provide the following Surety Bonds:

____ Bid Bond
____ Performance Bond
____ Payment Bond

The Payment Bond and Performance Bond shall be in a sum equal to the contract price. Bonds shall be duly executed by a responsible corporate surety, authorized to issue such bonds in the State of California and secured through an authorized agent with an office in California.

Other Insurance Provisions:

The insurance policies are to contain, or be endorsed to contain the following provisions:

X Additional Insured Status and Primary/Non-Contributory Language:

Contractor's general liability and automobile liability policies shall be primary and shall not seek contribution from the City's coverage and be endorsed to add the City and its officers, officials, employees, and agents as additional insureds under such policies using Insurance Services Office form CG 20 10 (or equivalent) on the general liability policy.

The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of City (if agreed to in a written contract or agreement) before the City's own insurance or self-insurance shall be called upon to protect it as a named insured.

___ Loss Payee Status – Builder's Risk/Course of Construction Insurance (applicable to Construction Contracts only)

Contractor or Consultant may submit evidence of Builder's Risk insurance in the form of Course of Construction coverage. Such coverage shall name the City as a loss payee as their interest may appear.

X Notice of Cancellation, Suspension or Otherwise Voiding Policies:

Each insurance policy required above shall contain or be endorsed to contain that coverage shall not be suspended, voided, canceled except with thirty (30) days' prior written notice by certified mail, return receipt requested to the City.

X Waiver of Subrogation:

Contractor or Consultant hereby grants to City a waiver of any right to subrogation which any insurer of said Contractor or Consultant may acquire against the City by virtue of the payment of any loss under such insurance. Contractor or Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor or Consultant, its employees, agents and subcontractors.

___ Completed Operations

For Construction Agreements, Contractor shall maintain insurance as required by this Agreement to the fullest amount allowed by law and shall maintain insurance for a minimum of five (5) years following the completion of

this project. In the event Contractor fails to obtain or maintain completed operations coverage as required by this Agreement, the City at its sole discretion may purchase the coverage required and the cost will be paid by Contractor.

Deductibles and Self-Insured Retentions ("SIR"):

Any deductibles or self-insured retentions must be declared to and approved by City. The City may require the Contractor or Consultant to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. At the option of the City, either (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its elected and appointed officials, officers, attorneys, agents, and employees; or (2) the Contractor or Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

All SIRs must be disclosed to Risk Management for approval and shall not reduce the limits of liability.

Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or the City.

City reserves the right to obtain a full-certified copy of any insurance policy and endorsements. Failure to exercise this right shall not constitute a waiver of right to exercise later.

Acceptability of Insurers:

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-:VII, unless otherwise acceptable to City.

Claims Made Policies: (note - should be applicable only to professional liability, see below)

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

2. Insurance must be maintained, and evidence of insurance must be provided for at least five (5) years after completion of contract of work.

3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract Effective Date, the Contractor or Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of work.

4. A copy of the claims reporting requirements must be submitted to the City for review.

5. If the services involve lead-based paint or asbestos identification/remediation, the Contractor's Pollution Liability Policy shall not contain lead-based paint or asbestos exclusions. If the services involve mold identification/remediation, the Contractors Pollution Liability Policy shall not contain a mold exclusion, and the definition of Pollution shall include microbial matter, including mold.

Subcontractors:

Contractor or Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that City is an additional insured on insurance required from subcontractors.

Subcontractor agrees to be bound to Contractor and City in the same manner and to the same extent as Contractor is bound to City under this Agreement and any other contract documents. Subcontractor further agrees to include the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, with any sub-subcontractor to the extent they apply to the scope of the sub-subcontractor's work. A copy of the City indemnity and insurance provisions will be furnished to the subcontractor upon request.

Verification of Coverage:

Contractor or Consultant shall furnish the City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the City before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor or Consultant's obligation to provide them. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances

City reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage or other special circumstances.

Failure to Comply:

Each insurance policy required above shall contain or be endorsed to contain that any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its elected and appointed officials, officers, attorneys, agents, and employees.

Applicability of Coverage:

Each insurance policy required above shall contain or be endorsed to contain that the Contractor's or Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Exhibit C

STATEMENT OF WORK

(See attached)

MARK43, INC. IMPLEMENTATION STATEMENT OF WORK CITY OF MILPITAS

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1. STATEMENT OF WORK OVERVIEW

This Statement of Work (SOW) outlines tasks required for the Mark43 Project Team to provide the Mark43 platform functionality to the City of Milpitas (Subscriber) in accordance with the Software License and Services Agreement (SLSA) entered into by Mark43 and Subscriber in conjunction with this SOW. The Mark43 Project Team shall perform in accordance with this SOW, which shall be effective as of the Effective Date. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the SLSA.

This document's intention is to outline the implementation services, customer success services, and third-party interface scope that were purchased along with the Mark43 system and that accompany the Mark43 software implementation. This document outlines project implementation scope, Mark43 responsibilities, Subscriber responsibilities, implementation governance, cutover responsibilities, and a project outline. Any changes to this document will be handled through the Change Control Process outlined in the Change Control section of this document. If a service is not listed in this document, it is not considered part of the project.

2. PROJECT MANAGEMENT

2.1 PROJECT MANAGEMENT OVERVIEW

Mark43 will provide a member of the implementation team who will act as the Project Lead and serve as Subscriber's main point of contact during implementation. The Project Lead will help guide Subscriber through the phases of implementation – from the initial kick-off call, to cutover to live operations – and assist with any questions Subscriber might have throughout the process. The Project Lead aims to bring together recommended best practices, blending implementation and project coordination processes to provide meaningful support throughout the project lifecycle. Implementation services will be governed by the expectation table contained in Section 2.6 of this document.

While the Project Lead is responsible for driving the implementation process, assistance from Subscriber is necessary to facilitate the project. Subscriber's project team will need to set aside time weekly for workflow and configuration validation sessions, data reconciliation, testing, and training. The Project Lead will outline the scope of these responsibilities at the kick-off meeting for the project.

If Subscriber anticipates having limited availability, then Subscriber may want to purchase additional services from Mark43 to reduce the amount of time required from Subscriber. In addition, once live on the System, Subscriber may decide to implement additional functionality or modules. In such cases, Subscriber should handle such requests through the Change Control Process outlined in the Change Control section of this document.

After the implementation has been completed, the Mark43 Customer Success Team will begin the transition to ongoing customer sustainment. After Go Live, Customer Success will take over as the primary point of contact for any outstanding projects, escalations, and maintenance of the system. Customer Success will be available to answer any project-related questions that may come up as you begin using the Mark43 service. In addition, Mark43 staffs a 24/7 Help Desk to assist with ground-level questions as they arise, and an online workflow portal that outlines out of the box Mark43 functionality. Support services are covered by your Annual Subscription, Maintenance & Support Fees.

2.2 PROJECT MANAGEMENT SCOPE AND RESPONSIBILITIES

As stated above, the Project Lead will guide Subscriber through the implementation. Coordinated effort and cooperation from Subscriber is necessary to facilitate the implementation. The following table breaks down general responsibilities for both Mark43 and Subscriber, outlining activities that are included in the scope of the Implementation.

- **R – Responsible:** Does the work to complete the activity
- **A – Accountable:** Ensures work is deemed complete
- **C – Consulted:** Provides input on activity
- **I – Informed:** Receives updates on the progress of activity

		Mark43	Subscriber
Project Management			
Deliverable	**Description**		
Project Kickoff	Conduct meeting that formally starts the project and sets expectations	R	R / A
Project Management			
Foundation Questionnaire	Completes form that provides key information about the agency, current state infrastructure, and workflows	A	R
Project Plan	Project schedule that indicates the timeline, activities, dependencies, and progress of the project	R	A

		Mark43	Subscriber
Project Communication Plan	Document that outlines the project communications process and cadence	R	A / I
Change Order Request Form	Completes form that requests new project work that is not included in the Statement of Work if desired	I / A	R
Status Report	Provides document that provides regular updates on project activities	R	A / I
Project Schedule Maintenance (Updates/Changes)	Communicates progress updates on project activities	R	A / I
Risk Matrix	Documents outlines project risks and their mitigations	R	A / C / I
Decision Log	Records and maintains significant decisions for the project including interfaces, workflows, and configurations	R	A / C
Workflow Guide Development and Maintenance	Creates document that specifies agency-specific workflows on using Mark43	A / C	R
Configuration Management	Configures the base RMS tenant during implementation	R	A
Fillable PDF Configuration	Configures and maps any fillable PDFs forms to be used in the RMS	A	R
Configuration Maintenance	Configures the base RMS tenant during implementation	A	R
Cutover Plan	Creates document that outlines the plan for cutover and Go Live	R	A / I
Sustainment Plan			
Sustainment Plan	Creates that outlines plan for managing the Mark43 system post cutover	R	A / C / I
New Feature Training	Train subscriber on newly released product features	R	A / I

		Mark43	Subscriber
Manage post cutover interface builds	Develops any post cutover interfaces	R	A / I
Help Desk and Issue Resolution	Manages and triages any reported issues post cutover	R	A / I
Change Management			
Change Management Plan	Creates change management plan for agency	R	R / C / I
Communication Plan	Creates and distributes agency communications on how to use Mark43, training, and Go Live	A / C	R
Training			
Baseline Training Materials	Develops and provide training course materials	R	A / I
Remote Training Walkthroughs	Develops and provide remote training course materials	R	A / I
Train-the-Trainer Logistics / Follow up	Identify Train the Trainers for agency specific training	R / A	R
Agency-Specific Training Logistics	Coordinates logistics and holds training for agency-specific workflows	A / C / I	R
Interface Development			
Interface Scoping and Prioritization	Prioritizes and provides scope for in-scope interfaces	C / I	R / A
Interface Server	Interface server set up and maintenance	C / I	R / A
Third Party System Access	Provide Mark43 access to third party vendor contacts and systems required to develop, test and turn on the interface	A	R
Reference Value Mapping	Map external reference values to Mark43 configured reference values	A	R

		Mark43	Subscriber
Field Mapping	Map external system fields to Mark43 partnership fields	R	A / C
Interface Control Documents (ICDs)	Creates document that describes interface scope and expected behavior	R	A / C / I
Interface UAT	Perform UAT on interfaces in test environments	A	R
Quality Control and Bug Fixes	Address reported bugs based on triage and priority	R	A / C / I
Interface Sustainment	Manage interfaces post-launch	R	A / C
Single Sign On			
Authentication Infrastructure	Install, configure, and maintain their authentication system. Install ADFS if ADFS or SAML SSO is not available	A / I	R
Connection Information	Provide ADFS or SAML SSO connection information to Mark43	A / I	R
Auth0 Configuration	Configure Auth0	R	A / I
Analytics			
Data walkthrough (Schema)	Walkthrough Mark43 data lake schema so that users can query	R	A / I
Product			
Roadmap Updates	Provides updates on Mark43 Product roadmap as they are available	R	A / I

The following activities and responsibilities are excluded from the scope of the implementation:

- Implementation of products or delivery of services not included within this SOW or the SLSA
- End user or train-the-trainer training for any employee or affiliate of Subscriber beyond what is included in Section 2.4.3.
- Evaluation of Subscriber's current state practices, policies, or procedures for the purpose of process improvement or performance improvement
- Troubleshooting of any issues not related to Mark43 software, Mark43 development, or Mark43 interfaces, unless otherwise outlined

- Migration of data to Mark43 from other systems or third parties other than those specified in this SOW or the SLSA
- Interfacing, or integrating, from or to Mark43 from other systems or third parties other than those specified in this SOW or the SLSA
- Installation of any non-Mark43 software, servers, workstations or any other hardware
- Export of Mark43 data to other systems or third parties other than those specified in the SLSA

For any tasks, deliverables, or services not included in scope that Subscriber wishes Mark43 to perform, Subscriber must follow the Change Control Process outlined in the Change Control section of this document.

2.3 PROJECT MANAGEMENT GOVERNANCE

Mark43 and Subscriber will work together to outline a full Governance Structure document detailing the persons for each Mark43 and Subscriber Team role. The document should include an escalation path for issues on both sides, an executive sponsor, and detail, as much as possible, the members of each working group.

The following is the breakdown of project roles and responsibilities:

MARK43 PROJECT TEAM	
Role	**Responsibilities**
Project Lead	● Primary point of contact for the project ● Manages the project schedule/timeline and provides regular status updates to all stakeholders ● Coordinates and schedules Mark43 resources ● Handles escalated issues
Customer Success Team	● Primary point of contact post Go Live ● Maintains ongoing release management and deployments ● Ensures outstanding projects, interfaces, and migrations on are on schedule ● Handles escalated issues and prioritizations ● Conducts regular surveys and feedback sessions ● Engage customers to improve in-app feature/product adoption

Technical Services Team	● Primary technical point of contact for the project ● Scopes and defines technical requirements and implementation plans for interfaces and migrations ● Coordinates and schedules Mark43 technical resources for interfaces, migrations, or any other technical services work ● Handles escalated technical issues ● Develops interfaces and/or data migrations ● Escalates technical, workflow, or business issues ● Communicates and works with third party developers and vendors (if any) for non-live interfaces ● Triages and handles bugs reported for non-live migrations and interfaces
Deployment Analysts	● Assist with general product questions and configuration activities
Product Specialists	● Assist with specific product questions and configuration activity ● Triages and handles bugs reported for post Go-Live migrations and live interfaces

SUBSCRIBER TEAM	
Role	**Responsibilities**
Executive Sponsor	● Command Staff representative for Subscriber ● Has authority to represent Subscriber and provide or obtain sign-off on major decisions during the project ● Assists with change management and potential policy changes within Subscriber ● Helps govern relevant project stakeholders / working group leaders
Project Lead	● Primary point of contact for Subscriber ● Participates in regular check-ins and status updates with the team ● Reviews and approves major milestones ● Manages and escalates issues ● Has authority to represent Subscriber and get sign-off on major decisions during the project
Business Point of Contact	● Has knowledge of existing workflows, processes, configurations, and systems, or has the resources to find business users needed to provide knowledge ● Has authority to represent Subscriber and get sign-off on business decisions around workflows, configurations, interfaces, and data conversions ● Helps define scope and requirements for configurations, interfaces, and data conversions
Technical Point of Contact	● Has knowledge of existing systems, interfaces, and

SUBSCRIBER TEAM	
	vendors/parties involved ● Has authority to represent Subscriber and get sign-off on major technical decisions ● Provides network, data, system, or other access deemed necessary for completion of interface and data conversions development work ● Provides documentation and other resources on data, schemas, systems as needed
Validation Point of Contact	● Has enough business and technical knowledge to be able to validate and sign-off on acceptance of workflows, configurations, interfaces, and data conversions ● Has authority to represent Subscriber and get sign-off on acceptance of interfaces and data conversions
Working Group Leads	● Primary points of contact for each user group. There should, at least, be one person for sworn, IT, Records, and each major module being implemented
Training Point of Contact	● Primary point of contact for user training ● Helps facilitate training initiatives

2.4 PROJECT MANAGEMENT STAGES AND ACTIVITIES

To ensure product implementation success, the Mark43 project will be divided into four distinct phases:

2.4.1 PHASE 1 - Plan

Phase 1 focuses on kicking off the implementation and planning the provision of the Mark43 software. Mark43 will work closely with Subscriber to outline the implementation steps, review project planning documentation, and analyze business processes to outline configuration needs. This includes meeting with identified working groups within the department, conducting research, and introducing individuals to how workflows will function in Mark43. Subscriber will need to ensure full assembly of Subscriber project team and working groups as well as completion of any questionnaires within two weeks of receipt.

The table below outlines Phase 1 activities:

Tasks	Task Details / Deliverables
Project Kick-Off	● Conduct a Project Kick-Off to commence the Mark43 software implementation through discussions of: ○ Mark43 as a Company ○ Mark43's Implementation Methodology ○ Project Organization, Roles, & Responsibilities for both Mark43 and Subscriber and the Project Communication Plan ● High level overview of product and project deliverables
SRS / NIBRS Contact	● Subscriber will work with Mark43 to introduce and establish communication with Subscriber [C]IBRS contact
Other Specialty Content Contact	● For any other specialty areas, Subscriber will need to work with Mark43 to introduce and establish communication with Subscriber point of contact (e.g. GIS experts)
Planning Documentation	● Subscriber will fill out Mark43's Foundation Questionnaire to help Mark43 understand Subscriber's current processes and state as well as the scope of the project ● Subscriber will fill out Mark43's Interface Questionnaire(s) to help Mark43 better understand the technical scope and goal of the project ● Subscriber provides Mark43 the Project Governance Structure Document to outline project contacts and communication protocols ● Mark43 provides customer requested documentation to satisfy state clearance process or requirements ● Mark43 to conduct the Introduction to Interface Scoping and Planning for Subscriber ● Mark43 to provide meeting minutes for monthly meetings
Project Plan	● Introduction of base project plan for Mark43 and Subscriber collaboration ● Mark43 will provide the Project Plan via Baton (note: Baton is a project planning and management tools leveraged by the Mark43 project team)

2.4.2 PHASE 2 - Implement

Phase 2 involves introducing the key working group leads and Subject Matter Experts (SMEs) to system configuration scope and options for the implementation. The depth and breadth of configuration required will be determined during project planning and scoping in Phase 1 based on the questionnaires Mark43 sent to Subscriber.

Mark43 will deliver a User Acceptance Testing (UAT) Plan for review by Subscriber. Interface (Third Party Interface) planning will also begin; for more information on these activities, please refer to the Third Party Interface Scope sections of this document.

The table below outlines Phase 2 activities:

Tasks	Task Details / Deliverables
Configuration Overview	● Conduct a system familiarization training overview with identified Subject Matter Experts in a tenant that has been lightly configured for the participating Subscriber ● Subscriber gains access to the lightly-configured tenant for initial workflow testing ● Mark43 provides Subscriber with Foundation Workflow Guide
Configuration Sessions	● Mark43 will hold a configuration training session for Subscriber staff that will be assisting and reviewing configuration settings
UAT Introduction	● Mark43 outlines standard UAT methodologies, timing, and logistics ● Subscriber is responsible for resource scheduling and logistics ● Mark43 provides base workflow testing outline
UAT Documentation	● Mark43 will provide documentation detailing the minimum scripts to be reviewed and tested
Interfaces Planning, Testing, and Completion	● Please reference the Third Party Interfaces Section of this document for details on interface planning, documentation, testing, and completion. Timing and milestones will be included in the project plan where appropriate
Training Needs Assessment	● Identify current department training infrastructure, resources, and methodologies ● Mark43 will provide Subscriber with documentation outlining current Mark43 Course Offerings

2.4.3 PHASE 3 - Train

Phase 3 includes Mark43 delivery of training documentation/material, and assistance coordinating training logistics. This phase also includes Mark43 train-the-trainer (TtT) courses as outlined in Section 2.4.3.1. Subscriber is responsible for incorporating feedback from workflow configuration and UAT sessions into training documents. Additional onsite trainings, beyond what is included in this SOW, are $2,880/day for onsite and $800/day for remote for the duration of the implementation.

Tasks and deliverables within this phase may overlap with tasks, deliverables, or activities included in Phase 2.

The table below outlines Phase 3 activities:

Tasks	**Task Details / Deliverables**
Foundation Training Documentation	● Mark43 will provide standardized workflow guides for Subscriber ● Mark43 will provide access to our knowledge portal via Mark43 Help Center
Training Logistics	● Where applicable, Mark43 will assist and offer previous best practices on coordination of training logistics
Train-the-Trainer	● Mark43 will provide the number of train-the-trainer sessions identified in Section 2.4.3.1 of this SOW
Additional Training	● For any additional training outside of what is defined within this SOW or the SLSA, Subscriber should follow the Change Control Process outlined in the Change Control section to request additional training services

The following train-the-trainer sessions are included with the purchase of Mark43 subscription items:

2.4.3.1 Training Courses

REFERENCE TRAINING TABLE

Module	**Number of Training Sessions Offered**	**Number of Maximum Attendees Per Session**	**Total Hours**
RMS Fundamentals	1 onsite TtT session	30	5 - 6

Module	Number of Training Sessions Offered	Number of Maximum Attendees Per Session	Total Hours
RMS Mobile	1 onsite TtT session	30	1
System Administration (RMS)	1 onsite session	10	3
RMS Case Management	1 remote session	30	5 - 6
RMS Evidence	1 onsite session	15	5 - 6
RMS Warrants	1 remote session	15	2
Records Group / Compliance	1 onsite session	25	5 - 6
BI Suite (full)	1 remote session	10	4
Data lake	1 remote session	10	3

2.4.4 PHASE 4 - Deploy

Phase 4 focuses on the final activities necessary for cutover to Mark43 production. Mark43 will provide a cutover checklist detailing tasks necessary for the customer to cutover to the production tenant.

Mark43 and Subscriber will hold a go/no-go meeting no less than 45 calendar days prior to the planned Go Live date as outlined in the collaborative project plan to assess readiness.

The table below outlines Phase 4 activities:

Tasks	Task Details / Deliverables
Cutover Checklist	● Mark43 will provide a Cutover Checklist for Subscriber. This checklist details: tasks necessary to cutover to Mark43, Go Live readiness steps, and any final changes needed before Go Live ● Mark43 will also provide guidance on navigating this plan and collaborate with Subscriber to ensure Subscriber can complete all tasks

Tasks	Task Details / Deliverables
Go-Live Readiness	● Mark43 and Subscriber will hold a joint go/no-go meeting to assess Subscriber's readiness for Go-Live and begin use of Mark43 products.
Go-Live	● Mark43 will provide cutover support as per the Implementation Service Level listed below in section 2.6 Implementation Services Overview.
Customer Success Transition	● The Mark43 Project Lead will work to introduce the Mark43 Customer Success team to Subscriber and help outline: maintenance plan, issue escalation protocol, and ongoing status updates

2.5 PROJECT MANAGEMENT MILESTONES

In addition, the Mark43 project is structured using the following project milestones. Each milestone's completion is determined by completion of the associated acceptance criteria.

Project Milestones

#	PROJECT MILESTONE	MILESTONE ACCEPTANCE CRITERIA	PAYMENT MILESTONE
1	Effective Date	● SLSA is executed	
2	Project Kickoff	● Project Kickoff meeting held by Mark43 and Subscriber ● Project working group established by Subscriber ● Meeting cadence established by Mark43 and Subscriber	• Approval of Project Plan
3	Workflow Validation Complete	● Signed approval on configurations and workflows for Go-Live by subscriber	• Completion of Hardware and Software Installation • Completion of Functional Testing
4	Training Complete	● Train-the-trainer sessions scheduled and conducted by Mark43 ● Subscriber trainers identified by Subscriber ● Training sessions scheduled by	• Completion of Training

#	PROJECT MILESTONE	MILESTONE ACCEPTANCE CRITERIA	PAYMENT MILESTONE
		Subscriber	
5	Cutover / Go-Live	• RMS Production tenant is live • Cutover support is complete by Mark43	• Completion of Go-Live • Final System Acceptance
6	3 Months Post Go Live	• 3 Months Successful NIBRS/CIBRS submissions	• 3 Months Successful NIBRS/CIBRS submissions

2.6 IMPLEMENTATION SERVICES OVERVIEW

Services that indicate onsite travel or visits are dependent on travel permitting or as otherwise agreed to per travel or gathering restrictions.

The table below outlines the expectations for the purchased Implementation Services Level.

Service	Description
Kickoff Meeting	Remote (Virtual)
Status Calls and Updates Cadence	Bi-Weekly
Project Response Times	Expected Mark43 response time within 5 business days for project-related activities
Implementation Product Support	All Milpitas working group product and workflow questions should be directed to the Mark43 project lead. Mark43 also provides support via support@mark43.com (no phone support). Response time expectation 2-4 business days, 9am - 9pm Eastern, M-F, excluding Federal Holidays.
Configuration Support	1 remote session, led by Mark43 product support specialist(s) based on product module; 1 additional remote preparatory and discovery session per module. All sessions should be coordinated with appropriate customer decision maker and/or SME for that area (e.g., Evidence).

Service	Description
Implementation Onsite Schedule[1]	Every other month (not to exceed 6 visits)
Technical Services Onsite Schedule	Remote
Launch Support	Remote (3 days during business hours [8:00am Local Time – 5:00pm Local Time])
Quality Assurance on any Interface Development	Remote
Quality Assurance on Any Data Migration	Remote
Target Project Duration	8 - 12 months (Contingent upon customer providing all required documentation and taking all required action)
Sustainment	30 Day Transition Onsite Annual Onsite Visit

2.7 CHANGE CONTROL

For any requests to change this SOW, Mark43 and Subscriber will follow the Change Control Process. Examples of changes include supplementing Subscriber staff with Mark43 resources, purchasing additional implementation services, adding third party interfaces to scope, or purchasing existing modules not currently included in the SOW or SLSA. The Change Control Process will be the main vehicle for containing scope and confirming that Mark43 and Subscriber can make timely trade-offs between the three key project variables of cost, time, and scope.

As gaps are defined and mitigated in the Plan, Implement, Training and Deploy phases of the project, the Change Control Process will be used for formalizing updates to terms of this SOW, whether or not there is a financial impact. The process is initiated by the submission of a Change Order Request Form, which will be provided by Mark43 at the start of the project.

The Change Order Request Form will need to describe the change, rationale for the change, impact the change will have on the project, and any other pertinent details.

[1] Subscriber may request additional trips, but will be required to submit a change order form prior to any trips occurring

Subscriber Executive Sponsor will review the proposed change and determine whether to submit the request to Mark43.

Upon Subscriber submission, the Mark43 Project Team will review the Change Order Request Form with internal Mark43 resources. The following will be presented upon completion of the internal Mark43 review: any proposed updates; costs to Subscriber; timeline estimates for the change; and a change order that reflects changes to the original project scope.

Mark43 reserves the right to reject a change request if it is not in the best interest of the implementation project. Some change requests may be deferred to after cutover to live operations if they are not critical to the success of the program. Upon signed approval by Subscriber, Mark43 will commence work as outlined in the Change Order.

3. THIRD PARTY INTERFACE SERVICES

Mark43 supports a number of different interface methods to suit the varying needs of customers, vendors, and partners. Mark43 is built using service-oriented architecture; therefore, every system activity has a RESTful API call to accomplish a user action to transfer data to or from the system. In addition, for partners that prefer other methods of interface either through a direct database connection or file transfer, Mark43 supports those needs through a comprehensive set of generic and custom solutions.

3.1 INTERFACE TIERS

Mark43 organizes interface development and maintenance under one of the following categories:

Interface Tier/SKU	Mark43 Task Details	Subscriber and Vendor Task Details
[INT 1] Interface - Custom Level 1	● Interfaces that do not require development work by Mark43 and may require: ○ An on-premise interface server installation ○ Maintenance of a regular job by Mark43 ○ Install Mark43 custom software on the interface server ○ Complete data transformation, configuration, and development ○ Maintain job to post or pull data from Mark43	● Subscriber responsibilities ○ Provision Mark43 interface server ● Vendor responsibilities ○ Provide documentation and assist with data transformation and configuration as needed/available
[INT 2] Interface - Custom Level 2	● Interfaces not on the "Mark43 Industry Standard Interface Types" list or have additional scope not included in the standard requirements that require: ○ Custom development, data transformation, or configuration by Mark43 ○ An on-premise interface server installation ○ Maintenance of a regular job by Mark43 ● Mark43 responsibilities ○ Install Mark43	● Subscriber responsibilities ○ Provision Mark43 interface server ● Vendor responsibilities ○ Provide documentation and assist with data transformation and configuration as needed/available

Interface Tier/SKU	Mark43 Task Details	Subscriber and Vendor Task Details
	custom software on the interface server ○ Complete data transformation, configuration, and development	
[INT 3] Interface - Custom Level 3	● Custom interfaces built by Mark43 that require: ○ Potentially multi-directional data transfer between Mark43 and the external system ○ An on-premise interface server installation ○ Maintenance of a regular job ○ Custom data transformation or configuration ● Mark43 responsibilities ○ Install Mark43 custom software on the interface	● Subscriber responsibilities ○ Provision Mark43 interface server ● Vendor responsibilities ○ Provide documentation and assist with data transformation and configuration as needed/available

Interface Tier/SKU	Mark43 Task Details	Subscriber and Vendor Task Details
	server ○ Complete data transformation, configuration, and development	
[INT 4] Interface - Self-Build	● Provide developer documentation ● Offer consultation (up to 1 training session and support through the help desk) ● Maintain uptime for the API and data lake	● Interfaces built by Subscriber IT team or third-party vendor using Mark43's API, a read-only connection to the Mark43 data lake standard views ● Vendor/Subscriber responsibilities ○ Transform data to/from Mark43's API or data lake format ● Maintain the scheduled job that interacts with the API/data lake
[INT 5] Interface - Partner Level 1	● Interfaces between Mark43 and a verified partner vendor ● interface options and developer documentation available in the Mark43 developer portal ● Refer to the "Mark43 Partner Vendors" list Level 1 ● Mark43 requires minimal development and configuration work to setup this interface for customer ● Customer must accept interface within document functionality	
[INT 6] Interface - Partner Level 2	● Interfaces between Mark43 and a verified	

Interface Tier/SKU	Mark43 Task Details	Subscriber and Vendor Task Details
	partner vendor ● Interface options and developer documentation available in the Mark43 developer portal ● This interface requires some configuration and development per customer ● Customer must accept interface within parameters documented	
Maintenance and Support	Subject to the terms and conditions of the MSA, Mark43 will provide Maintenance Services for all deployed interfaces. Maintenance Services shall consist of the following: ● Mark43 will maintain the application software installed on the interface server(s) ● Mark43 will update the docker containers on the interface server(s) as part of the bi-weekly Mark43 release cycle ● Mark43 will resolve any defects in the operation of the interface in a timely manner	

3.2 INTERFACE SCOPE

Mark43 will provide interface services to Subscriber aligned with the appropriate interface tier in section 4.1.

Interface Name	Tier	Direction

Coplink	INT 5	Outbound to Coplink
TriTech CAD	INT 1	Inbound to Mark43 RMS
Coplogic	INT 5	Inbound to Mark43 RMS
Crossroads Citations	INT 5	Inbound to Mark43 RMS

3.3 INTERFACE IMPLEMENTATION SCOPE

Mark43 and Subscriber will perform the tasks required to design, develop, optimize, test and integrate the Mark43 platform with third party systems as outlined in this SOW.

Phases / Tasks	Mark43 Task Details	Subscriber Task Details
Access	● Provide list of Mark43 employees requiring interfaces server access - these employees will be background-checked and CJIS-certified ● Provide Mark43 data lake access to Subscriber and/or third party vendor if applicable ● Provide Mark43 Public Endpoint access to Subscriber and/or third party vendor if applicable	● Set up interface servers that meet the interface server requirements detailed in the SLSA ● Provide the listed Mark43 employees VPN and server access credentials required for accessing the interface server ● Ensure the listed Mark43 employees are able to establish an SSH connection to the interface server over the VPN ● Provide Subscriber and/or third party vendor access to Mark43 based on the requirements in the attached Interface Access Requirements appendix (4.4)
Assessment & Scoping	● Work with Subscriber to create an Interface Scope Bundle for each interface. The Interface Scope Bundle contains:	● Work with Mark43 and/or third party vendor to complete the Interface Scope Bundle and sign off on the document

Phases / Tasks	Mark43 Task Details	Subscriber Task Details
	○ Interface Control Document (ICD) ○ Implementation plan ○ Interface User Acceptance Criteria ● Assist Subscriber with interface field mapping ● Provide Mark43 Developer Help Desk access and provide Mark43 product knowledge	● Receive sign off of the Interface Scope Bundle by the third party vendor if applicable ● Complete field-by-field mapping of data fields from the legacy system to Mark43's external models ● Map the following legacy reference values to Mark43 reference values if applicable: ○ Attributes ○ Offense Codes ○ Name Report Links ○ Report Permissions ○ Name Associations/Relationships ○ Property Chain Event Types ○ Property Storage Locations
Development (INT1, INT2, INT3, INT5)	● Work with Subscriber and/or third party vendor to develop the interface based on the signed Interface Scope Bundle ○ Develop interface to meet requirements specified in the signed Interface Control Document ● Develop interface based on the roles and responsibilities specified in the signed Interface Scope Bundle	● Provide test data and/or sandbox environment to develop against ● Provide external system product knowledge and technical assistance

Phases / Tasks	Mark43 Task Details	Subscriber Task Details
Development (INT4)	● Resolve any identified bugs and/or feature gaps with the Mark43 Public Endpoints and/or data lake if applicable	● Work internally and/or with third party vendor to develop the interface based on the signed Interface Scope Bundle ○ Develop interface to meet requirements specified in the signed Interface Control Document ○ Develop interface based on the roles and responsibilities specified in the signed Interface Scope Bundle
Testing	● Provide a Mark43 test tenant to perform interface testing against ● Schedule the interface to run on the Mark43 test tenant if applicable	● Schedule the interface to run against the Mark43 test tenant if applicable
Validation	● Correct valid bugs and make mapping change requests until the attached Interface User Acceptance criteria are met ● Mark43 will not perform data cleansing activities (e.g., custom formatting of text, incomplete location resolution, complex logic to populate missing data elements, etc.) to correct data quality issues in the external system	● Perform entity count validation on the imported data ● Perform field-level validation on the imported data ● Perform functionality validation by performing test workflows on the imported data ● Log bugs and mapping change requests found during imported data validation ● If applicable, perform data cleansing activities and/or workflow updates in the external system(s) to prevent bad data from being imported into Mark43

Phases / Tasks	Mark43 Task Details	Subscriber Task Details
Live Scheduling	● Schedule the interface to run on the Mark43 live tenant if applicable	● Schedule the interface to run on the Mark43 live tenant if applicable
Maintenance	● Maintain the containers installed on the interface server used to run interfaces ● Monitor host status and interface throughput and notify Subscriber of unexpected deviations ● Maintain the interface code and schedule if applicable ● Maintain the Mark43 Public Endpoints and/or data lake views used by the interface if applicable ● Notify Subscriber of any changes to relevant Mark43 Public Endpoint and data lake views if applicable	● Maintain the interface servers ● Maintain additional interface access (e.g., file transfer directory, database access) if applicable ● Maintain Subscriber and/or third party vendor processes (e.g., file transfer, data warehouse updates, schedule to hit Mark43 endpoints, etc.) if applicable ● Notify Mark43 of any changes to the endpoint and or database tables/views used by the interface if applicable ● Submit Change Requests for changes to live interfaces that deviate from the signed Interface Scope Bundle ICD

3.4 INTERFACE ACCESS REQUIREMENTS

Mark43 supports the following interface methods to suit the needs of customers, vendors and partners.

3.4.1 WEB SERVICE (RECOMMENDED)

The recommended interface method is through the Mark43 public API library. Mark43 provides a standard set of public endpoints to get and post data to the Mark43 system. New endpoints can be developed and added to the library if the specified interface functionality is not currently supported by existing endpoints.

Specifications:

- Secure RESTful API with live documentation and testing

- JSON data transfer via HTTPS
- Individual API authentication tokens provisioned for developers using the API

3.4.2 MARK43 DATA LAKE

To support the needs of interfaces that require a direct database connection, the Mark43 data lake offers the ability to extract data through a read-only MS SQL database connection. Mark43's cloud-hosted data lake offers the ability to connect reporting tools, pull custom queries for analysis, or run regular jobs for data extracts without requiring agencies to host an on-premise data warehouse.

Mark43 provides a set of standard views that have been normalized and optimized for reporting. Mark43 can develop custom views for partner interface vendors and for special department needs upon request.

Specifications:
- Secure, encrypted read-only connection to the Mark43 cloud-hosted data lake
- Microsoft SQL Server database
- Individual database accounts provisioned for developers, analysts, or other users requiring an account on the Mark43 data lake

3.4.3 FILE TRANSFER

Agencies and vendors may opt to build an interface via file transfer. Mark43 provides a set of configurable file transfer options for ingestion into Mark43 and export from Mark43.

Specifications:
- File transfer must occur in a directory accessible by the interface server
- Mark43 requires SFTP/SSH permission to the interface server and file transfer directory
- Mark43 requires permission to create directories and create, move, rename, and delete files in the file transfer directory
- Transferred files must be in a supported file type: XML (recommended), JSON, CSV, and standard open file formats (e.g., NIST)

3.4.4 DIRECT DATABASE

Agencies and vendors may opt to provide direct access to a replica database for Mark43 to query against. Mark43 cannot build interfaces to query against live production databases.

Specifications:
- The database must support connection via JDBC and/or Hibernate, an open source Java library for connecting to databases
- Mark43 requires read access to the database

- Agencies and vendors must provide properly indexed views (recommended) or tables to enable performant queries from Mark43

4. MESSAGE SWITCH INTERFACE

4.1 MESSAGE SWITCH INTERFACE SCOPE

The following interfaces will be achieved through access to a CLIPS terminal licenses.

Database Name	Method
CLETS/NCIC	via CLIPS

CLIPS Terminal (10 Device Licenses)

- CLIPS is a stand-alone product that supports all 300+ transactions available in CLETS.
    - CLIPS is licensed per device because it is installed on a physical device.
- To reduce duplicate entry, Mark43 will build a “pre-fill integration” with CLIPS. Data entered in the RMS can be pushed and pre-filled into CLIPS

Subscriber is responsible for:

- Providing Mark43 with the contact information for the agency’s federal and/or state message switch provider
- Ensuring a Subscriber connection to NCIC and in-scope state and county databases
- Completing and submitting any applications required for connection to federal and state databases and receiving application approvals within the specified project timeframe

Mark43 is responsible for:

- Configuring the Mark43 application to connect to the federal and/or state message switch
- Interfacing the Mark43 application with the CommSys middleware to connect to the federal and/or state message switch

5. ESRI INTERFACE

The Mark43 application utilizes ESRI geocoding services to resolve locations and addresses. The ESRI integration is required in order to resolve locations in the Mark43 application. The ESRI integration will require Mark43 and the Subscriber to implement an ESRI classifier and may also require an ESRI geolocator depending on the Subscriber’s provided spatial data.

- **ESRI Classifier:** Enables the Mark43 application to classify locations to their subdivisions with the ESRI classifier created from the Subscriber's polygon shapefiles.
- **ESRI Geolocator:** Enables the Mark43 application to support Subscriber's additional spatial data such as street centerlines using ESRI to improve location resolution accuracy.

Component	Description	Required Agency Setup
ESRI Infrastructure	Enables Subscriber to resolve locations using ESRI. Subscriber will require an ESRI classifier. Subscriber will require a geolocator in addition to a classifier **if** the Subscriber has spatial data in addition to a polygon shapefile (e.g. street centerlines)	• Classifier and Geolocator
ESRI Data Sharing	Enables Subscriber to share location data between Subscriber's ESRI instance and the Mark43 application.	• **Group Sharing:** Subscriber will establish a trusted connection with Mark43 by joining a Mark43-created custom Group on ArcGIS Online. Subscriber will then share spatial layers to the Group, thereby making them accessible by Mark43.

Subscriber will be responsible for:

- Providing polygon shapefiles to Mark43
- Sharing additional spatial with Mark43 if necessary
- Maintaining and updating their own spatial data and polygon shapefiles
- Joining any required groups or file shares to enable ESRI data sharing
- Providing test locations for ESRI testing
- Working with Mark43 to test ESRI location resolution

Mark43 will be responsible for:

- Building ESRI classifier and/or geolocators using Subscriber-provided spatial data
- Working with Subscriber to test ESRI location resolution

Mark43 will not be responsible for:

- Maintaining and updating Subscriber's spatial data and polygon shapefiles

6. CUSTOM PDF EXPORTS

The Mark43 Fillable PDFs feature enables an agency to create a custom, fillable PDF template that populates information mapped from supported fields in a standard Mark43 RMS report type. Subscriber will be responsible for configuring fillable PDF exports for use in the Mark43 application and providing the required software requirements outlined in the SLSA.

Mark43 will be responsible for:

- Providing the agency with up-to-date documentation on how to use the Fillable PDF feature
- Troubleshooting, assisting with configuration training, and interacting with Subscriber-designed system administrators

All other activities related to scoping, configuring, testing, and validating each fillable PDF will be the sole responsibility of Subscriber.

7. QUICKCRASH MODULE

This section outlines the deliverables and responsibilities required to implement Mark43's traffic module, QuickCrash.

QuickCrash, will be an addition to the Mark43 RMS application. QuickCrash allows Subscriber to document collisions through the use of QuickCrash's mobile app, tablet and desktop versions. QuickCrash will provide digital submissions to the state of California's collision reporting repository, commonly referred to at SWITRS (Statewide Integrated Traffic Records System).

QUICKCRASH FEATURES

- MMUCC Compliant Data Capture
- License Scanning
- Collision Sketch Builder
- Collision Data Sharing and Syncing between Devices
- License Plate Lookup
- Satellite Map with GPS Coordinates
- Narrative/Templates
- Narrative Dictation
- Media/Photos Section
- Report Review Process
- PDF Rendering (email, send, print)
- In App Feedback

- Integrated with Mark43 RMS

This will involve review, analysis, and acceptance of Mark43 QuickCrash performance and the coordination of project personnel, equipment, vehicles and facilities. Subscriber will have access to communicate with the Mark43 project manager to coordinate the execution of the project.

Mark43 Responsibilities

- Configure and enable QuickCrash application within the Mark43 RMS application
- Conduct one 2-hour Train the Trainer session in the use of the QuickCrash module

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve Accounts Receivable Write-offs for the Fiscal Year Ending June 30, 2021**
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	Lauren Lai, Finance Director, 408-586-3111
Recommendation:	Approve the Accounts Receivable write-offs for the Fiscal Year ending June 30, 2021.

Background:

As part of the annual preparation of the financial statements, staff reviews the City's accounts receivables or outstanding payments to the City. Any outstanding payment in excess of one year is considered for being written off, if after several attempts to collect payment including internal billing mailings, past due notices, phone call follow up and referral of the outstanding payment to a collection agency have been unsuccessful.

The City of Milpitas Municipal Code I-5-3.00 titled "Write-off of Uncollectible Accounts," authorizes the City Manager and the Director of Finance, jointly, to write off as uncollectible up to $50,000.00 in total annually (and up to $10,000.00 for any single account or claim) on all accounts or claims which the City may have against all persons under certain conditions. When the City Manager and Director of Finance determine that the claim is (1) uncollectible; possibly collectible but collection would not be reasonably cost effective taking into consideration the probable necessary cost to the City in pursuing collection and the likelihood of collection; or not a valid, enforceable claim of the City. Since the annual write-off amount is in excess of $50,000, staff seeks Council approval.

Analysis:

Depending on the total annual amount deemed uncollectible, staff recommends the attached listings of accounts receivable (AR) write-offs to City Council for approval. This report covers the period prior to June 2020. Attached in the Council's packet are two AR lists, one for utility accounts (water, and sewer) and the other for non-utility accounts that have remained unpaid for more than 12 months.

The table below identifies AR categories, total amounts invoiced for the period July 1, 2019 to June 30, 2020, proposed write-off amounts and proposed write-off amount represented as of percent of total amounts invoiced. It should be noted that during this period, the City achieved an overall collection rate of 99.80%. The proposed write-offs amount of $114,342 is approximately 0.20% of all the amounts invoiced during the same period.

AR Category	Total Amount Invoiced	Proposed Write-off Amount	Write-Offs as a % of Amount Invoiced
Utility Accounts	$ 51,821,107	$ 25,220	0.05%
Private Development Jobs	1,536,914	83,421	5.43%
Retirees Medical	54,232	2,814	5.19%
PD False Alarm	56,700	2,200	3.88%
Returned Check Building Permit	3,720,658	687	0.018%
Total	**$ 57,189,611**	**$ 114,342**	**0.20%**

Finance staff invoices and collects payments for all utility accounts as well as miscellaneous accounts receivable (private development jobs, fire permits, business licenses, police false alarms, animal regulation violations, and shopping cart retrievals). For utility accounts, in accordance to Senate Bill 998 Discontinuance of residential water service, a bill is due for payment in 21 days from the bill date. Finance staff then sends a reminder notice 23 days from the bill date and final notice 65 days from the bill date. A telephone call follows 73 days from the bill date. The utility account will be tagged for shut off 80 days from the bill date. And if not paid, a utility account will be cut-off 85 days from the bill date after which point it will be sent to the City's collection agency, Collection Bureau of America (CBA). If cut-off and sent to collections, a utility customer will not be able to start new service until they have paid their outstanding balance in full; even if that balance has been written off from an accounting standpoint.

For miscellaneous accounts receivable, an invoice issued is due for payment in 28 days from issuance date of the invoice. If not paid on the due date, a reminder notice will be issued by Finance staff on the 28th day and due for payment in 14 days from issuance date of the reminder notice. If not paid on the due date, a Final Notice will be issued on the 42nd day and due for payment in 7 days from issuance date of Final Notice. If not paid on the due date, the account will be sent to the City's collection agency on the 49th day. If the account is for a developer, they will not be able to start new work in Milpitas if they have an outstanding balance. Also, Staff has improved the private job accounts process to ensure that money (deposit) is on account before rendering service. This will reduce outstanding accounts receivable balances and write-offs in the future.

Policy Alternative:
Alternative: To not write off uncollectible accounts.
It is customary practice according to Generally Accepted Accounting Principles (GAAP) to write-off accounts receivable after all collection efforts have been exhausted and the account has little or no chance of collecting.

Pros: None

Cons: Will not follow Generally Accepted Accounting Principles and the City's financials will be overstated.

Reason not recommended: The City needs to ensure to follow financial practices consistent with Generally Accepted Accounting Principles. Following GAAP is a precursor towards an unqualified or "clean" financial audit.

Fiscal Impact:
Write offs of $114,342 from the outstanding accounts receivable will reduce the full-accrual fund balances of the General Fund by $89,122 and the Utility Funds by $25,220.

California Environmental Quality Act:
Not Applicable

Recommendation:
Approve the Accounts Receivable write-offs for the fiscal year ending June 30, 2021.

Attachments:
1. FY2020-2021 Utility Bills Write Off
2. FY2020-2021 Miscellaneous Accounts Receivable Write Off

City of Milpitas

Utility Bill Write Off (final date as of 6/30/20)

FY2020-2021

(for account write off > $25.00)

			TOTAL	25,220.41	
Account	Last Name	First Name	Final Bill Date	Amount Write Off	Reason
2000255	HARRIS	MARIE	06/22/20	619.22	Closed Account
2002655	SI FU MENG INT'L KUNG FU ACADE		04/20/20	1,039.24	Closed Account
2007844	HANKINS	LUEREES	12/09/19	420.42	Closed Account
2007881	SOTO	ANDREA	02/10/20	460.12	Closed Account
2013841	NOBIDA JR	MAXIMINO	10/21/19	603.74	Closed Account
2014375	DEL PONTE	ERMELINA	12/16/19	307.89	Closed Account
2017643	ORR	KENNETH	10/14/19	352.41	Closed Account
2017674	KING	SHIRLEY	07/22/19	277.91	Closed Account
2021410	WALKER	ROBERTA	07/22/19	505.93	Closed Account
2025751	ADVANCED MICRO TECHNOLOGY		01/06/20	2,345.64	Closed Account
2030736	ELLIOTT	KAREN	04/13/20	111.11	Closed Account
2030762	OROZCO	JOSE LUIS	10/07/19	620.84	Closed Account
2032848	PACIS	MANUEL	03/02/20	113.19	Closed Account
2034454	BUISSERETH	SANDRA	11/11/19	257.34	Closed Account
2036824	CRUZ	CLARENCE	06/08/20	641.47	Closed Account
2037904	FANUA	SIOSIANE JOYCE	10/28/19	739.62	Closed Account
2038400	SMITH	SHANNON	03/16/20	414.58	Closed Account
2038674	SUSHI KAI RESTAURANT INC		12/16/19	1,669.42	Closed Account
2039421	YANGGONG	YIFAN	08/12/19	415.91	Closed Account
2040436	YAN	DINGHONG	05/25/20	109.50	Closed Account
2041153	GARLIT	OLGA	02/10/20	189.57	Closed Account
2043184	WORLDWIDE GAS AND AUTO CARE		09/09/19	151.55	Closed Account
2044301	PALOMINO	MARCELINA	09/09/19	64.32	Closed Account
2044646	HONEBERRY #7		12/02/19	764.96	Closed Account
2044791	KRISHNAMOORTHY	SRINI	08/19/19	73.43	Closed Account
2044845	USHER	BILLY	11/11/19	133.28	Closed Account
2045005	HA	LAM	05/25/20	1,587.60	Closed Account
2045252	RATHINAM	KARTHIKEYAN	07/15/19	814.20	Closed Account
2045413	CARROLL	MARLA	09/23/19	546.61	Closed Account

City of Milpitas

Utility Bill Write Off (final date as of 6/30/20)

FY2020-2021

(for account write off > $25.00)

			TOTAL	25,220.41	
Account	Last Name	First Name	Final Bill Date	Amount Write Off	Reason
2045715	XU	FANG	12/09/19	128.60	Closed Account
2045784	SESHAIAH	HARIBABU	06/22/20	300.00	Closed Account
2045812	ABRIAM	JONATHAN	07/08/19	407.86	Closed Account
2045992	INC	AMTELTEK	09/02/19	320.53	Closed Account
2046004	HERRERA	MONIQUE	10/28/19	342.37	Closed Account
2046101	DANGOY	EDGARDO	12/30/19	126.36	Closed Account
2046259	ALI	RASHID	06/01/20	1,165.15	Closed Account
2046308	DENG	HENG	05/11/20	47.75	Closed Account
2046402	GUERRA	NORMA	10/07/19	180.45	Closed Account
2046422	SAN JOSE	DAVID	11/11/19	434.59	Closed Account
2047004	STEVESON	SHAYLA	10/28/19	1,012.12	Closed Account
2047014	LO	YUKUNG	07/08/19	119.68	Closed Account
2047239	MORENO	STEPHANIE	09/23/19	423.38	Closed Account
2047304	CHEN	GARY	09/23/19	481.95	Closed Account
2047488	RAMIREZ	VANESSA	12/09/19	556.10	Closed Account
2047546	ROCHMAN	ASLIA	07/08/19	134.22	Closed Account
2047624	KHUU	SEAN	08/05/19	155.92	Closed Account
2047795	SOTO	CASSANDRA	01/27/20	781.95	Closed Account
2047992	ANDERSON	REBECCA	02/17/20	366.16	Closed Account
2048297	O'LEARY	SHIRLEY	05/18/20	415.36	Closed Account
2048466	MA	TIGER	12/16/19	544.35	Closed Account
2042670	HERRERA	MELANY	12/25/19	264.53	Bankruptcy
2046831	24-HOUR FITNESS		07/27/20	160.01	Bankruptcy

FY 2020-2021 WRITE OFF

Miscellaneous Accounts Receivable

as of June 30, 2020

INVOICE #	DATE	CUSTOMER NAME	CUSTOMER ID NUMBER		AMOUNT	DESCRIPTION
I000046000	04/26/19	ALSTON CONSTRUCTION	00005005	$	497.07	Private Job
I000044025	02/23/18	AMARJAN CORP	00001373	$	353.59	Private Job
I000044342	04/27/18	AMARJAN CORP	00001373	$	154.23	Private Job
I000046466	06/28/19	ARCHITECTURAL DIMENSIONS	00001406	$	834.78	Private Job
I000046715	07/31/19	ARCHITECTURAL DIMENSIONS	00001406	$	724.42	Private Job
I000043408	09/29/17	CRIS SEBA	00001387	$	85.94	Private Job
I000043459	10/20/17	CRIS SEBA	00001387	$	477.68	Private Job
I000045417	01/25/19	FORTUNES CHINESE RESTAURANT	00001348	$	805.96	Private Job
I000045278	12/07/18	HONG YAN GENG	00001434	$	541.26	Private Job
I000046979	09/20/19	JOEY CAMINS	00001478	$	1,172.35	Private Job
I000041681	06/24/16	LENNAR HOMES OF CALIFORNIA	00001160	$	1,286.53	Private Job
I000046727	07/31/19	MARY LY	00001459	$	4,032.45	Private Job
I000047205	10/25/19	MARY LY	00001459	$	1,008.47	Private Job
I000047892	02/28/20	MARY LY	00001459	$	837.00	Private Job
I000046476	06/28/19	MARY LY	00001459	$	1,404.89	Private Job
I000046849	08/23/19	MARY LY	00005014	$	3,325.74	Private Job
I000046740	07/31/19	MARY LY	00005014	$	7,708.58	Private Job
I000046984	09/20/19	MARY LY	00005014	$	23,407.24	Private Job
I000047214	10/25/19	MARY LY	00005014	$	8,569.85	Private Job
I000048025	03/27/20	MARY LY	00005014	$	626.15	Private Job
I000048116	04/24/20	MARY LY	00005014	$	1,126.51	Private Job
I000048208	05/28/20	MARY LY	00005014	$	935.20	Private Job
I000046487	06/28/19	MARY LY	00005015	$	8,391.53	Private Job
I000045030	10/26/18	MARY LY	00005015	$	3,971.85	Private Job
I000046741	07/31/19	MARY LY	00005015	$	2,609.56	Private Job
I000046986	09/20/19	OCI	00005027	$	2,438.62	Private Job
I000047217	10/25/19	OCI	00005027	$	1,870.41	Private Job
I000045255	12/07/18	STEVEN TRAN	00001192	$	248.53	Private Job
I000045275	12/07/18	TRON TRAN	00001422	$	219.46	Private Job
I000045427	01/25/19	TRON TRAN	00001422	$	92.33	Private Job
I000043409	09/29/17	TRUMARK COMPANY	00002762	$	42.50	Private Job
I000045020	10/26/18	VETERANS DESIGN & DEVELOPMENT	00001410	$	498.89	Private Job
I000045272	12/07/18	VETERANS DESIGN & DEVELOPMENT	00001410	$	1,457.32	Private Job

I000045681	03/22/19	VETERANS DESIGN & DEVELOPMENT	00001410	$	914.35	Private Job
I000045988	04/26/19	VETERANS DESIGN & DEVELOPMENT	00001410	$	355.58	Private Job
I000047426	12/27/19	XIAO CHANG	00001468	$	293.68	Private Job
I000048203	05/28/20	XIAO CHANG	00001468	$	100.12	Private Job
		PRIVATE JOB		**$**	**83,420.62**	
I000043830	01/05/18	ARLENE DELEON-PRIDGEON	00012889	$	200.16	Retiree Medical
I000044582	07/02/18	CECIL WILLIAMS	00012946	$	65.96	Retiree Medical
I000046854	02/15/19	THOMAS WILLIAMS	00013029	$	2,548.50	Retiree Medical
		RETIREE MEDICAL		**$**	**2,814.62**	
I000047244	11/15/19	NEIMAN MARCUS	00011733	$	50.00	PD False Alarm
I000047618	01/24/20	NEIMAN MARCUS	00011733	$	100.00	PD False Alarm
I000046922	09/13/19	SUBWAY	00012956	$	500.00	PD False Alarm
I000047044	09/27/19	SUBWAY	00012956	$	1,000.00	PD False Alarm
I000047254	11/15/19	SUBWAY	00012956	$	250.00	PD False Alarm
I000047624	01/24/20	SUBWAY	00012956	$	250.00	PD False Alarm
I000047570	01/10/20	OUCHII	00013108	$	50.00	PD False Alarm
		POLICE FALSE ALARMS		**$**	**2,200.00**	
I000047306	11/29/19	AMONETT CONSTRUCTION	00013104	$	686.66	Building Permit
		RETURNED CHECK		**$**	**686.66**	
		OVERALL TOTAL		**$**	**89,121.90**	

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Adopt a Resolution Declaring Certain City Owned Land "Exempt Surplus Land" Under the Surplus Land Act (Government Code Section 54220 et seq.) and Approving and Authorizing the City Manager to Execute the Right-of-Way Agreement with the Santa Clara Valley Water District for the Purchase of Easements and City Owned Land for Lower Penitencia Creek Flood Protection Improvements And Making CEQA Findings.**
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Steve Erickson, 408-586-3301**
Recommendations:	**Adopt a** Resolution Of The City Council Of The City Of Milpitas Declaring That Certain Approximately 1.6-Acre Parcel Of City Owned Land "Exempt Surplus Land" Under The Surplus Land Act (Government Code Section 54420 Et Seq.) And Considering The Environmental Impact Report For The Lower Penitencia Creek Improvements Project; Adopting Findings Of Fact And Statement Of Overriding Considerations In Its Limited Role As A Responsible Agency Pursuant To The California Environmental Quality Act And Approving And Authorizing The City Manager To Execute The Right-Of-Way Agreement With The Santa Clara Valley Water District For The Purchase Of Easements And City Owned Land For Lower Penitencia Creek Flood Protection Improvements **a**

Background:

The Santa Clara Valley Water District (SCVWD) owns and maintains waterways within the City of Milpitas and recently completed improvements to Upper Berryessa Creek and portions of Lower Berryessa Creek to improve flood capacity. SCVWD desires to continue its plan of flood control improvements within Milpitas to reduce the potential of flooding and intends to construct significant flood protection improvements along a 1-mile segment of Lower Penitencia Creek.

Construction work along Lower Penitencia Creek will extend from McCarthy Boulevard to San Andreas Drive, and will include raising of levees, installation of steel and concrete floodwalls, and construction of new storm drain outfalls at City pump stations located at California Circle and San Andreas Drive. The foregoing work by SCVWD shall hereafter be referred to as the "Project." Work on the Project is anticipated to start in 2021. A vicinity map **(Attachment 1)** showing the limit of the Project is included in the Agenda packet.

SCVWD will need to acquire additional right of way from the City of Milpitas for the purpose of constructing and the perpetual maintenance of the new permanent flood control levee and floodwall infrastructure. SCVWD has requested the City enter into a Right-of-Way Agreement for the purchase of two easements (together, the "Easements") and the sale of approximately 1.6 acres of City owned land adjacent to McCarthy Boulevard and California Circle (the "City Owned Land") to allow SCVWD to complete construction of the Project. The locations of the Easements and the City Owned Land proposed to be sold to the SCVWD are shown on **(Attachment 2).**

Analysis:

The SCVWD Lower Penitencia Creek flood control improvement project ("Project")_is a benefit to Milpitas and will provide 100-year flood protection for homes, schools, and businesses and will maintain Federal

Emergency Management Agency (FEMA) levee accreditation along the Lower Penitencia Creek east levee located between California Circle and Berryessa Creek.

SCVWD is the lead agency for the Project pursuant to the California Environmental Quality Act ("CEQA") (Pub. Res. Code §§ 21000, et seq.) and the State CEQA Guidelines (14 CCR §§ 15000, et seq.). As the lead agency, SCVWD is responsible for assuring that an adequate analysis of the Project's environmental impacts. After first issuing a Notice of Preparation and a Draft Environmental Impact Report ("DEIR") SCVWD prepared a Final Environmental Impact Report for the Project, which included the DEIR, appendices, comments on the DEIR, responses to comments on the DEIR, and revisions to the DEIR (collectively, "FEIR"), and in November 2017 SCVWD certified the FEIR, took certain other actions regarding CEQA including making a Statement of Overriding Considerations, and approved the Project. The City is a "responsible agency" for the Project under State CEQA Guidelines section 15381 because it is not the lead agency for the Project, but it does have discretionary approval power over the Project in that it has discretion to approve sell City property and enter into a right of way agreement in connection with the construction of the Project.

Pursuant to State CEQA Guidelines section 15096 and in its limited role as a responsible agency under CEQA, as to those resources within the City's power and authority as a responsible agency under CEQA it appears that the FEIR contains a complete, objective and accurate reporting of the Project's impacts. Further, in its limited role as a responsible agency under CEQA, it appears that: (1) there are no feasible alternatives to the Project which would avoid or substantially lessen the Project's potentially significant environmental impacts but still achieve most of the Project's objectives; (2) there are no additional feasible mitigation measures which would eliminate or reduce the Project's potentially significant impacts to a level of less than significant; (3) the Statement of Overriding Considerations adopted by the SCVWD are supported by substantial evidence and the Overriding Considerations outweigh the Project's potentially significant impacts.

The approval of a Right-of-Way Agreement **(Attachment 3)** is recommended to allow the sale of the Easements and the City Owned Land to the SCVWD for the Project. The requested Easements total 1,784 square-feet and are for maintenance driveway access off McCarthy Boulevard south of Dixon Landing Road. The City Owned Land that the District has requested to purchase is located between McCarthy Boulevard and State Route 880, and adjacent to California Circle south of Dixon Landing Road **(Attachment 2)**. The City Owned Land is considered surplus due to it being non-buildable and of little value to the City. While the land is not necessary for the City's use, it is not subject to the Surplus Land Act (Government Code § 54220 *et seq.*) (the "Act") pursuant to section 54221(f)(1)(D) of the Act, which exempts surplus land that "a local agency is transferring to another local, state, or federal agency for the [transferee] agency's use." *See also* Surplus Land Act Guidelines (Final), § 103(b)(3)(D) (clarifying which agency's use is relevant for exemption). Both the City and SCVWD are "local agencies" as defined under section 54221(a)(1) of the Act, and the land will be used by SCVWD to further its flood control improvement project as described above. The Act does "not apply to the disposal of exempt surplus land as defined in Section 54221 by … any local agency." Gov't C. § 54222.3. Under section 54221(b)(1) of the Act, the City Council must take formal action at a regular meeting declaring the City Owned Land "exempt surplus" and make written findings to support such determination. Staff has prepared a resolution for City Council consideration that makes the required written findings. The District has offered $104,000 to purchase the Easements and the City Owned Land. Staff has reviewed the offer and determined it to be fair and a benefit to the City.

Policy Alternative:
Alternative: Do not enter into the Right-of-Way Agreement with the SCVWD for the sale of the surplus City Owned Land to benefit the lower Penitencia Creek Flood Control Project.

Pros: None

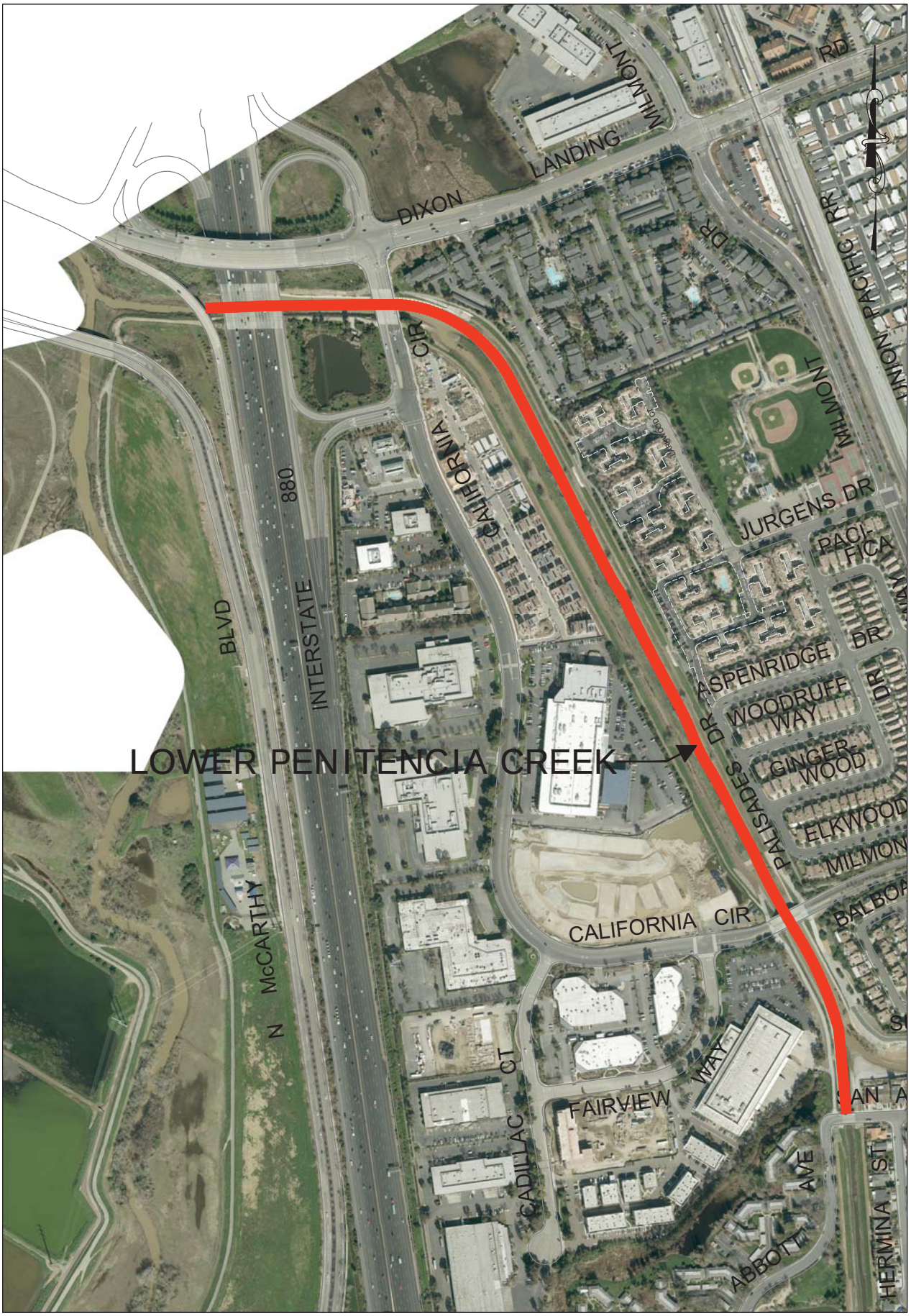
Cons: A denial would result in a delay in the construction of needed flood control improvements within Milpitas.

Reason not Recommended: A significant portion of the City is within a FEMA Special Flood Hazard Zone and these SCVWD flood control improvements will help alleviate the potential and severity of flooding within the City. The approval of the Right-of-Way Agreement for the sale of the Easements and the surplus City Owned Land is recommended to allow the Project to move forward and start on schedule in 2021.

Fiscal Impact:
The sale of the surplus City Owned Land to the SCVWD for the benefit of the Lower Penitencia Creek Flood Control Project will generate $104,000 in funding for the City's General Fund.

Recommendations:
Adopt A Resolution Of The City Council Of The City Of Milpitas Declaring That Certain Approximately 1.6-Acre Parcel Of City Owned Land "Exempt Surplus Land" Under The Surplus Land Act (Government Code Section 54420 Et Seq.) And Considering The Environmental Impact Report For The Lower Penitencia Creek Improvements Project; Adopting Findings Of Fact And Statement Of Overriding Considerations In Its Limited Role As A Responsible Agency Pursuant To The California Environmental Quality Act And Approving And Authorizing The City Manager To Execute The Right-Of-Way Agreement With The Santa Clara Valley Water District For The Purchase Of Easements And City Owned Land For Lower Penitencia Creek Flood Protection Improvements

Attachments:
Attachment 1 Project Vicinity Map
Attachment 2 City Easements & Parcels Requested
Attachment 3 Right of Way Agreement
Attachment 4: Resolution
Attachment 5: SCVWD's Lower Penitencia Creek Improvement Project FEIR, SCVWD's CEQA Findings of Fact, Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program.

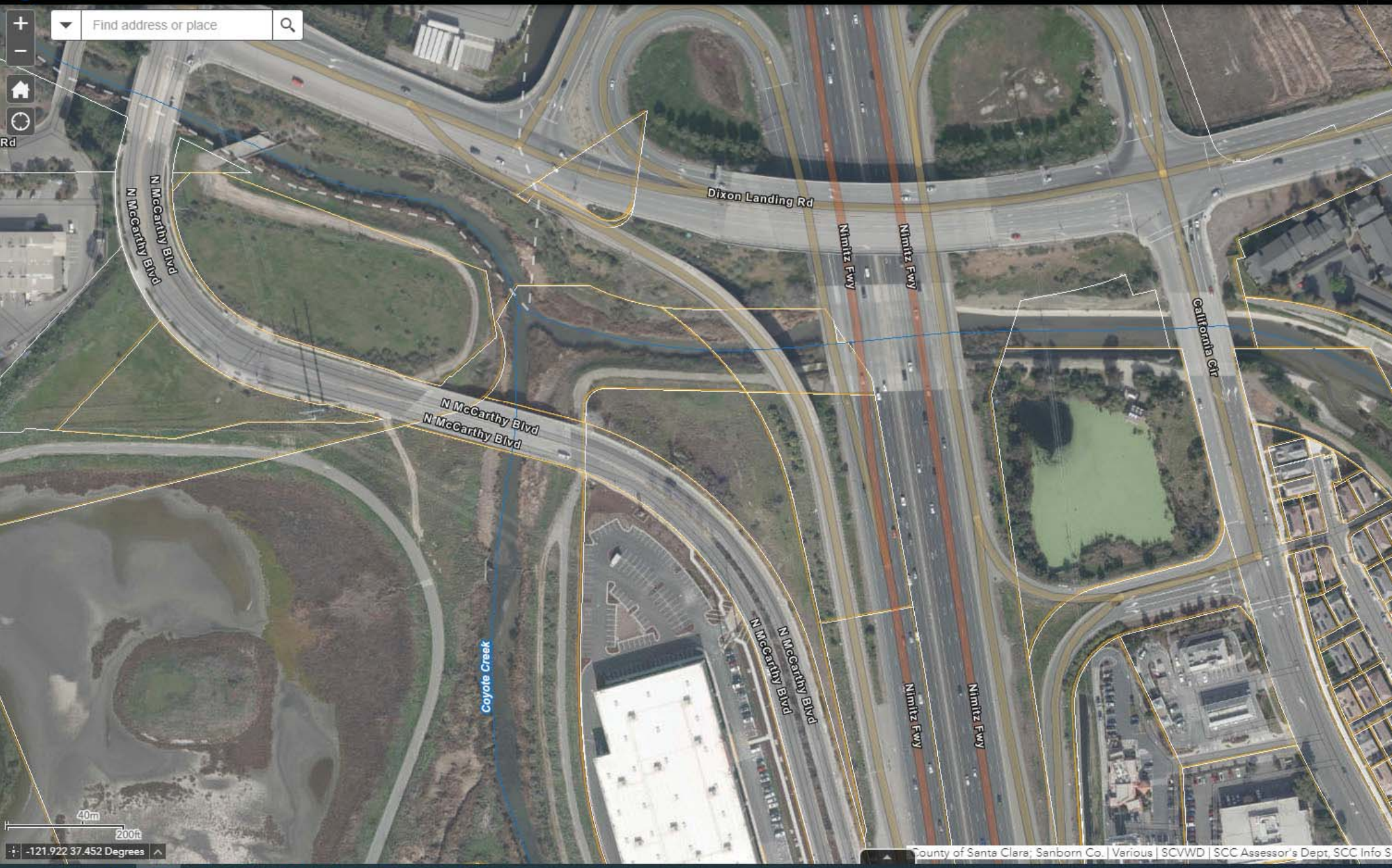


LOWER PENITENCIA CREEK

gis | Aqua.gov × Valley Water × GIS Data Viewer ×

gis.valleywater.org/portal/apps/webappviewer/index.html?id=d892331b984949c8a1e7165678d56c24

GIS Data Viewer Santa Clara Valley Water District



Santa Clara Valley Water District

RIGHT OF WAY AGREEMENT

FC 121 (12-03-14)

Project:	Lower Penitencia Creek Improvement Project
Grantor:	The City of Milpitas, a municipal corporation
Real Estate File No.:	4033-54, 4033-60, 4033-61, 4033-62
Project/Charge No.:	40334005

This is an agreement between the SANTA CLARA VALLEY WATER DISTRICT, hereinafter referred to as "District," and The City of Milpitas, a municipal corporation, hereinafter referred to as "Grantor" (whether singular or plural). It is agreed between the parties hereto as follows:

1. WHOLE AGREEMENT

This constitutes the entire agreement of the parties. The performance of this agreement constitutes the entire consideration of the property or interest described in said document (hereinafter called "the property") and shall constitute the entire payment of all claims including all interest and damages including severance.

2. DELIVERY OF DOCUMENT

Deed Document No. 4033-54, 4033-60, 4033-61, in the form of a Grant Deed; and Deed Document No. 4033-62, in the form of an Easement Deed, covering the property particularly described therein has been executed and delivered by Grantor to Carlos Herrera, Real Estate Agent for District for the purpose of conveying said property to District.

In consideration of which, and the other considerations hereinafter set forth, it is mutually agreed as follows:

A. The parties have herein set forth the whole of their agreement. The performance of this agreement constitutes the entire consideration for said document and shall relieve the District of all further obligation or claims on this account, or on account of the location or construction of the proposed public improvement.

B. District requires property interests described in Deed Document No. 4033-54, 4033-60, 4033-61, 4033-62 for District purposes, a public use for which District has the authority to exercise the power of eminent domain. Grantor is compelled to sell, and District is compelled to acquire the property.

Both Grantor and District recognize the expense, time, effort, and risk to both parties in determining the compensation for the property by eminent domain litigation. The

compensations set forth herein for the property is in compromise and settlement, in lieu of such litigation.

3. PURCHASE AND TITLE

District shall pay Grantor the sum of $104,000.00 for the property conveyed by the above document when title thereto vests in District free and clear of all liens, encumbrances, taxes, assessment and leases (recorded and/or unrecorded), except:

A. Taxes for the tax year in which this escrow closes shall be cleared and paid in the manner required by Section 5086 of the Revenue and Taxation Code if unpaid at the close of escrow.

B. Covenants, conditions, restrictions, and reservations of record, or contained in the above referenced deed.

C. Easements or rights of way over said land for public or quasi public utility or public street purposes, if any.

District shall also pay all costs of escrow and recording fees incurred in this transaction including documentary stamp tax, if required by law, and title insurance policy expenses.

4. PRORATION OF TAXES

In the event that the District acquires fee title under the terms of this agreement, taxes shall be prorated in accordance with the California Revenue and Taxation Code Section 5086 as of the date of recordation of the deed conveying title to the District.

District shall have the authority to deduct and pay from the amount shown in clause 3, above, any amount necessary to satisfy any bond demands and delinquent taxes due in any year except the year in which this escrow closes together with penalties and interest thereon, and/or delinquent and unpaid nondelinquent assessments which have become a lien at the close of escrow.

5. PAYMENT OF MORTGAGE OR DEED OF TRUST

Any and all moneys due under this agreement shall, upon demand, be made payable to the beneficiary or mortgagee entitled thereto under any trust deed or mortgage upon the property up to and including the total amount of any unpaid indebtedness secured by such trust deed or mortgage.

6. LEASE WARRANTY

Grantor warrants that there are no oral or written leases on all or any portion of the property exceeding a period of one month, and Grantor further agrees to hold District harmless and reimburse District for any and all losses and expenses occasioned to District by reason of any tenancy of the property held by any tenant of Grantor for any period exceeding one month.

7. DISMISSAL OF EMINENT DOMAIN

Grantor consents to the dismissal as to the property of any eminent domain action by District wherein the property is included and also waives any and all claims to any money that may now be on deposit in that action. This agreement is full consideration for all claims of damage that may have arisen by reason of any such eminent domain action and/or the public project for which this property is acquired.

8. POSSESSION

Grantor shall have the right to retain possession of the property up to and including the date of recording of the deed conveying title to the property acquired herein to District upon compliance by Grantor with the conditions of this agreement.

9. ESCROW

This transaction will be handled through an escrow with:

Fidelity National Title Company, escrow No. FSBC-TO14000420-EB

10. LANDSCAPING AND APPURTENANCES

All existing landscape and appurtenances that are attached to the property are included in the purchase price and shall be transferred free of liens and without Grantor warranty. Items to be transferred shall include, but not be limited to, any and all existing electrical, mechanical, lighting, in-ground landscaping, including trees and shrubs, and irrigation systems. It is also understood that the District will be removing landscape and appurtenances related to LMD95-1. Furthermore, Grantor shall release the District from any liability for the removal of all said landscape and appurtenances within the area to be used for flood improvement construction.

11. AS-IS, ENVIRONMENTAL MATTERS/RELEASE

Except as otherwise set forth in this agreement, District acknowledges that it is purchasing the property on an “as-is” basis solely in reliance on: (i) District’s inspection of the property; (ii) District’s independent verification of the truth of any documents delivered by Grantor to District; (iii) District’s independent verification of the truth of any statements made by Grantor to District concerning the property and its development; (iv) District’s due diligence review and inspection of the property, and (v) the opinions and advice concerning the property and its further development of consultants engaged by District. District acknowledges that it will undertake a complete and thorough inspection and study of the property, as District deems necessary and appropriate.

Except with respect to any express representations and warranties by Grantor, effective from and after the recordation of the grant deed referred to herein, District hereby waives, releases, acquits, and forever discharges Grantor, and Grantor’s agents, directors, officers, and employees to the maximum extent permitted by law, of and from any and all claims, actions, causes of action, demands, rights, liabilities, damages, losses, costs, expenses, or compensation whatsoever, direct or indirect, known or unknown, foreseen or unforeseen, that it now has or that may arise in the future because of or in any way growing out of or connected with this agreement and the property,

including, without limitation, with respect to any past, present or future violations of any rules, regulations or laws, now or hereinafter enacted, regulating or governing use, handling, storage or disposable of Hazardous Materials, including, without limitation (i) any and all remedies District may now or hereafter have under the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("**CERCLA**"), as amended, and any similar law, rule or regulation, (ii) any and all rights District may now or hereafter have against Grantor under the Carpenter-Presley-Tanner Hazardous Substance Account Act (California Health and Safety Code, Section 25300 et seq.), as amended and any similar law, rule or regulation, and (iii) any and all claims, whether known or unknown, now or hereafter existing, with respect to the Property under Section 107 of CERCLA (42 U.S. C.A. § 9607).

DISTRICT HEREBY ACKNOWLEDGES THAT IT HAS READ AND IS FAMILIAR WITH THE PROVISIONS OF CALIFORNIA CIVIL CODE SECTION 1542 ("SECTION 1542"), WHICH IS SET FORTH BELOW:

> "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY"

BY INITIALING BELOW, DISTRICT HEREBY WAIVES THE PROVISIONS OF SECTION 1542 SOLELY IN CONNECTION WITH THE MATTERS WHICH ARE THE SUBJECT OF THE FOREGOING WAIVERS AND RELEASES

District's Initials: _____

As used in this agreement, "**Hazardous Materials**" includes petroleum, asbestos, radioactive materials or substances defined as '"hazardous substances," "hazardous materials" or "toxic substances" (or words of similar import) in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Section 9601, et seq.), the Hazardous Materials Transportation Act (49 U.S.C. Section 1801, et seq.), the Resource Conservation and Recovery Act (42 U.S.C. Section 6901, et seq.), and under the applicable laws of California. District must rely on its own investigation and not on any representation by Grantor regarding Hazardous Materials. District shall rely solely upon its own investigation and inspection of the property and the improvements thereon and upon the aid and advice of District's independent expert(s) in purchasing the property, and shall take title to the property without any warranty, express or implied, by Grantor or any employee or agent of Grantor. Grantor makes no representations regarding Hazardous Materials in, on or under the property.

District has executed this agreement as of: _____

SANTA CLARA VALLEY WATER DISTRICT

By _____
Rick L. Callender, Esq.
Chief Executive Officer

ATTEST: MICHELE L. KING, CMC

_____
Clerk/Board of Directors

Grantor has executed this agreement as of: _____

The City of Milpitas, a municipal corporation

By: _____

Name: _____

Title: _____

Address:

Multiple Locations
Milpitas, CA

Recommended for Approval:

By _____
Senior Real Estate Agent

By _____
Real Estate Services Unit Manager

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS DECLARING THAT CERTAIN APPROXIMATELY 1.6-ACRE PARCEL OF CITY OWNED LAND "EXEMPT SURPLUS LAND" UNDER THE SURPLUS LAND ACT (GOVERNMENT CODE SECTION 54420 ET SEQ.) AND CONSIDERING THE ENVIRONMENTAL IMPACT REPORT FOR THE LOWER PENITENCIA CREEK IMPROVEMENTS PROJECT; ADOPTING FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS IN ITS LIMITED ROLE AS A RESPONSIBLE AGENCY PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND APPROVING AND AUTHORIZING THE CITY MANAGER TO EXECUTE THE RIGHT-OF-WAY AGREEMENT WITH THE SANTA CLARA VALLEY WATER DISTRICT FOR THE PURCHASE OF EASEMENTS AND CITY OWNED LAND FOR LOWER PENITENCIA CREEK FLOOD PROTECTION IMPROVEMENTS

WHEREAS, The Santa Clara Valley Water District ("SCVWD") owns and maintains waterways within the City of Milpitas and recently completed improvements to Upper Berryessa Creek and portions of Lower Berryessa Creek to improve flood capacity; and

WHEREAS, SCVWD desires to continue its plan of flood control improvements within Milpitas to reduce the potential of flooding and intends to construct significant flood protection improvements along a 1-mile segment of Lower Penitencia Creek. Construction work along Lower Penitencia Creek will extend from McCarthy Boulevard to San Andreas Drive, and will include raising of levees, installation of steel and concrete floodwalls, and construction of new storm drain outfalls at City pump stations located at California Circle and San Andreas Drive (together, the "Project").

WHEREAS, SCVWD is the lead agency for the Project pursuant to the California Environmental Quality Act ("CEQA") (Pub. Res. Code §§ 21000, et seq.) and the State CEQA Guidelines (14 CCR §§ 15000, et seq.). As the lead agency, SCVWD is responsible for assuring that an adequate analysis of the Project's environmental impacts; and

WHEREAS, after first issuing a Notice of Preparation and a Draft Environmental Impact Report ("DEIR") SCVWD prepared a Final Environmental Impact Report for the Project, which included the DEIR, appendices, comments on the DEIR, responses to comments on the DEIR, and revisions to the DEIR (collectively, "FEIR"), and in November 2017 SCVWD certified the FEIR, took certain other actions regarding CEQA including making a Statement of Overriding Considerations, and approved the Project; and

WHEREAS, the City is a "responsible agency" for the Project under State CEQA Guidelines section 15381 because it is not the lead agency for the Project, but it does have discretionary approval power over the Project in that it has discretion to approve sell City property and enter into a right of way agreement in connection with the construction of the Project; and

WHEREAS, the City Council, at its agendized public meeting on June 15, 2021, independently reviewed and considered the FEIR and all other related documents in the record before it; and

WHEREAS, all the procedures of CEQA have been met, and the FEIR prepared in connection with the Project is sufficiently detailed so that all of the potential effects of the Project on the environment and measures necessary to avoid or substantially lessen such effects have been evaluated in accordance with CEQA; and

WHEREAS, all of the findings and conclusions made by the District pursuant to this Resolution are based upon the oral and written evidence presented to it as a whole and not based solely on the information provided in this Resolution; and

WHEREAS, SCVWD needs to acquire additional right of way from the City of Milpitas for the purpose of constructing and the perpetual maintenance of the Project. SCVWD has requested the City enter into a Right-of-Way Agreement (the "ROW Agreement"), substantially in the form attached hereto as **Exhibit A**, for the purchase of, among other real property interests, approximately 1.6 acres of City owned land adjacent to McCarthy Boulevard and California

Circle (the "City Owned Land") to allow SCVWD to complete construction of the Project. The location of the City Owned Land proposed to be sold to the SCVWD is shown on the Site Map attached hereto as **Exhibit B**; and

WHEREAS, the City Owned Land is not necessary for the City's use and is therefore surplus, as defined in the Surplus Land Act (Government Code § 54220 *et seq.*) (the "Act"); and

WHEREAS, the City Owned Land is, however, exempt from the Act pursuant to section 54221(f)(1)(D) of the Act, because the City "is transferring [the City Owned Land] to another local, state, or federal agency for the [transferee] agency's use"; and

WHEREAS, both the City and SCVWD are "local agencies" as defined under section 54221(a)(1) of the Act, and the land will be used by SCVWD to further its flood control improvement project as described above; and

WHEREAS, the Act does "not apply to the disposal of exempt surplus land as defined in Section 54221 by … any local agency." Gov't C. § 54222.3; and

WHEREAS, the SCVWD Lower Penitencia Creek flood control improvement project is a benefit to Milpitas and will provide 100-year flood protection for homes, schools, and businesses and will maintain Federal Emergency Management Agency (FEMA) levee accreditation along the Lower Penitencia Creek east levee located between California Circle and Berryessa Creek

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. The custodian for these records is the City Clerk. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The City Council finds and declares that the City Owned Land is "exempt surplus land" pursuant to Section 54221(f)(1)(D), because the City is selling it to SCVWD, another local agency, for SCVWD's use.

3. The City Council finds and determines that the declaration of the City Owned Land as "exempt surplus land" under the Act does not constitute a project under CEQA.

4. Pursuant to State CEQA Guidelines section 15096 and in its limited role as a responsible agency under CEQA, the City Council has reviewed and considered the FEIR, as well as SCVWD's certification of the FEIR and approval of the Project, and SCVWD's CEQA Findings of Fact and Statement of Overriding Considerations, and the City Council incorporates those items herein by reference. As to those resources within the City's power and authority as a responsible agency under CEQA, the City Council exercises its independent judgment and finds that the FEIR contains a complete, objective and accurate reporting of the Project's impacts.

5. In its limited role as a responsible agency under CEQA, the City Council agrees with the SCVWD that: (1) there are no feasible alternatives to the Project which would avoid or substantially lessen the Project's potentially significant environmental impacts but still achieve most of the Project's objectives; (2) there are no additional feasible mitigation measures which would eliminate or reduce the Project's potentially significant impacts to a level of less than significant; (3) the Statement of Overriding Considerations adopted by the SCVWD are supported by substantial evidence and the Overriding Considerations outweigh the Project's potentially significant impacts.

6. The City Council hereby adopts the FEIR and the Mitigation Monitoring and Reporting Program prepared by and adopted by the SCVWD.

7. The documents and materials that constitute the record of proceedings for this Resolution are located at the City's office located at the Office of the City Engineer, Milpitas, California, and are maintained by the City Clerk.

8. The City Council hereby approves and authorizes the City Manager to execute the Right of Way Agreement with the Santa Clara Valley Water District for the Purchase of Easements and City Owned Land for Lower Penitencia Creek Flood Protection Improvements and any and all other documents necessary to effectuate the transaction with any modifications deemed necessary by the City Attorney.

9. The City Council hereby authorizes and directs staff to file and have posted a Notice of Determination with the County Clerk and with the State Clearinghouse within 5 working days of the adoption of this Resolution.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

Lower Penitencia Creek Improvements Project

Final Environmental Impact Report

State Clearinghouse No. 2015062026

VOLUME 2: MAIN BODY

October 2017

Horizon WATER and ENVIRONMENT

Santa Clara Valley Water District

SANTA CLARA VALLEY WATER DISTRICT

Lower Penitencia Creek Improvements Project
Milpitas, California

Final Environmental Impact Report

Volume 2 – Main Body

State Clearinghouse No. 2015062026

Prepared for:

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Prepared by:

Horizon Water and Environment, LLC
180 Grand Avenue, Suite 1405
Oakland, California 94612

Contact: Ken Schwarz
(510) 986-1851

October 2017

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Acronyms and Abbreviations

A	
AAI	All Appropriate Inquiries
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AC Transit	Alameda–Contra Costa Transit District
AIS	Aerial Information Systems, Inc.
APE	area of potential effect
ASTM	American Society for Testing and Materials
ATCM	Airborne Toxic Control Measure
B	
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Basin Plan	Water Quality Control Plan for the San Francisco Basin
the Bay	San Francisco Bay
Bay Area	San Francisco Bay Area
BCDC	San Francisco Bay Conservation and Development Commission
bgs	below ground surface
BIA	U.S. Bureau of Indian Affairs
BMP	best management practices
C	
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
Cal EMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
Cal OES	Governor's Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund Act)
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CIWMA	California Integrated Waste Management Act of 1989
cm	centimeter
CMP	Congestion Management Program
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yards
D	
dB	decibel
dBA	A-weighted decibel
DEIR	draft environmental impact report
District	Santa Clara Valley Water District
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
E	
EFH	Essential Fish Habitat
EIR	environmental impact report
EO	Executive Order
ESA	Endangered Species Act
F	
F&G Code	California Fish and Game Code
FEIR	final EIR
FEMA	Federal Emergency Management Agency
FMP	fishery management plan
FTA	Federal Transit Administration

G

GC	General Commercial
GHG	greenhouse gas
GIS	geographic information system
GPS	global positioning system
GWP	global warming potential

H

H_2S	hydrogen sulfide
Handbook	*Santa Clara Valley Water District Best Management Practices Handbook*
HAP	hazardous air pollutant
HCM	*Highway Capacity Manual*
HCP	habitat conservation plan
HFCs	hydrofluorocarbons
HSLA	Hazardous Substance Liability Assessment
HTL	high tide line
Hz	Hertz

I

I-	Interstate
in/sec	inches per second
IP	Industrial Park
IPCC	International Panel on Climate Change

L

L_{dn}	day-night average sound level
L_{eq}	equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
LUST	leaking underground storage tank

M

MBTA	Migratory Bird Treaty Act
MCLs	Maximum Contaminant Levels
MFH	Multi-family Residential, Very High Density
MFM	Multi-family Residential, Medium Density
mgd	million gallons per day
MHHW	mean high high water
MHW	mean high water
MLD	Most Likely Descendent
MLLW	mean lower low water
MMI	Modified Mercalli Intensity
MMRP	Mitigation Monitoring and Reporting Program

MMT CO_2e	million metric tons of carbon dioxide equivalent
MS_4	municipal separate storm sewer system
msl	mean sea level
MT CO_2e	metric tons of carbon dioxide equivalent
MTC	Metropolitan Transportation Commission
MUTCD	*California Manual on Uniform Traffic Control Devices*
MW	Manufacturing and Warehousing
N	
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum of 1988
NCCP	natural community conservation plan
NEHRP	National Earthquake Hazards Reduction Program
NFP	Natural Flood Protection
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation of an EIR
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act of 1977
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Resources
NSF	National Science Foundation
NWIC	Northwest Information Center
O	
O_3	ozone
OEHHA	California Governor's Office of Environmental Health Hazard Assessment
OHW	ordinary high water mark
OSHA	U.S. Department of Labor, Occupational Safety and Health Administration
P	
Pb	lead
PCE	passenger car equivalents
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment

$PM_{2.5}$	particulate matter of aerodynamic radius of 2.5 microns or less
PM_{10}	particulate matter of aerodynamic radius of 10 microns or less
Porter-Cologne	Porter-Cologne Water Quality Control Act
POS	Parks and Open Space
ppb	parts per billion
ppd	pounds per day
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
Program	Lower Berryessa Creek Program
Program EIR	*Lower Penitencia Creek Program Environmental Impact Report*
proposed project	Lower Penitencia Creek Improvements Project
PVC	polyvinyl chloride
R	
RCPS	Regional Climate Protection Strategy
RCRA	Resource Conservation and Recovery Act of 1976
REC	recognized environmental condition
RMP	risk management plan
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
S	
Santa Clara Permittees	Santa Clara Valley Urban Runoff Pollution Prevention Program
SAR	Second Assessment Report
SB	Senate Bill
SBWR	South Bay Water Recycling Program
SCVWD	Santa Clara Valley Water District
SF_6	sulfur hexafluoride
SFEI	San Francisco Estuary Institute
SFPUC	San Francisco Public Utilities Commission
SHMA	Seismic Hazards Mapping Act of 1990
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMP	Stream Maintenance Program
SO_X	sulfur dioxide
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
T	
TAC	toxic air contaminant
TCP	traditional cultural properties
TCR	tribal cultural resource

TDB	travel demand management
TFCA	Transportation Fund for Clean Air
U	
USA North	Underground Service Alert–Northern California
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
V	
V/C	volume to capacity
VdB	vibration decibels
VegCAMP	Vegetation Classification and Mapping Program
VOC	volatile organic compound
vph	vehicles per hour
VTA	Santa Clara Valley Transportation Authority
W	
WRCC	Western Regional Climate Center
°F	degrees Fahrenheit
$\mu g/m^3$	micrograms per cubic meter
µin/sec	micro-inch per second

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.

EXECUTIVE SUMMARY

Introduction

The Santa Clara Valley Water District (District) prepared this ~~Draft~~ Environmental Impact Report (~~D~~EIR) to provide the public, responsible agencies, and trustee agencies with information about the environmental effects of the proposed Lower Penitencia Creek Improvements Project (proposed project). This ~~D~~EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

Project Objectives

The proposed project is necessary to avoid flooding in the project area during the projected future 1-percent (or 100-year) flow. The proposed project would meet the following objectives:

- Convey the Lower Berryessa Creek 1-percent design flow that is delivered to Lower Penitencia Creek;
- Meet required water surface elevations at the confluences of Lower Penitencia Creek with Coyote Creek and Berryessa Creek;
- Minimize the need for seasonal removal of sediment and non-woody vegetation;
- Maintain existing FEMA accreditation of the east levee located between California Circle and Berryessa Creek; and
- Ensure the project improvements meet FEMA certification requirements.

Project Location

The proposed project is located on Lower Penitencia Creek within a developed area in the City of Milpitas. **Figure ES–1 and Figure ES–2** show the project location. The proposed project area extends from just upstream of the confluence with Berryessa Creek downstream to the confluence with Coyote Creek. The land surrounding the proposed project is a mix of residential and office park/commercial land uses.

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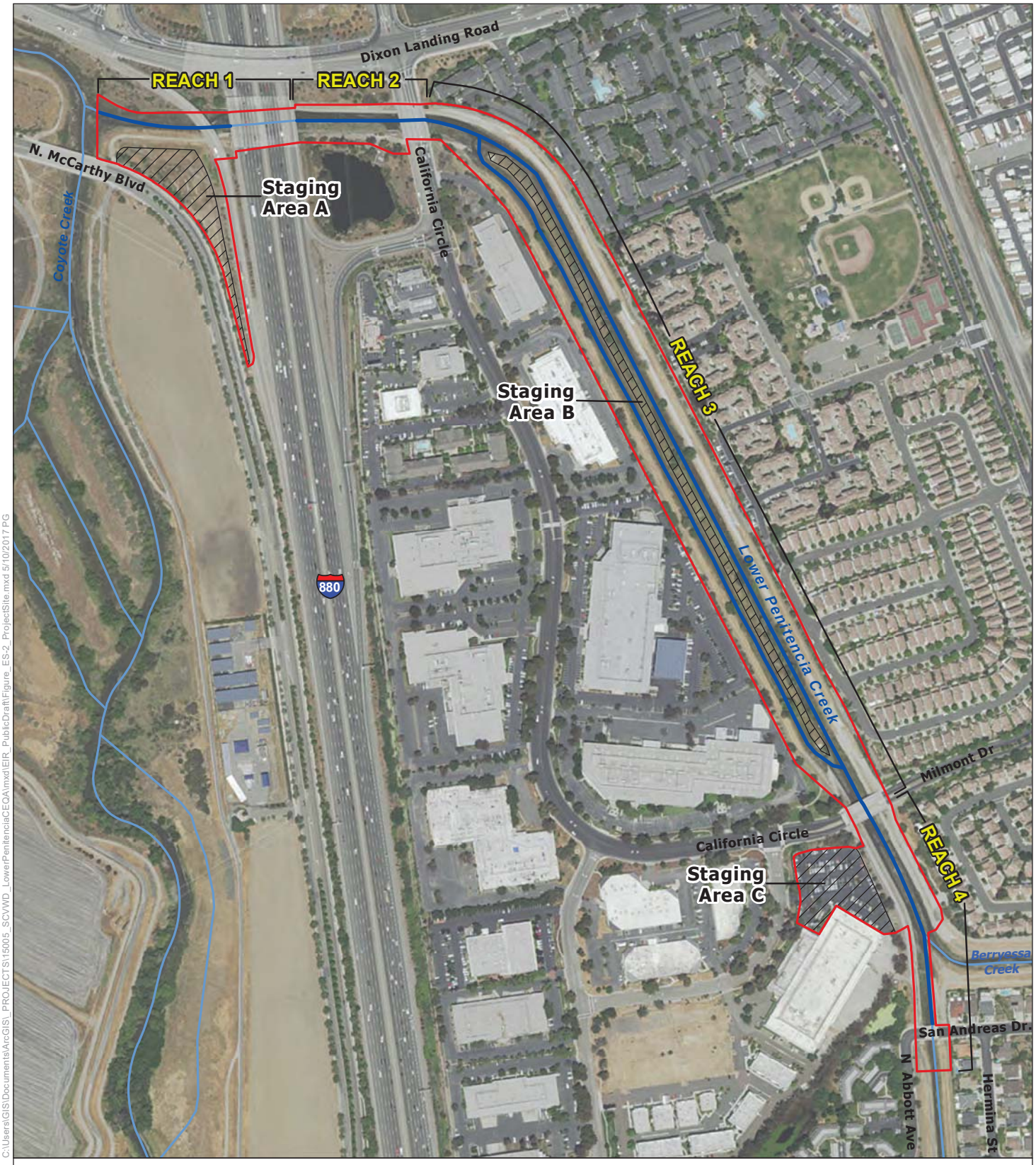
Figure ES-1
Project Location

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project



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N

0 200 400 800
Feet

Project Boundary

Staging Area

Figure ES-2
Project Site

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Project Planning and Development

Lower Penitencia Creek Improvements Project is one of six elements evaluated in the *Lower* Berryessa Creek Program Environmental Impact Report (Program EIR). The District prepared this Program EIR in 2011, and evaluated the Lower Penitencia Creek Project reach at a a programmatic level of detail.

At the time the Program EIR was prepared, future water surface elevations and flow rates during the 1% flow (i.e., the streamflow rate with a 1-percent estimated likelihood to be equaled or exceeded in any given year) on Lower Penitencia Creek Project could only be estimated at a general level of detail. Upstream improvement projects (i.e., the District's Lower Berryessa Creek and Lower Calera Creek Flood Protection Improvements Project and the USACE's Upper Berryessa Creek Flood Risk Management Project) are currently under construction and will increase the future 1% flow of Lower Penitenica Creek. Now that the detailed designs of the upstream projects are known, the future 1% flow and resulting water surface elevations can be estimated with precision. The proposed project would accomodate the increased future 1% flow without overtopping of the Lower Penitencia Creek banks.

The District developed and analyzed various conceptual design alternatives to achieve the project objectives. These conceptual design alternatives included different combinations of infrastructure upgrades, which were refined through the District's Natural Flood Protection (NFP) evaluation processto develop four potentially feasible design alternatives:

- Design Alternative 1: widen the California Circle crossing, construct floodwalls, raise a levee, and construct wetland bench in Reach 2;
- Design Alternative 2A: widen the California Circle and Milmont Drive crossings, construct floodwalls, relocate and raise the Reach 1 levee, and construct wetland benches in Reaches 1 and 2;
- Design Alternative 4: widen the California Circle and Milmont Drive crossings, construct floodwalls, relocate and raise the Reach 1 levee, and construct wetland benches in Reaches 1 and 3; and
- Design Alternative 6: widen the California Circle crossing, construct floodwalls, raise the Reach 1 levee, remove the central berm in Reach 3, and line the channel with concrete.

Based on the NFP evaluation process, District staff initially determined that Design Alternative 2A would best meet the project objectives. As part of the design process, the District modeled the 1-percent flow that would occur under "interim" and "ultimate" conditions. The interim condition is defined as the future flow that would result after construction of the District's Lower Berryessa Creek Flood Protection Project and the USACE's Upper Berryessa Flood Risk Management Project had been completed. These two projects are currently under construction and will be completed in 2018, at which time the 1-percent (or 100-year) interim flow at the confluence of Lower Penitencia Creek with Coyote Creekwill increase from 4,830 cubic feet per second (cfs) to 6,900 cfs. The ultimate condition is the future flow that would result after the channel improvements to Upper Berryessa Creek upstream of I-680 are completed. The 1 percent ultimate flow is 8,720 cfs, which is 26 percent greater than the interim flow. Construction of channel improvements to Upper Berryessa Creek upstream of I-680 are not expected to occur for at least 10 years or longer. Due to the uncertainty as to when the ultimate flow condition would be achieved, Alternative 2A was

refined such that the proposed project would convey the 1-percent interim flows of 6,900 cfs without overtopping of the Lower Penitencia Creek banks.

For all of the project design alternatives, interim flows could be conveyed without modifying the existing bridges at California Circle and Milmont Drive. Thus, modifications of those two bridges, which were originally considered as part of Design Alternative 2A, are not proposed as part of the proposed project or project alternatives (described further in Chapter 5, *Alternatives*). As described above, throughout the initial planning phase, the District refined Alternative 2A to develop the proposed project. Proposed project elements are described in more detail in the following sections.

Proposed Project

The proposed project would include various improvements along the four reaches included in the project area, including: sheetpile floodwalls, earthen fill, a wetland bench, a relocated and raised levee, bridge headwalls, sediment removal, maintenance road improvments, and revegetation. **Table ES–1** summarizes the project elements proposed for each reach.

Table ES–1. Proposed Project Elements

Reach or Bridge	Project Elements
Reach 1 Coyote Creek to I-880	Relocated and raised south bank levee with maintenance road on crest Wetland bench on south bank Approximately 50 feet of sheetpile floodwall to the north of channel
Reach 2 I-880 to California Circle	Sheetpile floodwall on top of existing south/west bank levee Approximately 25 feet of sheetpile floodwall on top of existing north/east bank levee near I-880 Removal of about 70 cy of sediment from the concrete-lined channel) Relocated access ramp to City's pump station Maintenance road improvements
Reach 3 California Circle to Milmont Drive	Sheetpile floodwalls on top of existing west and east bank levees Earthen fill to floodwall to allow the existing Penitencia Creek Trail to cross over the new floodwall Removal of about 1,500 cy of accumulated sediment from low-flow channel Maintenance road improvements
Reach 4 Milmont Drive to San Andreas Drive	Sheetpile floodwalls on top of existing west bank levee Raising of existing east bank levee by up to 6 ft Removal of about 730 cy of sediment from the concrete-lined channel Maintenance road improvements
San Andreas Drive Bridge	Headwalls on the downstream and upstream faces of San Andreas Drive bridge

Project Construction

Construction Activities

Construction activities and processes would differ based on the type of improvement. Construction of floodwalls would generally entail shallow excavation and fill to create a working platform for installation of sheetpiles. A specialized piece of equipment called a Giken silent piler would be used to install the sheetpile walls. Construction of the wetland bench would involve excavation in the existing south bank of Reach 1 to lower the ground surface elevation to below mean high tide level. Excavated soil would either be used to create the replacement levee in Reach 1 and raise Reach 4 east bank levee or disposed of at an offsite location. Construction of the new south bank levee in Reach 1 would entail removal of the existing levee down to grade level and preparation of the ground surface to receive new fill.

In-channel work would occur between mid-June and mid-October when channel flow is lowest. Dewatering would be temporary and would be necessary throughout the project area. In total, about 5,100 linear feet of channel would be dewatered. During in-channel work, water would be diverted into pipes and routed around the work areas by a temporary cofferdam. Diverted water would be returned to the creek downstream of the project area. At the end of each dry-period construction season, disturbed areas would be hydroseeded to provide erosion protection and prevent eroded sediment being washed into the creek.

Construction Staging Areas and Access

Construction would generally occur within existing District right-of-way (ROW) and easements along the channel. Three staging areas adjacent to the project site may be used during project construction for staging of equipment and construction materials.

I-880, Dixon Landing Road, and California Circle would be the primary construction access routes to the project area.

Construction Workers and On-haul and Off-haul Estimates

The proposed project would require up to 40 construction workers on site, although less than 20 workers would likely be on site on a typical workday. It is expected that all excavated soil would be reused on site, and approximately 3,430~~3,500~~ cubic yards (cy) of fill~~concrete~~ would be delivered and placed on site. About 2,300 cy of sediment would be removed from the low-flow channel for disposal off-site.

Construction Schedule

Project construction is anticipated to occur over 2 years, during 2018 and 2019. In-channel construction activities, as described above, would occur between June 15 and October 15 each year, while activities on the levee crests or outside the channel may occur outside the June 15 to October 15 dry season. Project construction would primarily occur on weekdays between the hours of 7:00 a.m. and 7:00 p.m. Less frequently, construction may also occur on weekend days between the hours of 7:00 a.m. and 7:00 p.m, which is allowed by the Milpitas Noise Abatement Ordinance. On rare occasions, construction may be necessary before 7:00 a.m. or after 7:00 p.m; construction during those hours would be very infrequent and would occur only with advance approval from the City of Milpitas. No construction activities would

occur on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Project Operations

Following project construction and similar to current practice, routine maintenance activities would be conducted within the project area as needed. These activities include trash and debris removal, vegetation management (e.g., mowing the channel banks, removing vegetation along maintenance roads), maintenance road grading, management of wildlife conflicts, graffiti removal, and fence repair. These routine maintenance activities would continue to occur under the District's Stream Maintenance Program (SMP), an ongoing countywide program that provides maintenance standards and guides maintenance activities for the District to meet its designated flood protection mandates throughout Santa Clara County. In addition, the newly installed floodwalls and San Andreas Drive bridge headwalls would be visually inspected on a periodic basis (one to two times per year) and would be repaired as-needed. Once constructed, the proposed project would reduce the need for routine sediment removal in the channel.

Public Involvement Process

EIR Scoping

An NOP for the proposed project was prepared in accordance with State CEQA Guidelines Section 15082 and circulated to the State Clearinghouse on June 11, 2015. The scoping period continued for 30 days and concluded on July 10, 2015. During the scoping period, the District received comment letters from the California Department of Transportation and the San Francisco Bay Regional Water Quality Control Board. All of the comments contained in the scoping letters have been incorporated and/or addressed as appropriate in this EIR.

Draft EIR Public Comment Period

The District ~~is circulating this~~ circulated the DEIR for a 45-day public review and comment period.

Interested parties ~~are~~were encouraged to submit written comments on ~~this~~the DEIR. All comments ~~must be received~~were due by 5:00 p.m. on July 3, 2017 and directed to:

Michael Coleman, Environmental Planner II
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95115
mcoleman@valleywater.org

Written comments on the DEIR received by the Distirict during the public review period ~~will be~~were addressed in ~~the~~this Final EIR (Volume 1, Response to Comments on the Draft EIR).

Areas of Known Controversy and Issues to Be Resolved

State CEQA Guidelines Section 15123(b) requires that an Executive Summary identify "areas of controversy known to a lead agency including issues raised by agencies and the public."

The following issues were raised by agencies in response to the EIR NOP and may be considered controversial:

- Possible flooding effects due to sea-level rise in the vicinity of the I-880/Dixon Landing Road interchange;
- Construction-period impacts on I-880 and other highways (e.g., vehicle queues on ramps);
- Accurate description of project components not evaluated in the Lower Berryessa Program EIR; and
- Potential effects on the I-880 creek crossing.

Each issue is addressed in this EIR.

Significant Impacts

This section presents the significant impacts that were identified in the DEIR. This is not a comprehensive discussion of impacts of the proposed project; the reader is directed to Table ES-2 (Summary of Impacts and Mitigation Measures) which is presented at the end of this chapter for additional information. Environmental resource topics with the potential for significant environmental impacts are as follows:

- Air Quality
- Biological Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Noise and Vibration
- Traffic and Transportation

Sections 3.2 through 3.14 of this ~~D~~EIR address each of these environmental resource topics and the environmental consequences of the proposed project in more detail.

Significant and Unavoidable Impacts

The following impacts have been identified as significant and unavoidable:

- Impact NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in the applicable standards of other agencies
- Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- Impact NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The project would also make a cumulatively considerable contribution to significant cumulative noise impacts during project construction.

Alternatives Considered

The District considered the following alternatives to the proposed project:

- No Project Alternative
- Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal
- Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls
- Alternative 3: Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls

In addition, during project planning, the District considered several additional alternatives, but ultimately dismissed them from further analysis for one or more of the following reasons: (1) they would not sufficiently meet the proposed project objectives; (2) they were determined to be infeasible; or (3) they would not avoid or substantially reduce one or more significant impacts of the proposed project.

No Project Alternative

Under the No Project Alternative, no new construction activities would occur. The flood control channel would remain in its current condition. Ongoing maintenance activities, including sediment removal and vegetation management currently occurring under the District's SMP, would continue in the future. Although this alternative would avoid all impacts associated with construction of the proposed project, this alternative would not meet project objectives. Flood hazards and flooding impacts would increase under this alternative. In the event of a 100-year flood event, substantial damage to nearby land uses including residential, office space, the District's maintenance roads, nearby public roads, I-880, and the Penitencia Creek Trail. Flood damage and subsequent clean-up efforts could also result in adverse effects related to water quality, geology and soils, biological resources, cultural resources, recreational resources, noise, traffic and circulation, utilities and service systems, and air quality.

Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal

Under this alternative, the south bank levee in Reach 1 would be raised but would not be relocated. Floodwalls would be constructed in Reaches 2, 3, and 4 and would be of similar height as those for the proposed project. As with the proposed project, headwalls would be constructed on both sides of the existing San Andreas Drive bridge.

Alternative 1 would result in similar construction-related impacts as the proposed project, including temporary transportation and traffic impacts, use of hazardous materials, air emissions, noise and vibration, and impacts on hydrology and water quality. Alternative 1 also would increase operational impacts associated with increased sediment removal in Reaches 2 and 4 compared to the proposed project, resulting in periodic disturbance of aquatic and riparian habitat that would be greater than if the proposed project were implemented. Additionally, the enhancements to Reach 1 tidal wetlands included in the proposed project would not be achieved, and the current degraded and isolated conditions of Reach 1 wetlands, which provide marginal habitat value, would continue indefinitely.

Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls

Under Alternative 2, the south bank levee in Reach 1 would be relocated and raised, which would create space for establishing a 50-foot-wide wetland bench immediately south of the existing channel. Floodwalls would be constructed in Reaches 2, 3, and 4. In Reach 3, the west bank floodwall would have a total height of 18.5 feet when viewed from inside the channel, but it would be partially below grade and extend about 4 feet above the crest of the existing levee. This alternative would create enhanced tidal wetlands in Reach 1, similar to the proposed project. In Reach 3, a 25 to 45-foot-wide wetland bench and depressed channel access road would be constructed.

Alternative 2 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. However, this alternative would not minimize the need for removal of sediment and non-woody vegetation.

This alternative would result in increased construction-related impacts due to excavation of the depressed maintenance road and Reach 3 wetland bench, and therefore would result in greater construction-related traffic, air quality, and noise impacts than the proposed project. Additionally, this alternative would involve greater excavation work than the proposed project and would therefore result in greater effects on existing landfill capacity. The increased hardscape in the channel due to the Reach 3 floodwall and depressed maintenance road could result in increased pollutant flows to the creek, adversely affecting water quality. This would be partially offset by the wetland bench between the road and the creek channel, which would help to filter pollutants from storm runoff before they reach the creek.

In the long term, up to 3 acres of wetland habitat would be established in Reach 3, which would provide habitat for common and special-status species. This wetland bench would offset loss of riparian habitat loss due to elimination of the Reach 3 central berm.

Alternative 3: Reach 1 Raised Raise, Reach 3 Concrete Channel Lining, and Floodwalls

Under Alternative 3, the south levee in Reach 1 would be raised and floodwalls would be constructed in Reaches 2, 3, and 4. The central berm in Reach 3 would be excavated and removed, and the entire channel would be lined with concrete. Alternative 3 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. This alternative would only partially meet objectives to minimize the need for removal of sediment and non-woody vegetation. Alternative 3 would minimize vegetation removal because about 8 acres of vegetation would be permanently replaced with concrete lining, but the need for future sediment removal would not be minimized.

Alternative 3 would result in greater construction-related traffic, noise, vibration, and air quality impacts due to excavation and removal of the Reach 3 berm and installing concrete lining in the Reach 3 channel. These activities would require substantially more haul truck trips in comparison to the proposed project. Lining the channel with concrete also would

result in loss of about 8 acres riparian and aquatic habitat throughout Reach 3, most of which occurs on the berm and some of which is used by special-status species; this would adversely affect the ecological functions the existing creek channel may provide.

Environmentally Superior Alternative

Among the alternatives considered in this EIR (not including consideration of the proposed project), Alternative 2 is considered the environmentally superior alternative. When considering the proposed project against Alternative 2, however, the proposed project is environmentally superior. Alternative 2 would permanently create greater wetlands in the project area than the proposed project, but would also result in permanent removal of more riparian habitat and creation of more in-stream hardscape than the proposed project. Alternative 2 would also result in greater construction-related impacts associated with traffic, noise, vibration, hazards and hazardous materials, utilities and service systems, and air quality. While the proposed project would expose of residents to significant and unavoidable construction noise and vibration impacts, Alternative 2 would increase the severity of those impacts.

Summary of Impacts and Levels of Significance

Table ES–2 summarizes the impact of the proposed project, mitigation measures, and levels of significance.

Table ES–2. Summary of Impacts and Mitigation Measures for the Proposed Project

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
Aesthetics			
AES-1: Have a substantial adverse effect on a scenic vista	NI	None	NI
AES-2: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway	NI	None	NI
AES-3: Substantially degrade the existing visual character or quality of the site and its surroundings	LS	None	LS
AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	LS	None	LS
Air Quality			
AQ-1: Conflict with or obstruct implementation of the applicable air quality plan	LS	None	LS
AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation	S	Mitigation Measure AQ-1	LM
AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	S	Mitigation Measure AQ-1	LM
AQ-4: Expose sensitive receptors to substantial pollutant concentrations	LS	None	LS
AQ-5: Potential to create objectionable odors affecting a substantial number of people during construction	S	Mitigation Measure AQ-2	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
Biological Resources			
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	S	Mitigation Measures BIO-1 through BIO 12	LM
BIO-1a: Impacts on longfin smelt and steelhead	S	Mitigation Measure BIO-1	LM
BIO-1b: Impacts on essential fish habitat	LS	None	LS
BIO-1c: Impacts on western pond turtles	S	BIO-2	LM
BIO-1d: Impacts on burrowing owls	LS	None	LS
BIO-1e: Impacts on the Alameda song sparrow and San Francisco common yellowthroat	S	Mitigation Measures BIO-3 and BIO-4	LM
BIO-1f: Impacts on non-nesting special-status birds	LS	None	LS
BIO-1g: Impacts on salt marsh harvest mouse	S	Mitigation Measures BIO 5 through BIO-8	LM
BIO-1h: Impacts on special-status bats	LS	None	LS
BIO-1i: Impacts on Congdon's tarplant	S	Mitigation Measures BIO-9 and BIO-10	LM
BIO-1j: Introduction of invasive species	S	Mitigation Measures BIO-11 and BIO-12	LM
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	LS	None	LS
BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), waters of the U.S., and waters of the state through direct removal, filling, hydrological interruption, or other means	S	Mitigation Measure BIO-13	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	LS	None	LS
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LS	None	LS
BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	NI	None	NI
Cultural Resources			
CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5	NI	None	NI
CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	LS	None	LS
CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	NI	None	NI
CR-4: Disturb any human remains, including those interred outside of formal cemeteries.	LS	None	LS
CR-5: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in public resources code Section 21074	~~NI~~LS	None	~~NI~~LS
Geology, Soils and Seismicity			
GEO-1: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); or strong seismic ground shaking	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
GEO-2: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction; or landslides	S	Mitigation Measure GEO-1	LM
GEO-3: Result in substantial soil erosion or the loss of topsoil	LS	None	LS
GEO-4: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S	Mitigation Measure GEO-1	LM
GEO-5: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	LS	None	LS
GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	NI	None	NI
Greenhouse Gas Emissions			
GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	LS	None	LS
GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	NI	None	NI
GHG-3: Cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and increase the need for energy resources	LS	None	LS
Hazards and Hazardous Materials			
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S	Mitigation Measure HAZ-1	LM
HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school	LS	None	LS
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	NI	None	NI
HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, such that the project could result in a safety hazard for people residing or working in the project area	NI	None	NI
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	NI	None	NI
HAZ-7: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	LS	None	LS
Hydrology and Water Quality			
HYD-1: Violate any water quality standards or waste discharge requirements; or otherwise substantially degrade water quality	LS	None	LS
HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)	LS	None	LS
HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, or siltation on- or off-site	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site	LS	None	LS
HYD-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	LS	None	LS
HYD-6: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or place structures within a 100-year flood hazard area structures which would impede or redirect flood flows	NI	None	NI
HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	B	None	B
HYD-8: Inundation by seiche, tsunami, or mudflow	NI	None	NI
Land Use and Planning			
LU-1: Physically divide an established community	LS	None	LS
LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	LS	None	LS
LU-3: Conflict with any applicable habitat conservation plan or natural community conservation plan	NI	None	NI
Noise and Vibration			
NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	S	Mitigation Measure NOI-1	SU

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	S	Mitigation Measure NOI-1	SU
NOI-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	LS	None	LS
NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	S	Mitigation Measure NOI-1	SU
NOI-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI
NOI-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI
Recreation			
REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LS	None	LS
REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	LS	None	LS
Traffic and Transportation			
TRA-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit	S	Mitigation Measure TRA-1	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
TRA-2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	LS	None	LS
TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	NI	None	NI
TRA-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	S	Mitigation Measure TRA-1	LM
TRA-5: Result in inadequate emergency access	S	Mitigation Measure TRA-1	LM
Utilities and Service Systems			
UTL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	LS	None	LS
UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	NI	None	NI
UTL-3: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	LS	None	LS
UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	LS	None	LS
UTL-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	LS	None	LS
UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste	LS	None	LS
UTL-8: Potential disruption and/or relocation of existing utilities	LS	None	LS
Significant Cumulative Impacts			
CUM-1: Cumulative Impacts on Air Quality	S	Mitigation Measure AQ-1	NCC
CUM-2: Cumulative Impacts on Biological Resources	S	Mitigation Measures BIO-1 through BIO-13	NCC
CUM-3: Cumulative Impacts on Hydrology and Water Quality	S	None	NCC
CUM-4: Cumulative Impacts on Noise and Vibration	S	Mitigation Measure NOI-1	CC
CUM-5: Cumulative Impacts on Traffic Patterns and Safety Hazards	S	Mitigation Measure TRA-1	NCC

Notes:

LS = Less than Significant; LM = Less than Significant with Mitigation; N/A = Not Applicable; CC = Cumulativetly Considerable Contribition; NCC = Not Cumulatively Considerably; B = Beneficial; NI = No Impact; S = Significant; SU = Significant and Unavoidable

Chapter 1
INTRODUCTION

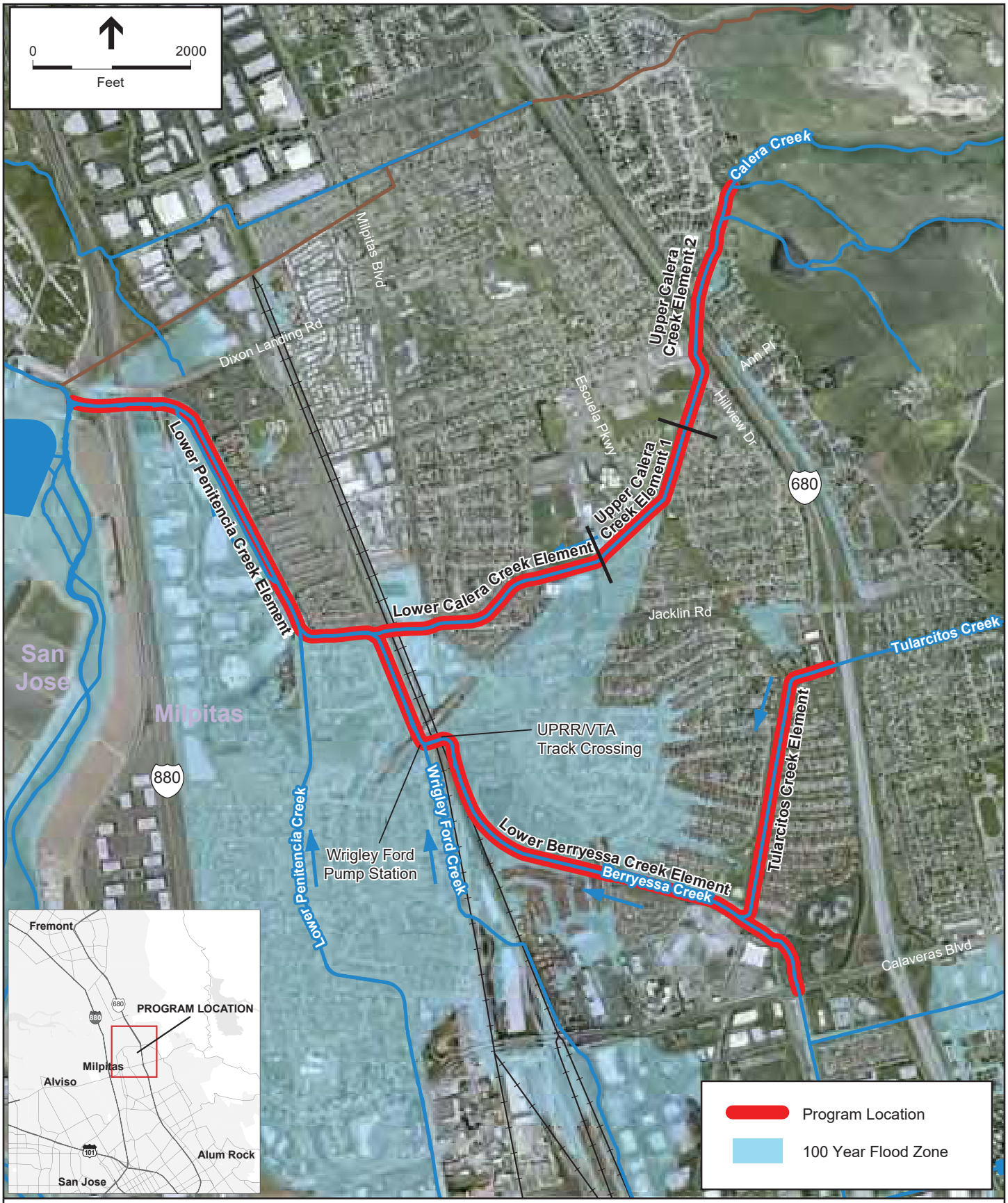
The Santa Clara Valley Water District (District) prepared this ~~draft~~ environmental impact report (~~D~~EIR) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of implementing the proposed Lower Penitencia Creek Improvements Project (proposed project). This document was prepared in accordance with the requirements of the California Environmental Quality Act of 1970 (as amended) (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15000 et seq.).

1.1 Project Background

~~The District has approved and is planning~~This project relates to capital improvements to Lower Penitencia Creek and several of its tributaries. The Lower Berryessa Creek Program (Program) consists of capital improvements to provide flood protection to portions of four creeks in the Berryessa Creek watershed. As shown in **Figure 1-1**, the Program is divided by geography and implementation sequence into six elements, each located in the City of Milpitas in Santa Clara County:

- Lower Berryessa Creek
  - Lower Berryessa Creek Element
- Calera Creek
  - Lower Calera Creek Element
  - Upper Calera Creek Element 1
  - Upper Calera Creek Element 2
- Tularcitos Creek
  - Tularcitos Creek Element
- Lower Penitencia Creek
  - Lower Penitencia Creek Element (the proposed project)

In 2011, the District prepared the *Lower Berryessa Creek Program Environmental Impact Report* (Program EIR); this ~~was a program-level~~ EIR ~~covering~~ covers all capital improvements on the four creeks. The 2011 Program EIR (State Clearinghouse Number 2007092084) evaluated environmental consequences of improvements to Lower Penitencia Creek at a programmatic level of detail and prescribed additional impact evaluation to occur when the project was further defined.



Source: ESA 2011

Figure 1-1.
Lower Berryessa Creek Program Area

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

This ~~D~~EIR analyzes proposed improvements to Lower Penitencia Creek, the downstream-most element of the Program, which receives water conveyed by the upstream Program elements. The proposed project extends from the Lower Penitencia Creek/Coyote Creek confluence upstream to the San Andreas Drive bridge in Milpitas, California.

In its current condition, Lower Penitencia Creek has existing capacity to accommodate the existing 1-percent flood flow[1] without overtopping its levees. However, upstream capital improvements to the Program elements on Lower Berryessa Creek, Lower Calera Creek, and Tularcitos Creek and enlargement of the Upper Berryessa Creek channel, which is currently under construction by the U.S. Army Corps of Engineers, will increase the size of the 1-percent flow. After the other upstream elements of the Program are improved and Upper Berryessa Creek is enlarged, the increased 1-percent flow from the upstream channels delivered to Lower Penitencia Creek will exceed the existing flow conveyance capacity of Lower Penitencia Creek. Therefore, the District proposes the Lower Penitencia Creek Improvements Project (proposed project) to contain the projected 1-percent flow after completion of the upstream channel improvements, thereby preventing the 1-percent flow from overtopping the banks of Lower Penitencia Creek in the future.

The District has prepared the current project EIR analyzing, at a project-specific level of detail, the proposed improvements to Lower Penitencia Creek.

1.2 Overview of CEQA Requirements

CEQA's basic purposes are to:

- Inform governmental decision makers and the public about the potential significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant avoidable damage to the environment by requiring implementation of feasible mitigation measures or project alternatives that would substantially lessen any significant effects that a project would have on the environment; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

With certain exceptions, CEQA requires all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority before approving or carrying out those projects. CEQA establishes both procedural and substantive requirements that agencies must satisfy to meet CEQA's objectives. For example, the agency with principal responsibility for approving or carrying out a project (the lead agency) must first assess whether a proposed project would result in significant environmental impacts. If there is substantial evidence that the project would result in

[1] A 100-year flood event, sometimes referred to as a 1-percent flood event, has an estimated 1-percent probability of occurring in any given year.

significant environmental impacts, CEQA requires that the agency prepare an EIR, analyzing both the proposed project and a reasonable range of potentially feasible alternatives.

As described in the State CEQA Guidelines (14 CCR Section 15121[a]), an EIR is an informational document that assesses potential environmental effects of a proposed project and identifies mitigation measures and alternatives to the project that could reduce or avoid potentially significant environmental impacts. Other key CEQA requirements include developing a program for implementing and monitoring the success of the identified mitigation measures and carrying out specific public notice and distribution steps to facilitate public involvement in the environmental review process. As an informational document used in the planning and decision-making process, an EIR's purpose is not to recommend either approval or denial of a project. It is important to note that an EIR does not expand or otherwise provide independent authority for the lead agency to impose mitigation measures or avoid project-related significant environmental impacts, beyond the authority already provided within the lead agency's jurisdiction.

1.2.1 Intent and Scope of this Document

In proposing to construct and operate the project as identified in Chapter 2, *Project Description,* of this ~~D~~EIR, the District is proposing to carry out and approve a discretionary project subject to CEQA (14 CCR Section 15378). The District will use the analyses presented in this ~~D~~EIR, the public response to those analyses, and the whole of the administrative record to evaluate the proposed project's environmental impacts and to further modify, approve, or deny approval of the proposed project.

1.2.2 Baseline Conditions

Under CEQA, the environmental setting or "baseline" serves as a gauge to assess changes to existing physical conditions that would occur as a result of a proposed project. In accordance with State CEQA Guidelines Section 15125, for purposes of this ~~D~~EIR, the environmental setting is the existing physical conditions at the time the Notice of Preparation of an EIR (NOP) was published (June 11, 2015). However, the project reach is within a larger maintenance program operated by the District that involves routine sediment removal and vegetation management activities. The existing physical conditions in the channel within the project area reflect a range of conditions that are influenced by routine maintenance activities. Since the NOP was published, the District has conducted maintenance work at the project site in November 2015, including sediment removal from the channel. As a result, the "existing conditions" (i.e., baseline conditions) of the project site range from the conditions in June 2015 to the conditions in late November 2015. The project site is also influenced by tidal fluctuations, and the range of sediment, vegetation growth, and tidal elevations and water quality that result from those fluctuations are evaluated equally in this analysis.

Please note, that since the NOP was published, two residential development projects, just west of Reach 3 (Waterstone and iStar), have been under construction during the preparation of this ~~Draft~~ EIR document. While no residents were living in the new townhomes at the time the ~~Draft~~ EIR was prepared, given the high housing demands in the Milpitas and South Bay Area, these developments will likely be inhabited by the time construction of the Lower Penitencia Creek Improvements Project begins. For this reason and for the purposes of this EIR, some analyses (e.g., Section 3.2, *Aesthetics*, and Section 3.11, *Noise and Vibration*) consider the proposed project's potential effects on these residents.

1.3 CEQA Process

1.3.1 Berryessa Creek Program EIR

As described above, the Lower Penitencia Creek Element is one of six elements evaluated in the Lower Berryessa Creek Program EIR. The District prepared the *Lower Berryessa Creek Program Final EIR* (SCH #2007092084) in December 2011. That Program EIR analyzed at a programmatic level of detail the environmental impacts of improving Lower Penitencia Creek. This EIR builds upon the analysis presented in the Program EIR by evaluating the environmental impacts of the proposed Lower Penitencia Creek improvements at a more specific project level of detail based on the current design of the improvements. The current project EIR evaluates potential project effects at greater level of detail than the programmatic design information available in 2011. Note that this EIR does not tier from the Program EIR, but evaluates the current project independently and entirely.

1.3.2 Notice of Preparation of an EIR

An NOP for the proposed project was prepared in accordance with State CEQA Guidelines Section 15082 and circulated to the State Clearinghouse on June 11, 2015. The scoping period continued for 30 days and concluded on July 10, 2015. The NOP presented general background information on the proposed project, the scoping process, and the environmental issues to be addressed in the EIR. Approximately 28 copies of the NOP were mailed or emailed to a broad range of stakeholders, including local, state, and federal regulatory agencies and jurisdictions and nonprofit organizations. The NOP is included in this DEIR in Appendix A, *Scoping Summary Report*.

1.3.3 Scoping Comments and Meetings

The District accepted written comments on the proposed project, the scoping process, and the environmental issues to be addressed during the 30-day scoping period. During the scoping period, two comment letters were received: one from the California Department of Transportation and one from the San Francisco Bay Regional Water Quality Control Board. Copies of comment letters received during the scoping period are included in Appendix A, *Scoping Summary Report*.

1.3.4 Draft EIR

The District ~~has~~ prepared the~~is~~ DEIR, as informed by public and agency input received during the scoping period, to disclose potentially significant environmental impacts associated with the proposed project. Where any such impacts are significant, feasible mitigation measures and potentially feasible alternatives that would substantially lessen or avoid such effects are identified and discussed.

1.3.5 Public Review and Meetings

The DEIR ~~is currently undergoing~~was available for public review for 45 days. The public review period provide~~s~~d the public an opportunity to comment on the DEIR to the lead agency. During the public review period, the District ~~will hold~~held a public meeting. The meeting ~~will begin~~began with a brief overview of the proposed project and the analysis and conclusions set forth in the DEIR. This introductory presentation ~~will then be~~was followed by

the opportunity for interested members of the public to provide oral and written comments to the District regarding the proposed project and the DEIR.

This information ~~is~~was also included in the Notice of Availability of ~~this~~the DEIR.

1.3.6 Final EIR

Written and oral comments received in response to the DEIR ~~will be~~were addressed in a Response to Comments document that, together with the DEIR and any related changes to the substantive discussion in the DEIR, ~~will~~ constitute ~~the~~this Final EIR (FEIR). The Response to Comments document is presented in Volume 1 of this FEIR. ~~The~~This FEIR, in turn, will inform the District's exercise of its discretion as a lead agency under CEQA in deciding whether or how to approve the proposed project.

1.3.7 Mitigation, Monitoring, and Reporting

CEQA requires lead agencies to adopt a Mitigation Monitoring and Reporting Program (MMRP) for mitigation measures that are adopted to avoid or substantially lessen significant effects on the environment. All adopted measures will be included in an MMRP to ensure CEQA compliance during project construction and operation (State CEQA Guidelines Section 15097[a]).

1.4 Organization of this ~~D~~EIR

This ~~D~~volume of the EIR contains the following components:

Executive Summary. A project summary, description of the issues of concern, list of project alternatives, and summary of environmental impacts and mitigation measures are provided in the *Executive Summary*.

Chapter 1, *Introduction*. This chapter describes the purpose and organization of the EIR and its preparation, review, and certification process.

Chapter 2, *Project Description*. This chapter summarizes the proposed project, including a description of the project need, purpose, and objectives; project area; project components, design alternatives, and construction activities; and other actions that would be taken under the proposed project.

Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*. Section 3.1 is an introduction to the impact analysis conducted in this DEIR and describes resource topics that have been eliminated from further analysis. Sections 3.2 through 3.14 describe the environmental resources and potential environmental impacts of the proposed project. Each of these chapters describes the existing setting and background information for the resource topic area under consideration. This background provides the reader with the basis to understand the conditions that could be affected by the proposed project. These chapters present impact evaluations and discuss the criteria used in determining the significance levels of the proposed project's environmental impacts. Each of these chapters also identifies mitigation measures to reduce, where possible, the adverse effects of potentially significant impacts.

Chapter 4, *Other Statutory Considerations*. This chapter addresses the proposed project's potential to contribute to cumulative impacts. Chapter 4 also outlines the proposed project's potential to induce growth and identifies significant, irreversible environmental changes resulting from the project.

Chapter 5, *Alternatives*. This chapter describes the process by which alternatives to the proposed project were developed, screened, and evaluated. This chapter also summarizes the likely environmental impacts of the alternatives and identifies the environmentally superior alternative.

Chapter 6, *Report Preparers*, lists the individuals involved in preparing this DEIR.

Chapter 7, *References*, provides a bibliography of printed references, websites, and personal communications used in preparing this DEIR.

Volume 3 of this FEIR is organized as follows:

Appendix A is the Scoping Summary Report, which includes the NOP issued by the District, a summary of the scoping process, comments received during the scoping period, and copies of comments received.

Appendix B contains a summary of local plans and policies relevant to the proposed project.

Appendix C contains the air quality and greenhouse gas emissions calculations used for the project's air quality and greenhouse gas emissions impact evaluations.

Appendix D contains the preliminary wetland delineation prepared for the proposed project.

Appendix E contains a table summarizing special-status plants that were evaluated for their potential occurrence in the project area.

Appendix F contains detailed descriptions of special-status animal species potentially occurring in the project area.

Appendix G contains noise calculations used to determine the proposed project's noise effects on the surrounding environment.

Appendix H includes the traffic impact analysis memorandum completed for the proposed project.

Appendix I contains the draft mitigation monitoring and reporting program prepared for the proposed project.

Appendix J contains the Notice of Availability and DEIR distribution list.

Appendix K includes the public meeting presentation and sign-in sheet.

1.5 Submittal of Comments

The District ~~is circulating~~circulated the DEIR for a 45-day public review and comment period, as identified in the Notice of Availability. As discussed in Section 1.2.4 above, the District ~~will~~hosted a public meeting during this period at which oral and written comments will be received. The purpose of public circulation and the public meeting ~~is~~was to provide agencies and interested individuals with opportunities to comment on or express concerns regarding the contents of the~~is~~ DEIR.

Meeting attendees were allowed to submit ~~W~~written and oral comments concerning ~~this~~the DEIR ~~may be submitted~~ at the public meeting described above, and written comments ~~can be provided at any time~~were submitted during the DEIR public review period. ~~All written comments must be received by 5:00 p.m. on the final date of public review, as identified in the Notice of Availability.~~ Written comments ~~should be~~were directed to the name and address listed below:

Michael Coleman, Environmental Planner II
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
mcoleman@valleywater.org

Submittal of written comments via e-mail (Microsoft Word or Adobe PDF format) ~~is~~was preferred. Written and oral comments received in response to ~~this~~the DEIR during the public review period w~~ill be~~ere addressed in ~~a~~ the Response to Comments section of the FEIR (Volume 1).

Chapter 2
PROJECT DESCRIPTION

2.1 Overview

The District prepared this EIR in accordance with CEQA to identify and evaluate environmental effects of the proposed Lower Penitencia Creek Improvements Project (proposed project). During the CEQA process, the District considers the proposed project as a proposed activity only. Pending the outcome of the CEQA process, the proposed project will be submitted to the District Board of Directors for their review and approval.

The objective of this project description is to provide the public with a clear understanding of the proposed project, including its objectives, location, proposed elements, construction, built features, operation, and required permits and approvals. This project description does not presume that the proposed project is considered approved, nor will it necessarily be approved, until the environmental and planning process has been completed.

2.2 Project Objectives

Lower Penitencia Creek is situated in the northeasterly portion of Santa Clara County within the city of Milpitas in the Berryessa Creek watershed (**Figure 2-1**). Lower Penitencia Creek is an open trapezoidal channel with both earth- and concrete-lined sections. Channel capacity improvements were constructed in 1955, 1962, 1965, and 1984. Lower Penitencia Creek's east levee, between California Circle and Berryessa Creek, is currently certified by the Federal Emergency Management Agency (FEMA), which means that the levee meets federal design, construction, maintenance, and operation standards to adequately reduce the risk of flooding from a major flood (i.e., a flood with a 1-percent chance of occurring in any given year), and areas behind the levee are shown as moderate-risk zones on FEMA flood maps. Two tributaries, Berryessa Creek and East Penitencia Channel, flow into Lower Penitencia Creek at the upstream terminus of the project area. Lower Penitencia Creek itself flows into Coyote Creek at the downstream terminus of the project area.

The Lower Berryessa Creek Element, a component of the Lower Berryessa Creek Program, is located directly upstream of Lower Penitencia Creek, and discharges to Lower Penitencia Creek. The District is currently constructing improvements to the Lower Berryessa Creek Element (hereinafter referred to as the Lower Berryessa Creek Project) (SCVWD 2017). The Lower Calera Creek Element discharges to Lower Berryessa Creek. Flood protection improvements to the Lower Calera Creek Element are currently under design, and are expected to be constructed in the next 2 to 3 years. The U.S. Army Corps of Engineers' (USACE's) Upper Berryessa Creek Flood Risk Management Project (USACE 2014), located directly upstream of the Lower Berryessa Creek Project, is also currently under construction. The location of these two projects in relation to the proposed project are shown in **Figure 2-2**.

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Figure 2-1
Project Location

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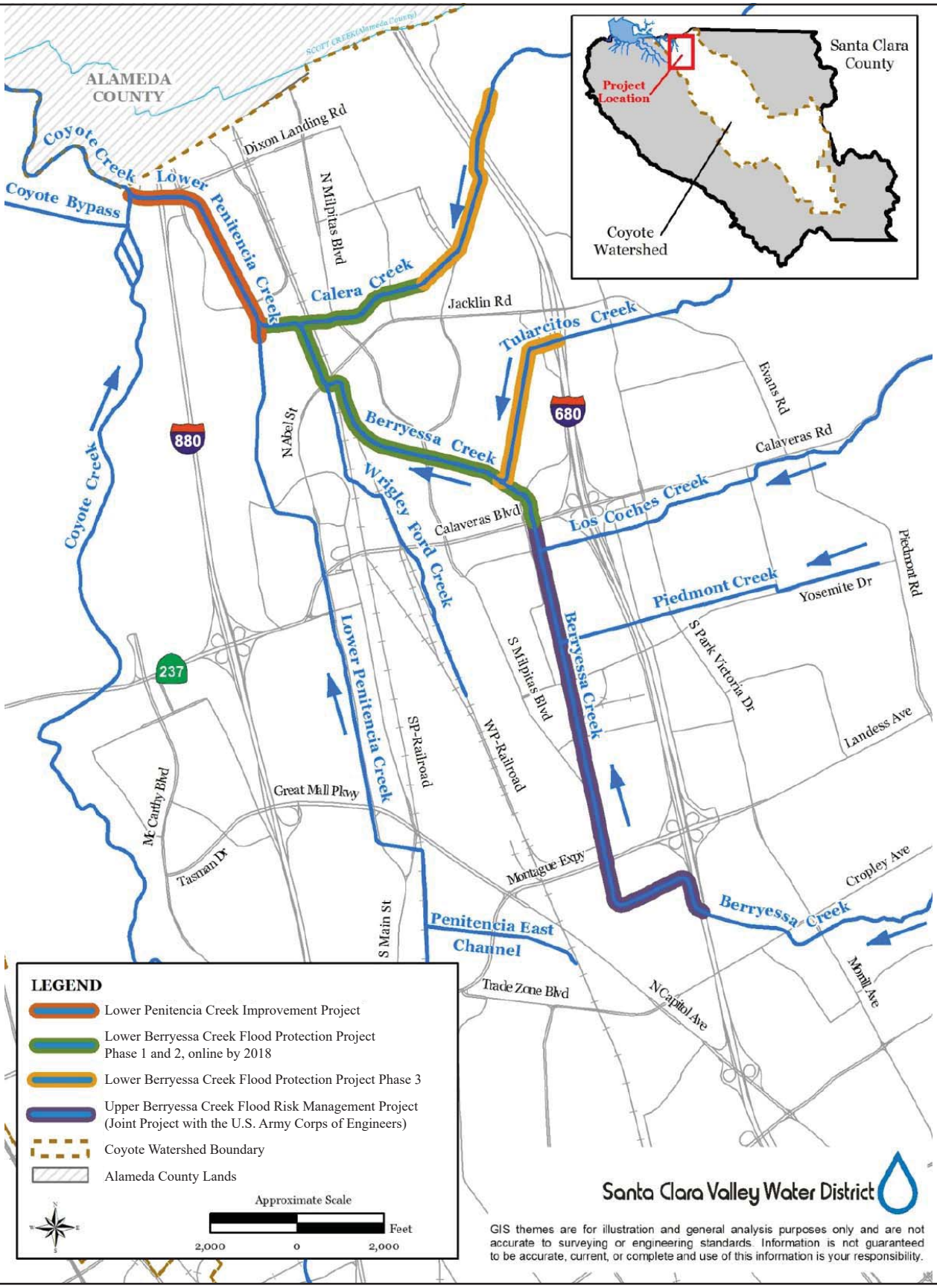
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project



Source: SCVWD 2016

Figure 2-2. Location of Proposed Project and Upstream Flood Protection Projects

Prepared by:

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Construction of USACE's Upper Berryessa Creek Flood Risk Management Project (Interstate 680 [I-680] to Calaveras Boulevard) is scheduled for completion in late 2017 (SCVWD 2016). The District began construction of the Lower Berryessa Creek Project (Calaveras Boulevard to Lower Penitencia Creek) in summer 2015 and expects to complete construction in late 2018 (SCVWD 2016). Together, the Upper and Lower Berryessa Creek projects will protect 3,400 homes, businesses, and public facilities from the 1-percent flood event (SCVWD 2011a).

After construction of the Lower Berryessa Creek and Upper Berryessa Creek projects is completed, the Upper and Lower Berryessa channels will have the capacity to convey the 1-percent flood event (i.e., the stream flow with a 1-percent likelihood of being equaled or exceeded in a given year; also referred to as the 100-year flow) downstream to Lower Penitencia Creek. Because these projects will contain the 100-year event within the channel without overtopping of banks, the amount of water conveyed downstream to Lower Penitencia Creek will increase (i.e., water that would have overflowed the creek banks onto surrounding areas will now remain within the channel). Under current conditions, the estimated 1-percent (100-year) design discharge for Lower Penitencia Creek at its confluence with Coyote Creek is 4,830 cubic feet per second (cfs). In the future (after completion of the Lower and Upper Berryessa Creek projects), Lower Penitencia Creek's 1-percent flow would increase to an estimated 6,900 cfs (SCVWD 2016). In its existing condition, Lower Penitencia Creek lacks the capacity to convey the projected future 1-percent flow.

A primary objective of the proposed Lower Penitencia Creek project is to convey the increased 1-percent flows from the improved Upper and Lower Berryessa Creeks to Coyote Creek without overtopping of the Lower Penitencia Creek banks. This would extend the flood protection benefits from the upper watershed projects downstream to the Coyote Creek/ Lower Penitencia Creek confluence. The proposed project is intended to meet the following specific objectives:

- Convey the Lower Berryessa Creek 1-percent design flow;
- Meet required water surface elevations at the confluences of Lower Penitencia Creek with Coyote Creek and Berryessa Creek;
- Minimize the need for seasonal removal of sediment and non-woody vegetation;
- Maintain existing FEMA accreditation of the east levee located between California Circle and Berryessa Creek; and
- Ensure the project improvements meet FEMA certification requirements.

In the long term, the 1-percent or 100-year flow on Lower Penitencia Creek could increase to 8,720 cfs (i.e., the ultimate flow) if additional channel improvements are made to Berryessa Creek upstream of I-680, which is located about 4 miles upstream of the confluence of Lower Penitencia Creek and Lower Berryessa Creek (SCVWD 2016). Channel improvements upstream of I-680 are not currently planned by the District and would occur only after the District conducted additional planning studies and CEQA analysis of those improvements, which would take many years (SCVWD 2016). The proposed project would accommodate the 6,900-cfs flow in Lower Penitencia Creek projected to result from construction of the Upper Berryessa Creek Flood Risk Management Project by USACE and construction of the Lower Berryessa Creek Project by the District. The floodwalls included in the proposed project would be designed to accommodate the anticipated ultimate 8,720 cfs flow, however, as only a minor increase in floodwall heights is required above the 6,900-cfs floodwall heights. All other project elements would be designed to accommodate the projected 100-year flow of

6,900 cfs, which would result after the completion of improvements to Lower Berryessa Creek and Upper Berryessa Creek (currently under construction).

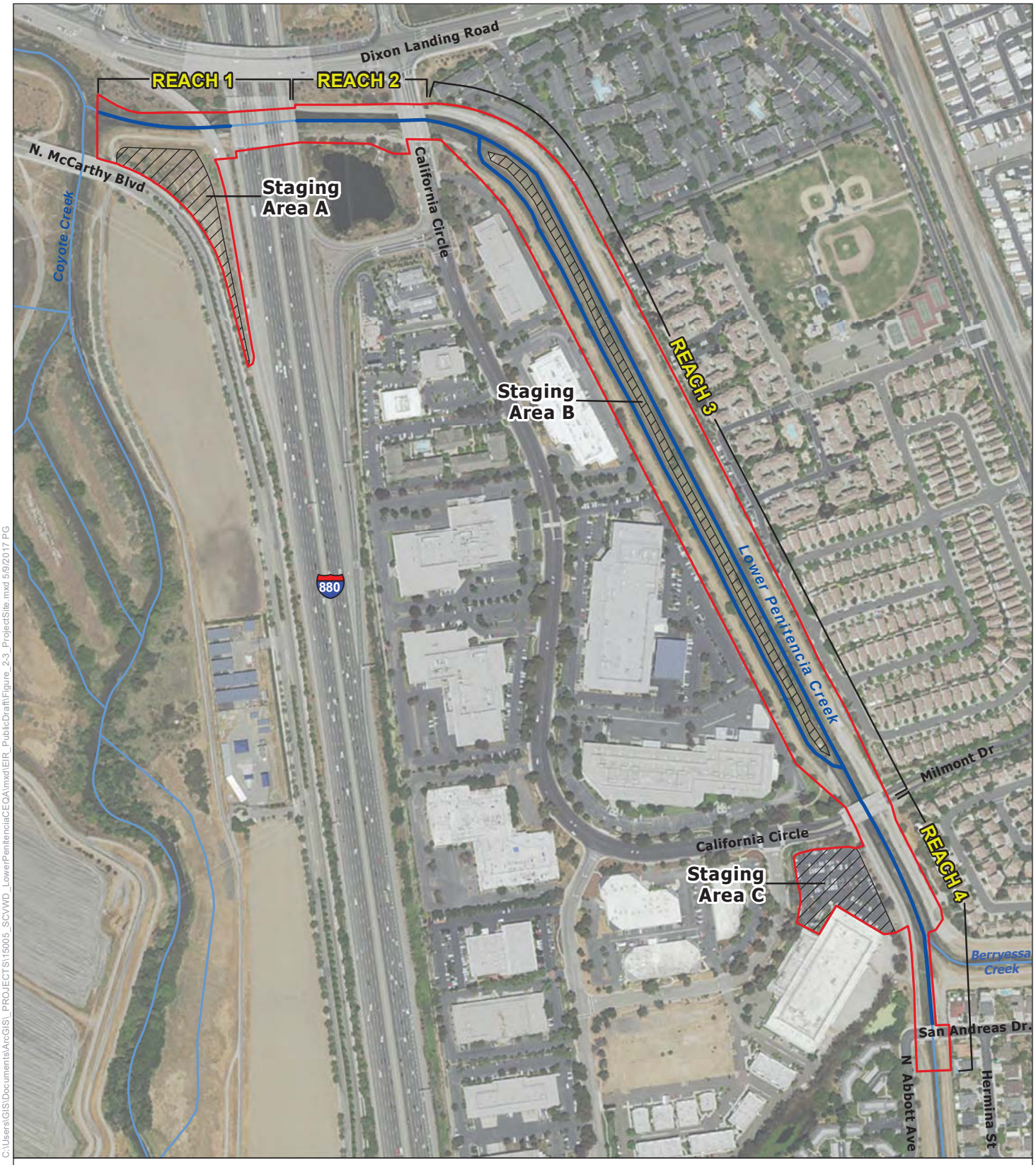
The proposed project would be necessary to prevent flooding in the project vicinity during a future 1-percent event. The proposed project is also necessary to maintain the existing FEMA accreditation[1] of the Lower Penitencia Creek east levee, located between California Circle and the Lower Berryessa Creek confluence, after construction of the Upper and Lower Berryessa Creek projects. If the Lower Penitencia Creek east levee were to be decertified by FEMA (i.e., if it no longer provided 100-year flood protection), a portion of Milpitas would be returned to the flood hazard zone.

2.3 Proposed Project Location and Setting

The project area on Lower Penitencia Creek is located in the lower portion of the Coyote Creek watershed on the east side of the Santa Clara Valley. Lower Penitencia Creek receives streamflow from approximately 28.2 square miles of upstream catchment area in the watershed east and south of the project area. These upstream watershed lands consist mostly of hillslopes in the western portion of the Diablo Range. Closer to the project area, the lower watershed is urbanized, and storm runoff moves quickly through the City of Milpitas' storm drain system to the Lower Penitencia Creek channel. The main tributaries to Lower Penitencia Creek are the East Penitencia Channel and Lower Berryessa Creek. Lower Penitencia Creek flows through residential and office park/commercial areas in the City of Milpitas before reaching its confluence with Coyote Creek, which drains to south San Francisco Bay.

The proposed project is located in a developed area in the city of Milpitas, Santa Clara County, California. As shown in **Figure 2-3**, the upstream limit of the proposed project is upstream of the San Andreas Drive bridge, just upstream of Lower Penitencia Creek's confluence with Lower Berryessa Creek. The downstream limit of the proposed project is at the creek's confluence with Coyote Creek.

[1] FEMA has the responsibility of accrediting levee systems that are defined as providing protection from the base flood. FEMA has established a set of design, operation, and maintenance criteria that must initially be met and must continue to be met in order for a levee system to be recognized as providing a 1-percent annual level of flood protection on National Flood Insurance Program maps or Digital Flood Insurance Rate Maps.



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Project Boundary

Staging Area

Figure 2-3
Project Site

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Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

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Within the project area, the total length of the affected creek channel is approximately 5,000 linear feet. The project area includes four reaches of Lower Penitencia Creek (Figure 2-3), as listed below:

- Reach 1: Coyote Creek confluence to Interstate 880 (I-880) (800 feet)
- Reach 2: I-880 to California Circle (500 feet)
- Reach 3: California Circle to Milmont Drive (3,000 feet)
- Reach 4: Milmont Drive to San Andreas Drive (800 feet)

The existing Lower Penitencia Creek channel is a trapezoidal flood control channel with both earth and concrete-lined sections, bounded on its north/east and south/west banks by earthen levees. In Reach 3, primary and secondary channels are separated by a central berm. Vehicular bridges for the I-880 southbound ramp, I-880, California Circle, Milmont Drive, and San Andreas Drive cross the creek channel in the project area. The banks and/or bed of Lower Penitencia Creek are lined with concrete at two areas: upstream of the California Circle Bridge and between the Milmont Drive Bridge and the Lower Berryessa Creek confluence. Additionally, a concrete-lined crossing at the southern end of the Reach 3 secondary channel allows vehicle access to the central berm in this reach. An unpaved maintenance road runs the length of the central berm. Existing maintenance roads are located on the levee crests on both sides of the creek in Reaches 2, 3, and 4. In Reach 1, a maintenance road is located on the south bank, but not on the north bank. Additionally, a depressed maintenance road is located along the inboard eastern levee between California Circle and Milmont Drive (Reach 3).

2.4 Relationship to Other District Activities

In an ongoing effort to ensure flood protection in the five watersheds under its jurisdiction, the District is currently engaged in several flood protection projects. Flood protection activities most closely associated with the proposed project include the Lower Berryessa Creek Project described in Chapter 1 and Section 2.2 of this chapter, the Upper Berryessa Creek Flood Risk Management Project, and the District's Stream Maintenance Program, described in Section 2.4.1 below. Additionally, the District has developed standard procedures (i.e., best management practices [BMPs]) that are applied during construction and operation of its flood protection projects. These BMPs are described in Section 2.4 and listed at the end of this chapter.

2.4.1 Stream Maintenance Program

The District's Stream Maintenance Program (SMP) provides maintenance standards and guides maintenance activities for the District to meet its designated flood protection mandates throughout Santa Clara County, including at the Lower Penitencia Creek channel. SMP activities are intended to maintain a channel to its original design and are not conducted (or allowed) to increase the flow conveyance capacity of a channel. The SMP includes many measures to avoid and minimize potential environmental impacts associated with maintenance activities. The SMP is an ongoing, countywide program that is included in this EIR's cumulative impact analysis (Chapter 4, Section 4.3).

The SMP covers sediment removal, vegetation management (including mowing of levee banks for fire safety purposes), streambank protection, management of wildlife conflicts, and minor maintenance activities such as fence repair and graffiti removal. In 2012, the District

prepared an EIR for updates to the SMP (SCVWD 2012). In 2014, programmatic permits were issued for SMP activities extending through 2023 (SCVWD 2014a).

The project area along Lower Penitencia Creek is maintained by the District in accordance with the SMP. Reaches 2, 3 and 4 (i.e., I-880 crossing to Lower Berryessa Creek confluence) of the Lower Penitencia Creek channel undergo periodic sediment removal and are classified as pre-mitigated areas for sediment removal activities. In 2015, the District removed accumulated sediment in Reaches 2, 3, and 4 of Lower Penitencia Creek to restore the design flow conveyance capacity of the channel. Sediment removal activities conducted under the SMP maintain the channel's current design capacity and do not provide any additional conveyance capacity beyond the existing channel design. Because the sediment removal area is classified as pre-mitigated, no additional mitigation was required for that activity. In contrast to SMP activities, the proposed project would increase the flow conveyance capacity of Lower Penitencia Creek. Following construction of the proposed project, the future maintenance of the channel would be conducted in compliance with the District's SMP.

2.4.2 District Best Management Practices

The District has developed, and regularly updates, the *Santa Clara Valley Water District Best Management Practices Handbook* (Handbook), which provides a comprehensive list of standard procedures that are consistently applied to design, development, construction, and operation of District projects, with the purpose of avoiding or minimizing adverse environmental effects (SCVWD 2014b). The Handbook provides general technical guidance and standardized procedures for all District projects; it does not address project-specific issues. The Handbook refers to these procedures as BMPs. Relevant BMPs from the Handbook are incorporated into the proposed project and are identified in the impact analyses in Chapter 3. The full text of relevant BMPs are presented in **Table 2-4** at the end of this chapter.

2.5 Project Development

At the time the *Lower Berryessa Creek Program Environmental Impact Report* (Program EIR) was developed in 2011, the District anticipated that a hydrologic and hydraulic analysis of the creek from just upstream of the Lower Berryessa Creek confluence downstream to I-880 was needed to determine the 100-year water surface elevation and hydraulic grade line throughout the Lower Penitencia Creek Project reach that would result from upstream improvements (i.e., the Lower Berryessa Creek Project and the USACE's Upper Berryessa Creek Flood Risk Management Project). Because this analysis was not complete at the time the Program EIR was developed, the Lower Penitencia Creek Improvements Project was evaluated at a more general level of detail in the Program EIR, without the specific understanding of project needs based on the forthcoming hydraulic analysis. The preliminary concept of the Lower Penitencia Creek Element entailed returning the channel to design capacity by removing accumulated sediment and vegetation in the channel and lowering the in-channel bench between the creek's confluence with Lower Berryessa Creek and California Circle. More specifically, the District envisioned removing accumulated sediment between California Circle and I-880, and within the reach downstream of I-880 (SCVWD 2011a).

Since publication of the Program EIR, the District has developed and analyzed a number of conceptual design alternatives that could fulfill the project objectives (identified in Section 2.2). The conceptual design alternatives included different combinations of infrastructure upgrades to improve flood protection at Lower Penitencia Creek. Conceptual design

alternatives were evaluated for their hydraulic and engineering conditions and were refined based on the District's Natural Flood Protection (NFP) evaluation process. The NFP evaluation is documented in the Staff-Recommended Alternative Report (SCVWD 2015) for the project. The NFP evaluation considered input received during meetings held during 2014 and 2015 from the City of Milpitas, members of the local community, and District experts.

Of the alternatives considered initially, four potentially feasible design alternatives were evaluated using the NFP process, and the results of that analysis are documented in the District's Staff-Recommended Alternatives Report (SCVWD 2015). The four design alternatives are:

- Design Alternative 1: widen the California Circle crossing, construct floodwalls, raise a levee, and construct wetland benches;
- Design Alternative 2A: widen the California Circle and Milmont Drive crossings, construct floodwalls, relocate a levee, and construct wetland benches in Reaches 1 and 2;
- Design Alternative 4: widen the California Circle and Milmont Drive crossings, construct floodwalls (including a taller floodwall), relocate a levee, and construct wetland benches; and
- Design Alternative 6: widen the California Circle crossing, construct floodwalls, raise a levee, remove the central berm in Reach 3, and line the channel with concrete.

Each design alternative was rated according to how well it would accomplish the project objectives. Based on the evaluation process, District staff determined that Design Alternative 2A would best meet the project objectives. Upon completion of hydraulic and geotechnical studies prepared for Alternative 2A, the District further refined Alternative 2A to develop the proposed project. Specifically, the District confirmed that the project would not require widening of the California Circle and Milmont Drive bridges, a wetland bench would be feasible in Reach 1 but not in Reach 2, and headwalls (see Section 2.6.1) would need to be installed on the upstream and downstream sides of the San Andreas Drive bridge. Chapter 5, *Alternatives*, analyzes potential environmental impacts of the other three potentially feasible design alternatives and indicates how these impacts compare to impacts of the proposed project.

2.6 Characteristics of the Proposed Project

The proposed project would meet project objectives for flood protection while accommodating daily tidal fluctuations and expected sea-level rise. The controlling factors for channel conveyance capacity are the 10-year tide and 100-year flow event (after completion of the upstream projects on Lower and Upper Berryessa Creek). The proposed project would be designed to accommodate an expected increase of 2.59 feet in sea level rise over the project's 50-year design life (SCVWD 2016). Proposed project elements for each reach are described below.

2.6.1 Proposed Project Elements

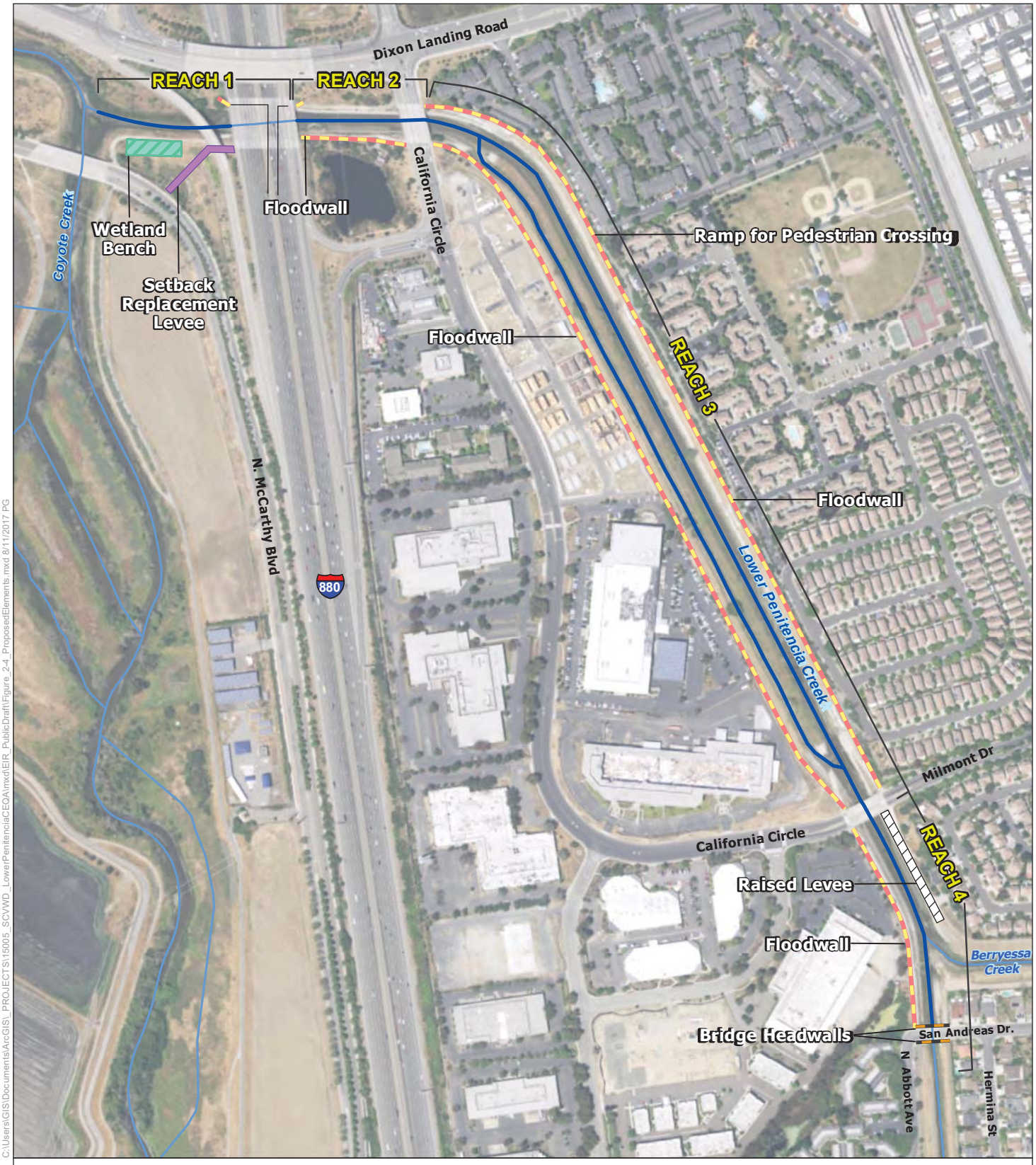
The proposed project includes the following elements: floodwalls in Reaches 2, 3, and 4; setback replacement levee and wetland bench in Reach 1; earthen ramps on the Reach 3 east

bank; bridge headwalls;[2] sediment removal; restoration of maintenance roads disturbed during construction; and hydroseeding and stabilization of disturbed areas. **Table 2-1** summarizes proposed project elements considered for each reach, and general descriptions of these elements are provided below. **Figures 2-4 and 2-5** show conceptual plan view and cross-section views of these elements, respectively.

Table 2-1. Proposed Project Elements Considered for Reach and Bridge Locations

Reach or Bridge	Project Elements
Reach 1 Coyote Creek to Highway 880	Relocated and raised south bank levee with maintenance road on crest Wetland bench on south bank Approximately 50 feet of sheetpile floodwall to the north of channel
Reach 2 I-880 to California Circle	Sheetpile floodwall on top of existing south/west bank levee Approximately 25 feet of sheetpile floodwall on top of existing north/east bank levee near I-880 Removal of about 70 cy of sediment from the concrete-lined channel Relocated access ramp to City's pump station Maintenance road improvements
Reach 3 California Circle to Milmont Drive	Sheet pile floodwalls on top of existing west and east bank levees Earthen fill to floodwall to allow the existing Penitencia Creek Trail to cross over the new floodwall Maintenance road improvements Removal of accumulated sediment from low-flow channel
Reach 4 Milmont Drive to San Andreas Drive	Sheetpile floodwalls on top of existing west bank levee Raising of existing east bank levee by up to 6 feet Removal of about 730 cy of sediment from the concrete-lined channel Maintenance road improvements
San Andreas Drive Bridge	Headwalls on the downstream and upstream faces of San Andreas Drive bridge

[2] A headwall is an impervious wall connecting to a bridge over a stream channel to prevent high water from flowing onto the bridge deck.



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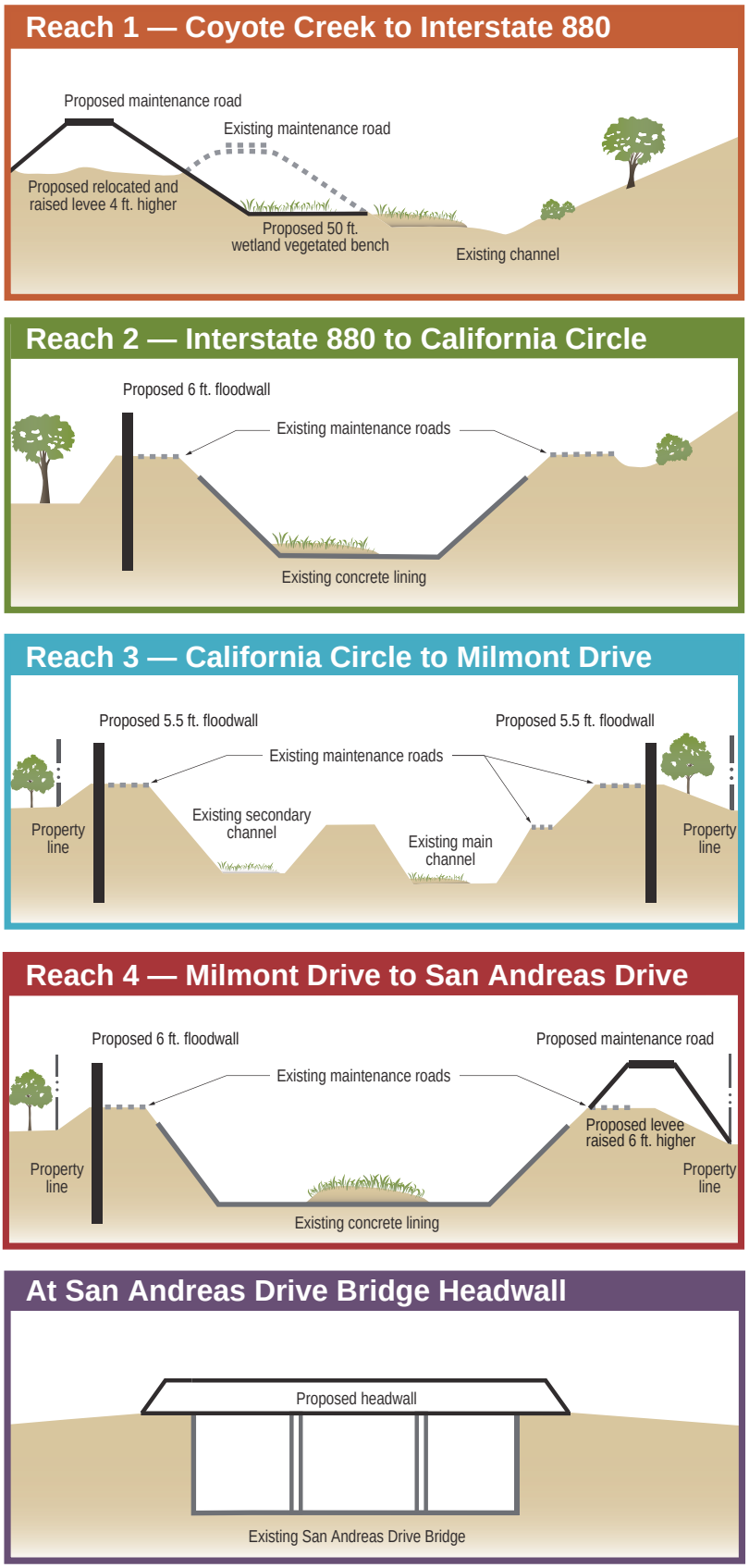
Horizon WATER and ENVIRONMENT

Proposed Elements

- Raised Levee
- Setback Replacement Levee
- Wetland Bench
- Bridge Headwall
- Floodwall

Figure 2-4
Proposed Project Elements

Lower Penitencia Creek Improvements Project



Source: SCVWD 2017

Figure 2-5. Conceptual Cross-Section View of Proposed Project Elements by Reach

Prepared by:

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Floodwalls

New vertical sheet pile floodwalls would be constructed on top of the existing levees parallel to the creek channel in all four ~~R~~reaches ~~2, 3, and 4~~. Floodwalls would provide increased flood protection and freeboard[3] necessary to comply with FEMA requirements and the District's freeboard standards. Floodwalls would vary in height from approximately 5.5 to 6 feet above the levee crest along the Project. In Reaches 2 and 4, the floodwalls would be 6 feet tall; and in Reach 3, the floodwalls would be 5.5 feet tall. Floodwall heights are measured from the existing top of the levees. Some of the floodwalls would be installed on the outboard side slope of levees and would appear taller when viewed from outside the channel.

The floodwalls would be composed of overlapping coated-steel sheet piles driven into the ground. While the District has not yet selected a color coating, it is anticipated that the coating would be non-reflective and a neutral color selected to blend into the surrounding environment **Figure 2-6** (top two photos) shows example floodwalls comprised of coated sheet pile. Although the proposed floodwalls are currently in the design phase, the new floodwalls would appear similar to those shown in Figure 2-5. The sheet piles would be coated to prevent corrosion and improve aesthetics. Additional description of the floodwalls is provided by project reach below.

Reach 1. An approximately 50-foot-long section of floodwall would be constructed on the north/east levee near I-880.

Reach 2. A floodwall would be constructed on the outboard side of the south/west levee in Reach 2. To accommodate access to the California Circle Pump Station, which is located just south of the District's this levee, an 18-foot-wide ramp accessible from California Circle would be constructed behind the floodwall. A 26-foot-long segment of floodwall would be constructed on the north/east levee near I-880.

Reach 3. Floodwalls would be constructed on both sides of the channel in Reach 3. On the west bank of Reach 3, the floodwall would be constructed on the outboard side of the maintenance road. On the east bank of Reach 3, between Milmont Drive and the point at which the City trail merges with the District's maintenance road, the floodwall would be on the inboard side of the maintenance road. To the north of the trail merge, the floodwall would be on the outboard side of the maintenance road. The east levee floodwall in Reach 3 would include a pedestrian crossing to allow for continued use of the existing Penitencia Creek Trail (owned by the City of Milpitas) that parallels and connects with the trail located on the District's levee-crest maintenance road. The floodwall crossing would require raising the slope of the existing trail to meet the top of the proposed floodwall, building a rectangular earthen pad at the crest point, and building an earthen ramp connecting to the existing trail at the outboard base of the east levee. The existing grade of the Penitencia Creek Trail would be increased to meet the ramp. In both directions of the maintenance road, the grade would be sloped at no greater than 1:12 (vertical:horizontal) to ensure compliance with the Americans with Disabilities Act and conform to the existing maintenance road elevation. To buttress the ramps, sheet pile retaining walls would be installed.

[3] In flood management terminology, freeboard is the height of a given structure above the flood level. FEMA encourages communities to adopt at least a 1-foot freeboard in designated floodways (FEMA 2017).

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Example photo of sheetpile floodwall installed for the
Downtown Guadalupe Flood Protection Project in San Jose, California.

Example photo sheetpile floodwall installed for a project in Long Beach, California.

Photo depicting sheetpile wall installation for a project
along Trabuco Creek in San Juan Capistrano, California.

Another photo showing sheetpile wall installation for a project
along Trabuco Creek in San Juan Capistrano, California

Figure 2-6. Example Photos of Sheet Pile Walls

Prepared by:
Horizon

**Lower Penitencia Creek
Improvements Project**

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Reach 4. A sheetpile floodwall would be installed on the west side of the channel, extending from Milmont drive to San Andreas Drive. The northern portion of floodwall would be installed on the outboard side of the levee (i.e., the outer side facing away from the creek), and the southern portion of floodwall would be located on the inboard side of the levee (i.e., the inner side facing toward the creek).

Raised Levee

On the east bank, the existing earthen levee would be raised by about 5.5 feet, from Milmont Drive to the Lower Berryessa Creek confluence, where it would connect to an existing raised levee along Lower Berryessa Creek.

Setback Replacement Levee

The existing south levee in Reach 1 would be removed and replaced with a taller earthen levee (approximately 2.5 feet taller than the existing levee) located up to 150 feet south of the existing levee. The new levee would have side slopes at a 3:1 to 2:1 (horizontal:vertical) gradient and a minimum top width of 18 feet. A maintenance road surfaced with crushed stone or armoring aggregate would be built on the levee crest. The new levee would have an 18-foot-wide road surfaced with compacted aggregate on its crest that would connect to McCarthy Road and the existing I-880 access gate. The road would be gated at either end and access would be restricted to District maintenance staff

Wetland Bench

A new approximately 0.29-acre bench[4] would be created on the south bank of Reach 1. To create the Reach 1 bench, the existing south/west levee would be removed and a new earthen levee with a crest elevation approximately 2.5 feet higher than the removed levee and would be constructed farther south, away from the channel. The bench would be located between the existing North McCarthy Road embankment at its western end and to the existing I-880 southbound onramp embankment at its eastern end. The bench area would be excavated to an elevation that would experience tidal inundation. The newly created bench would be approximately 50 feet wide and planted with wetland vegetation to create tidal aquatic habitat. The relocated levee and wetland bench would increase the channel's flow conveyance capacity in Reach 1.

San Andreas Drive Bridge Headwalls

Without any improvements, the existing San Andreas Drive bridge in Reach 4 could be overtopped by backwater[5] accumulating in the Lower Penitencia Creek channel during the 1-percent flow event. Therefore, to prevent overtopping by floodwaters, concrete headwalls would be constructed on the downstream and upstream faces of the bridge. The headwalls would connect with the east and west bank levees and floodwalls and would each be approximately 70 feet long. The headwalls would be approximately 1 foot thick and have a height of approximately 6.5 feet. Since the southern portion of floodwall along the west bank

[4] A wetland bench is a horizontal area of the channel margin. While positioned higher than the main channel bottom, the wetland bench would be at an elevation that experiences periodic tidal inundation under mean higher high water conditions and is also inundated during moderate and larger creek flows during winter storm events. The bench would be vegetated with estuarine plants that are suited to both tidal and riverine conditions. The bench would create tidal aquatic habitat.

[5] Backwater is water that has backed up in its course because of an obstruction, an opposing current, or tides.

of the channel would be on the inboard side of the levee, it would not obstruct pedestrian access to the trail on the west bank of Reach 4 from San Andreas Drive. The east bank would have a closeable gate-type opening between the floodwall and the bridge headwall. The gate-type opening would be designed so that a wood or metal barrier could be quickly deployed to close the opening to flood waters.

Sediment Removal

Accumulated sediment would be removed from the concrete-lined portions of Reaches 2 and 4 of the channel and an additional 1,500 cubic yards from the unlined channel in from Reach 3.

Maintenance Road Restoration

The District's maintenance roads along the channel would be disturbed during construction of the floodwalls in Reaches 2, 3, and 4. The project would restore the roads to conditions similar to existing conditions. Portions of the maintenance roads along the east bank of Reach 3 and on the west bank of Reach 4 which serve as public trails would be repaved with asphaltic concrete after floodwall construction has been completed. All other maintenance roads would be surfaced with aggregate. Additionally, a maintenance road surfaced with either crushed stone or aggregate base would be constructed on of the crest of the setback levee on the south bank of Reach 1, replacing the maintenance road on the crest of the existing levee (which would be removed).

Revegetation and Stabilization

Upon completion of construction, disturbed areas would be hydroseeded with native grasses to prevent erosion and establish upland habitat. Specific areas that would be hydroseeded include the side slopes of the Reach 1 setback levee; maintenance road shoulders in Reaches 2, 3 and 4; and construction staging areas. Note that the wetland bench in Reach 1 would not be hydroseeded. Woven, biodegradable erosion control blankets would be secured over the disturbed areas to prevent erosion while the grass establishes. The grass would grow through the blankets, which would biodegrade and disappear over time.

2.7 Project Construction

2.7.1 Construction Activities

~~Reach 2, 3, and 4~~ Floodwalls

Floodwalls would be constructed on or near the crests of existing levees and would require shallow excavation and fill to accommodate floodwall supports below the existing grade. A specialized piece of equipment called a Giken silent piler would be used to install the sheet pile walls. This particular machine uses a press-in method that emits less noise and vibration than other methods for pile installation. To the extent feasible, all equipment would be operated from the levee-crest maintenance roads.

Reach 1 Setback Replacement Levee and Wetland Bench

Construction of the Reach 1 improvements would require dewatering (i.e., draining) of the creek channel. Construction of the new south bank levee in Reach 1 would entail demolition

and removal of the existing Reach 1 south bank levee, as well as preparation of the ground surface to receive new fill. The existing levee would be removed down to grade level. The new levee would be set back from the creek channel and constructed using stockpiled soils, imported fill, or a combination of the two. Approximately 4,600 cubic yards would be excavated and ~~T~~to the extent feasible, material excavated from the existing levee would be used to reconstruct the new levees. The newly placed fill would be contoured and compacted to ensure the levees' structural stability. The levee slopes would be hydroseeded[6] with native grasses for erosion protection.

A wetland bench would be excavated between the creek channel and the replacement levee in the existing south bank of Reach 1 using excavators and backhoes. As previously described, work in Reach 1 would entail lowering the ground surface to create the new, nearly level bench within the tidal range. Excavated soil would be used to create the replacement levee in Reach 1 or disposed of at an offsite location. The bench would be planted with native species adapted to tidal conditions to create new habitat.

San Andreas Drive Bridge Headwalls

Construction of new headwalls on the upstream and downstream faces of the San Andreas Drive bridge would require dewatering of the channel under and near the bridge. The existing chain-link fence on the bridge would be removed and concrete headwalls would be installed. The downstream headwall would tie into the Reach 4 west bank floodwall and the Lower Berryessa floodwall on the east bank. The upstream headwall would tie into the future floodwalls on both sides of the channel. Construction of the headwalls would take up to 2 months. During construction of each headwall, one lane of the two-lane bridge would be temporarily closed and the bridge would remain in use with reduced capacity. Traffic controls would be put in place to ensure safe and efficient movement of vehicles, bicyclists, and pedestrians over the bridge during the construction period. Refer to Section 3.13, *Transportation and Traffic,* for additional information regarding traffic control measures that would be implemented.

Sediment Removal

During construction in Reach 2 Approximately 70 cubic yards of accumulated sediment would be removed from the concrete-lined portions of the channel. During construction in Reach 4 approximately 730 cubic yards of accumulated sediment would be removed from the concrete-lined portions of the channel. During construction in Reach 3, approximately 1,500 cubic yards of accumulated sediment would be removed from the unlined earthen channel. This sediment would ~~either~~ be ~~reused on site or~~ off-hauled to the Newby Island Landfill, located just northwest of the project site.

Dewatering Activities

In-channel construction work for the proposed project would occur during the dry season, between mid-June and mid-October when channel flow is lowest. Channel dewatering would be required for construction of the relocated levee and wetland bench in Reach 1, sediment removal within Reaches 2 and 3, construction of headwalls to the San Andreas Drive bridge,

[6] Hydroseeding is a planting process that uses a slurry of seed and mulch; it is often used as an erosion control technique on construction sites to stabilize bare soil and prevent erosion.

and sediment removal in Reach 4. Dewatering activities at these project areas would be temporary.

Additionally, depending on the layout of equipment needed to construct floodwalls on the south bank of Reach 2 and both banks of Reach 3, it would be necessary to dewater the entire length of Reaches 2 and 3 during construction of the floodwalls. In total, about 5,100 linear feet of channel would be dewatered. The work would be staged and only a portion of the channel length would be dewatered at any one time. Dewatering at any particular creek section would have a maximum duration of 4 months.

All water in the dewatered areas would be removed and creek flows and runoff diverted around the work areas. Water would be diverted into pipes and routed around the work areas by a temporary cofferdam. Diverted water would be returned to the creek downstream of the project area. This diversion would remain in place during construction of the Reach 1 wetland bench and replacement levee, the San Andreas Drive headwalls and sediment removal work area, and possibly the Reach 2 and 3 floodwalls.

Maintenance Road Improvements

The District's maintenance roads would be improved and restored similar to existing conditions. An approximately 18-foot-wide maintenance road consisting of either crushed stone or aggregate base would be constructed on the crest of the replacement levee on the south bank of Reach 1. Portions of the maintenance roads along the east bank of Reach 3 and on the west bank of Reach 4 would be repaved with asphaltic concrete after floodwall construction has been completed. The remaining portions of those roads would be surfaced with an aggregate base.

Construction-period Erosion Control

Prior to stripping of vegetative cover and site grading, erosion control features (e.g., silt fences, fiber rolls, drainage swales, detention ponds) would be installed in compliance with the proposed project's stormwater pollution prevention plan (SWPPP). These temporary features would be designed to prevent soil erosion at the construction areas. They would be removed at the end of construction, and the affected areas would be hydroseeded and permanently stabilized.

Hydroseeding and Slope Stabilization and Revegetation

Disturbed areas, including the side slopes of the setback replacement levee, maintenance road shoulders, and staging areas would be hydroseeded at the end of the dry-period construction season (likely in October) to provide erosion protection and prevent sediment erosion and transport to the channel. A hydroseed mix consisting of native and naturalized grass seeds, mulch, and tackifier would be sprayed onto the ground surface. In addition, biodegradable mats would be placed on top of disturbed areas, such as on relatively steep levee-side slopes, where necessary to prevent erosion.

For revegetation activities, the District will follow regional guidelines developed by the Phytophthoras in Native Habitats Work Group. This Work Group is a coalition of California native plant nursery managers, land management agencies, researchers, and non-profit organizations, created for the purpose of coordinating and developing comprehensive

program of management, monitoring, research, education and policy to minimize the spread of Phytophthora pathogens in restoration sites and native plant nurseries. The full text of the guidelines can be found at http://www.suddenoakdeath.org/wp-content/uploads/2016/04/Restoration.Nsy .Guidelines.final .092216.pdf and http://www.suddenoakdeath.org/wp-content/uploads/2016/04/Restoration_guidance_FINAL-111716.pdf. Implementing the regional guidelines would require the District to follow sanitation, planting, and nursery guidelines through the following:

- If container plants are used for revegetation efforts, the District will require the nursery to implement the "Guidelines to Minimize Phytophthora Pathogens in Restoration Nurseries" (2016a).

- In preparation for and during restoration activities, the District and its contractors will follow the "Guidelines to Minimize Phytophthora Contamination in Restoration Projects" (2016b).

In addition, to the maximum extent practicable, the District will follow general site sanitation practices such as:

- The exterior and interior of all vehicles, construction equipment and tools should be clean and free of debris, soil and mud (including mud on tires, treads, wheel wells and undercarriage)

- Work shoes should be kept clean by inspection of shoe soles and removal of mud, debris, and soil off treads before moving to a new job site.

- Vehicles should stay on established roads whenever possible.

2.7.2 Construction Equipment

The following pieces of equipment would be used for project construction:

- track-mounted excavator
- crane
- dump truck
- flat-bed delivery truck
- concrete truck
- grader
- bulldozer
- compactor
- Giken silent piler
- backhoe
- compactor
- front-end loader
- water truck
- diesel generators
- water hoses
- pumps for dewatering
- cement and mortar mixers
- mowing equipment (e.g., weed eaters, commercial lawnmowers)

2.7.3 Construction Staging Areas, Access, and Vehicle Trips

Project construction would generally occur within existing District right-of-way (ROW) and easements along the creek channel. As shown in Figure 2-3, in addition to the existing channel ROW, the vacant area south of the Reach 1 replacement levee may also be used as a staging area during project construction. This area, Staging Area A, is accessible from an existing District access road connecting to North McCarthy Boulevard and would be used for staging of equipment and construction materials.

Staging may also occur at the central berm between the primary and secondary channels in Reach 3 (Staging Area B) during floodwall construction and sediment removal activities. Prior to use of this staging area, the channel would be dewatered and water would be routed around the extent of Reach 3. Within Staging Area B, equipment and materials would be stored on the flat portions of the berm. The central berm is accessible via two existing concrete-lined ramps located at the northern and southern end of Reach 3. These ramps both connect to the levee crest road on the west bank in Reach 3.

In addition, the District may use Staging Area C throughout project construction. This potential staging area is located adjacent to Reach 4, southwest of the Milmont Drive bridge. The site is currently a paved parking lot with some landscaping. Any stockpiling of import, export, or reuse materials would also occur within the designated staging areas. Staging may also occur within channel easements or District ROW on District channel maintenance roads on both sides of the channel.

I-880 and the Dixon Landing Road exit would be the primary construction access route to the project area. Construction vehicles would access Reach 1 from North McCarthy Boulevard and the District maintenance road accessible from this roadway. Reach 2 would be accessed from California Circle and existing maintenance roads on both sides of the channel. Reach 3 would be accessed from California Circle, Milmont Drive, and the existing maintenance roads along the channel. Similarly, Reach 4 would be accessed from Milmont Drive and/or San Andreas Drive and existing maintenance roads along the channel.

The Penitencia Creek Trail on and at the toe of the east levee of Reach 3 would be temporarily closed to the public for the duration of Reach 3 construction.

Table 2-2 summarizes the anticipated number of potential worker trips and construction-related trips for the proposed project. The proposed project would require up to 40 construction workers on site, although 20 workers would likely be on site on a typical work day. The construction-related trip estimates are based on the District's Planning Study Report, which assumed that approximately 14,400 cubic yards of excavated soil would be reused on site, approximately 6,700 cubic yards of soil would be off-hauled, and approximately 3,500 cubic yards of concrete would be delivered and placed on site (SCVWD 2016). About 2,300 cubic yards of sediment would be removed from the low-flow channel for disposal off-site. The Planning Study Report estimates are conservative and it is likely that the project would actually require somewhat less concrete and earth movement. Since the DEIR was published, project design has advanced and the total volume of soil that would be excavated would be approximately 4,600 cubic yards. Assuming that this material would be reused for new levee construction, an additional 3,430 cubic yards of fill material would be imported to the project site for new levee construction. These excavation and fill quantities

were not available at the time the DEIR was published; Ttherefore, the construction-related trip estimates presented in Table 2-2 are overestimated and considered conservative.

Table 2-2. Construction-related Trips

Time Period	Average Employee Trips [1]	Average Heavy Vehicle Trips [2]	Total Trips [3]		
			To the Project Site	Out from the Site	Total
AM Peak Hour	40	3	40	3	43
PM Peak Hour	40	3	3	40	43
Daily	132	26	79	79	158

[1] Assumes one commute trip per employee per peak hour and miscellaneous trips such as deliveries, visitor trips, and lunch trips.

[2] Based on 10 cubic yards of material per heavy vehicle trip during the busiest 2-month work period, with truck trips evenly distributed throughout 8 hours of a typical day.

Source: Hexagon Transportation Consultants, Inc. 2016

2.7.4 Construction Schedule

The District intends to construct the proposed project over 2 years, during 2018 and 2019. In-channel construction activities, including channel dewatering, would occur between June 15 and October 15 each year, although some work outside the creek channel and revegetation planting may occur before June 15 or after October 15. Construction activities that could occur prior to June 15 include site preparation (e.g. vegetation clearing), staging of construction equipment and materials, and some earthwork outside of the channel (e.g. grading of maintenance roads). For the purposes of the EIR, it is assumed that the total number of work days would be equivalent to 4 months total each year. Although the phasing of construction has not yet been determined, for the purposes of this analysis, it is assumed that the first half of the construction activities would take place in 2018 and the second half would occur in 2019. While there is a possibility that construction delays could occur, the EIR analysis conservatively assumes a worse-case scenario that construction activities would be condensed within a 2-year timeframe.

Project construction would generally occur on weekdays during daytime hours (7:00 a.m. to 7:00 p.m.), which is consistent with the City of Milpitas noise ordinance. However, extended construction hours on weekends may occur infrequently if approved in advance by the City of Milpitas. No construction activities would occur on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2.8 Project Operations

2.8.1 Maintenance Activities

Similar to current practice, maintenance activities may be conducted within the project area following project construction. These activities may include trash and debris removal, vegetation management (e.g., mowing the channel banks, removing vegetation along maintenance roads), maintenance road grading, management of wildlife conflicts, graffiti

removal, and fence repair. In addition to continuing these maintenance activities, the newly installed floodwalls and San Andreas Drive bridge headwalls would be visually inspected on a periodic basis (one to two times per year). If observed damage threatens the integrity of the structure, repairs would be completed to return them to the as-built design.

Once constructed, the proposed project would reduce the need for routine sediment removal in the channel. The proposed project would be designed so that sediment build-up can occur up to the mean high water mark and still ensure sufficient flow capacity to convey the 1-percent flow. During low tide, the majority of accumulated sediment would settle in the Reach 3 low-flow channel. Future sediment removal work in the channel would occur under the District's SMP and would be triggered once sediment accumulation exceeds design standards. Localized sediment removal work may be needed to keep culverts and ramps clear. Other post-construction maintenance activities in the project area would also continue under the District's SMP similar to current channel maintenance efforts.

2.9 Intended Uses of the EIR

As described in the State CEQA Guidelines (14 CCR Section 15121[a]), an EIR is a public information document that assesses potential environmental effects of a proposed project, as well as identifies mitigation measures and alternatives to the project that could reduce or avoid potentially significant environmental impacts (14 CCR Section 15121[a]). Other key requirements include developing a plan for implementing and monitoring the success of the identified mitigation measures, and carrying out specific noticing and distribution steps to facilitate public involvement in the environmental review process.

The EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project. The information contained in this EIR and the administrative record will be reviewed and considered by the District Board of Directors prior to making a decision to approve, disapprove, or modify the proposed project. In addition, the EIR will also be used by a responsible agency for purpose of deciding whether and how to approve the project. Responsible agencies are state or local agencies other than the lead agency which have some discretionary approval power over the project. In this instance, as listed in Table 2-3 below, the responsible agencies would include the Regional Water Quality Control Board, California Department of Fish and Wildlife, Caltrans, and City of Milpitas.

2.10 Permits and Approvals

Agencies expected to use this EIR in their decision making for permits and approvals required for implementation of the project are summarized in **Table 2-3** below. With respect to the floodwall and ramp in Reach 3, the District would also coordinate with the City of Milpitas as design of those facilities advances.

Table 2-3. ~~Applicable~~Anticipated Permit and Regulatory Requirements for Project

Regulatory Agency	Law/Regulation	Purpose	Permit/Authorization Type
U.S. Army Corps of Engineers (USACE)	Clean Water Act (CWA) Section 404/Rivers and Harbor Act Section 10	Regulates placement of dredge and fill materials into waters of the U.S., including wetlands	Individual Permit
U.S. Fish and Wildlife Service (USFWS) / National Marine Fisheries Service (NMFS)	Endangered Species Act Section 7 / Magnuson-Stevens Fishery Conservation and Management Act	Potential Consultation between USACE and USFWS and/or NMFS if threatened or endangered species might be affected by the project	ESA Section 7 Consultation (likely informal consultation for project)
Regional Water Quality Control Board San Francisco Bay Region	CWA Section 401	Water quality certification for placement of dredge and fill materials into waters of the U.S., including wetlands	401 Water Quality Certification is required for federal permits, such as CWA Section 404 Permits
	CWA Section 402	National Pollutant Discharge Elimination System (NPDES) program, which regulates discharges of pollutants	NPDES General Construction Permit
	Porter-Cologne Water Quality Control Act	Regulates discharges of materials to land and protection of beneficial uses of waters of the state	Waste Discharge Requirements
California Department of Fish and Wildlife	Fish and Game Code Section 1602	Applies to activities that will substantially modify a river, steam, or lake; includes reasonable conditions necessary to protect those resources	Streambed Alteration Agreement
California Department of Transportation (Caltrans)	Section 660 of the California Streets and Highways Code	Applies to Reaches 1 and 2 work in areas within Caltrans right-of-way	Encroachment permit

Regulatory Agency	Law/Regulation	Purpose	Permit/Authorization Type
City of Milpitas	N/A	Applies to Reaches 1, 2, and 3 work on City of Milpitas property	Temporary and permanent easements
City of Milpitas	Tree Maintenance and Protection Ordinance	Applies to trees within the limits of the City of Milpitas	Permit for removal of street trees, protected trees, or heritage trees.

Table 2-4. District Best Management Practices Relevant to the Proposed Project

BMP Number and Title	BMP Text
Air Quality	
AQ-1: Use Dust Control Measures	The following Bay Area Air Quality Management District (BAAQMD) Dust Control Measures will be implemented: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered; 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited; 4. Water used to wash the various exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, etc.) will not be allowed to enter waterways; 5. All vehicle speeds on unpaved roads shall be limited to 15 mph; 6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used; 7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations), and this requirement shall be clearly communicated to construction workers (such as verbiage in contracts and clear signage at all access points); 8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications, and all equipment shall be checked by a certified visible emissions evaluator; 9. Correct tire inflation shall be maintained in accordance with manufacturer's specifications on wheeled equipment and vehicles to prevent excessive rolling resistance; and, 10. Post a publicly visible sign with a telephone number and contact person at the lead agency to address dust complaints; any complaints shall be responded to and take corrective action within 48 hours. In addition, a BAAQMD telephone number with any applicable regulations will be included.
AQ-2: Avoid Stockpiling Odorous Materials	Materials with decaying organic material, or other potentially odorous materials, will be handled in a manner that avoids impacting residential areas and other sensitive receptors, including: 1. Avoid stockpiling potentially odorous materials within 1,000 feet of residential areas or other odor sensitive land uses; and 2. Odorous stockpiles will be disposed of at an appropriate landfill.

BMP Number and Title	BMP Text
Biological Resources	
BI-1: Avoid Relocating Mitten Crabs	Sediment potentially containing Chinese Mitten Crabs will not be transported between San Francisco Bay Watersheds and Monterey Bay Watersheds, specifically: 1. Sediment removed from the San Francisco Bay watersheds will not be transported south of Coyote Creek Golf Drive in south San Jose, and the intersection of McKean and Casa Loma Roads; and, 2. Earth moving equipment used in the San Francisco Bay watershed will be cleaned before being moved to, and used in, the Pajaro Watershed.
BI-2: Minimize Impacts to Steelhead	Minimize potential impacts to salmonids by avoiding routine use of vehicles and equipment in salmonid streams between January 1 and June 15.
BI-3: Remove Temporary Fill	Temporary fill materials, such as for diversion structures or cofferdams, will be removed upon finishing the work or as appropriate. The creek channels and banks will be re-contoured to match pre-construction conditions to the extent possible. Low-flow channels within non-tidal streams will be contoured to facilitate fish passage and will emulate the preconstruction conditions as closely as possible, within the finished channel topography.
BI-5: Avoid Impacts to Nesting Migratory Birds	Nesting birds are protected by state and federal laws. The District will protect nesting birds and their nests from abandonment, loss, damage, or destruction. Nesting bird surveys will be performed by a qualified biologist prior to any activity that could result in the abandonment, loss, damage, or destruction of birds, bird nests, or nesting migratory birds. Inactive bird nests may be removed with the exception of raptor nests. Birds, nests with eggs, or nests with hatchlings will be left undisturbed.
BI-6: Avoid Impacts to Nesting Migratory Birds from Pending Construction	Nesting exclusion devices may be installed to prevent potential establishment or occurrence of nests in areas where construction activities would occur. All nesting exclusion devices will be maintained throughout the nesting season or until completion of work in an area makes the devices unnecessary. All exclusion devices will be removed and disposed of when work in the area is complete.
BI-7: Minimize Impacts to Vegetation from Survey Work	Survey cross-sections will be moved, within acceptable tolerances, to avoid cutting dense riparian vegetation and minimize cutting of woody vegetation, taking advantage of natural breaks in foliage. If the cross-section cannot be moved within the established acceptable tolerances to avoid impacts to dense riparian or woody vegetation, the survey section will be abandoned.
BI-8: Choose Local Ecotypes of Native Plants and Appropriate Erosion-Control Seed Mixes	Whenever native species are prescribed for installation the following steps will be taken by a qualified biologist or vegetation specialist:

BMP Number and Title	BMP Text
	1. Evaluate whether the plant species currently grows wild in Santa Clara County; and, 2. If so, the qualified biologist or vegetation specialist will determine if any need to be local natives, i.e., grown from propagules collected in the same or adjacent watershed, and as close to the project site as feasible. Also, consult a qualified biologist or vegetation specialist to determine which seeding option is ecologically appropriate and effective, specifically: 1. For areas that are disturbed, an erosion control seed mix may be used consistent with the SCVWD Guidelines and Standards for Land Use Near Streams, Design Guide 5, 'Temporary Erosion Control Options.' 2. In areas with remnant native plants, the qualified biologist or vegetation specialist may choose an abiotic application instead, such as an erosion control blanket or seedless hydro-mulch and tackifier to facilitate passive revegetation of local native species. 3. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable. 4. If a gravel or wood mulch has been used to prevent soil compaction, this material may be left in place [if ecologically appropriate] instead of seeding. Seed selection shall be ecologically appropriate as determined by a qualified biologist, per Guidelines and Standards for Land Use Near Streams, Design Guide 2: Use of Local Native Species.
BI-9: Restore Riffle/Pool Configuration of Channel Bottom	The channel bottom shall be re-graded at the end of the work project to as close to original conditions as possible. In salmonid streams, restore pool and riffle configurations to emulate pre-project instream conditions, taking into account channel morphological features (i.e., slope), which affects riffle/pool sequence.
BI-10: Avoid Animal Entry and Entrapment	All pipes, hoses, or similar structures less than 12 inches diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2-inches diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or properly trained construction personnel before the pipe is buried, capped, used, or moved. If inspection indicates presence of sensitive or state- or federally-listed species inside stored materials or equipment, work on those materials will cease until a qualified biologist determines the appropriate course of action. To prevent entrapment of animals, all excavations, steep-walled holes or trenches more than 6-inches deep will be secured against animal entry at the close of each day. Any of the following measures may be employed, depending on the size of the hole and method feasibility:

BMP Number and Title	BMP Text
	1. Hole to be securely covered (no gaps) with plywood, or similar materials, at the close of each working day, or any time the opening will be left unattended for more than one hour; or 2. In the absence of covers, the excavation will be provided with escape ramps constructed of earth or untreated wood, sloped no steeper than 2:1, and located no farther than 15 feet apart; or 3. In situations where escape ramps are infeasible, the hole or trench will be surrounded by filter fabric fencing or a similar barrier with the bottom edge buried to prevent entry.
BI-11: Minimize Predator Attraction	Remove trash daily from the worksite to avoid attracting potential predators to the site.
Cultural Resources	
CU-1: Accidental Discovery of Archaeological Artifacts, Tribal Cultural Resources, or Burial Remains	If historical or unique archaeological artifacts are accidentally discovered during construction, or tribal cultural resources, work in affected areas will be restricted or stopped until proper protocols are met. Work at the location of the find will halt immediately within 100~~30~~ feet of the find. A "no work" zone shall be established utilizing appropriate flagging to delineate the boundary of this zone. A Consulting Archaeologist will visit the discovery site as soon as practicable for identification and evaluation pursuant to Section 21083.2 of the Public Resources Code and Section 15126.4 of the California Code of Regulations. If the archaeologist determines that the artifact is not significant, construction may resume. If the archaeologist determines that the artifact or resource is significant, the archaeologist will determine if the artifact or resource can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the archaeologist will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines. If a tribal cultural resource cannot be avoided, the Action Plan will include notification of the appropriate Native American tribe, and consultation with the tribe regarding acceptable recovery options. If burial finds are accidentally discovered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified and the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent. No further excavation or disturbance within ~~30~~100 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and/or the County Coordinator of Indian Affairs.

BMP Number and Title	BMP Text
Hazards & Hazardous Materials	
HM-7: Restrict Vehicle and Equipment Cleaning to Appropriate Locations	Vehicles and equipment may be washed only at approved areas. No washing of vehicles or equipment will occur at job sites.
HM-8: Ensure Proper Vehicle and Equipment Fueling and Maintenance	No fueling or servicing will be done in a waterway or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators). 1. For stationary equipment that must be fueled or serviced on-site, containment will be provided in such a manner that any accidental spill will not be able to come in direct contact with soil, surface water, or the storm drainage system. 2. All fueling or servicing done at the job site will provide containment to the degree that any spill will be unable to enter any waterway or damage riparian vegetation. 3. All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will be prevented. 4. All equipment used in the creek channel will be inspected for leaks each day prior to initiation of work. Maintenance, repairs, or other necessary actions will be taken to prevent or repair leaks, prior to use. 5. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be done in a channel or flood plain.
HM-9: Ensure Proper Hazardous Materials Management	Measures will be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means.

BMP Number and Title	BMP Text
	1. Prior to entering the work site, all field personnel will know how to respond when toxic materials are discovered. 2. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage. 3. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and not be allowed to enter surface waters or the storm drainage system. 4. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. 5. Quantities of toxic materials, such as equipment fuels and lubricants, will be stored with secondary containment that is capable of containing 110% of the primary container(s). 6. The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations will be conducted in accordance with applicable State and federal regulations. 7. In the event of any hazardous material emergencies or spills, personnel will call the Chemical Emergencies/Spills Hotline at 1-800-510-5151.
HM-10: Utilize Spill Prevention Measures	Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water following these measures: 1. Field personnel will be appropriately trained in spill prevention, hazardous material control, and clean-up of accidental spills; 2. Equipment and materials for cleanup of spills will be available on site, and spills and leaks will be cleaned up immediately and disposed of according to applicable regulatory requirements; 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means; 4. Spill prevention kits will always be in close proximity when using hazardous materials (e.g., at crew trucks and other logical locations), and all field personnel will be advised of these locations; and, 5. The work site will be routinely inspected to verify that spill prevention and response measures are properly implemented and maintained.
HM-11: Ensure Worker Safety in Areas with High Mercury Levels	To ensure worker safety is protected in areas with elevated mercury concentrations in exposed surfaces, personal protective equipment will be required during project construction to maintain exposure below levels established by the California Division of Occupational Safety and Health (Cal/OSHA).

BMP Number and Title	BMP Text
HM-12: Incorporate Fire Prevention Measures	1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site. 3. An extinguisher shall be available at the project site at all times when welding or other repair activities that can generate sparks (such as metal grinding) is occurring. 4. Smoking shall be prohibited except in designated staging areas and at least 20 feet from any combustible chemicals or vegetation.
Hydrology/Water Quality	
WQ-1: Conduct Work from Top of Bank	For work activities that will occur in the channel, work will be conducted from the top of the bank if access is available and there are flows in the channel.
WQ-2: Evaluate Use of Wheel and Track Mounted Vehicles in Stream Bottoms	Field personnel will use the appropriate equipment for the job that minimizes disturbance to the stream bottom. Appropriately tired vehicles, either tracked or wheeled, will be used depending on the situation. Tracked vehicles (bulldozers, loaders) may cause scarification. Wheeled vehicles may cause compaction. Heavy equipment will not operate in the live stream.
WQ-3: Limit Impact of Pump and Generator Operation and Maintenance	Pumps and generators will be maintained and operated in a manner that minimizes impacts to water quality and aquatic species. 1. Pumps and generators will be maintained according to manufacturers' specifications to regulate flows to prevent dry-back or washout conditions. 2. Pumps will be operated and monitored to prevent low water conditions, which could pump muddy bottom water, or high water conditions, which creates ponding. 3. Pump intakes will be screened to prevent uptake of fish and other vertebrates. Pumps in steelhead creeks will be screened according to NMFS criteria. 4. Sufficient back-up pumps and generators will be onsite to replace defective or damaged pumps and generators.
WQ-4: Limit Impacts from Staging and Stockpiling Materials	1. To protect on-site vegetation and water quality, staging areas should occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all

BMP Number and Title	BMP Text
	equipment and materials (e.g., road rock and project spoil) will be contained within the existing service roads, paved roads, or other pre-determined staging areas. 2. Building materials and other project-related materials, including chemicals and sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains. 3. No runoff from the staging areas may be allowed to enter water ways, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). 4. The discharge of decant water to water ways from any on-site temporary sediment stockpile or storage areas is prohibited. 5. During the wet season, no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained silt fencing or other means of erosion control. During the dry season; exposed, dry stockpiles will be watered, enclosed, covered, or sprayed with non-toxic soil stabilizers.
WQ-5: Stabilize Construction Entrances and Exits	Measures will be implemented to minimize soil from being tracked onto streets near work sites: 1. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by a 4-inch thick layer of 1 to 3-inch diameter gravel on unsurfaced access roads. 2. Access will be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the water body bed and banks, and the surrounding land uses.
WQ-6: Limit Impact of Concrete Near Waterways	Concrete that has not been cured is alkaline and can increase the pH of the water; fresh concrete will be isolated until it no longer poses a threat to water quality using the following appropriate measures: 1. Wet sacked concrete will be excluded from the wetted channel for a period of four weeks after installation. During that time, the wet sacked concrete will be kept moist (such as covering with wet carpet) and runoff from the wet sacked concrete will not be allowed to enter a live stream. 2. Poured concrete will be excluded from the wetted channel for a period of four weeks after it is poured. During that time, the poured concrete will be kept moist, and runoff from the wet concrete will not be allowed to enter a live stream. Commercial sealants (e.g., Deep Seal, Elasto-Deck Reservoir Grade) may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If a sealant is used, water will be excluded from the site until the sealant is dry. 3. Dry sacked concrete will not be used in any channel. 4. An area outside of the channel and floodplain will be designated to clean out concrete transit vehicles.

BMP Number and Title	BMP Text
WQ-7: Isolate Work in Tidal Areas with Use of Coffer Dam	For work in tidal areas, it is preferable to isolate one side of the channel with a cofferdam and allow flows to continue on the other side of the creek. If downstream flows cannot be diverted around the project site, the creek waters will be transmitted around the site through cofferdam bypass pipes. By isolating the work area from tidal flows, water quality impacts are minimized. 1. Installation of coffer dams will begin at low tide. 2. Waters discharged through tidal coffer dam bypass pipes will not exceed 10 percent in areas where natural turbidity is greater than 50 Nephelometric Turbidity Units (NTU) over the background levels of the tidal waters into which they are discharged. 3. Coffer dams in tidal areas may be made from earthen or gravel material. If earth is used, the downstream and upstream faces will be covered by a protected covering (e.g., plastic or fabric) and anchored to minimize erosion. 4. Cofferdams and bypass pipes will be removed as soon as possible but no more than 72 hours after work is completed. Flows will be restored at a reduced velocity to minimize erosion, turbidity, or harm to downstream habitat.
WQ-8: Minimize Hardscape in Bank Protection Design	Bank repair techniques appropriate to a given site based on hydraulic and other site conditions will be selected. 1. Biotechnical repair methods include construction with living materials; willow wattling; erosion control blankets; brush matting; and, installation of root wads and boulders in banks. 2. The repair will be designed and installed so that it will be self-sustaining and use vegetation that adds structural integrity to the stream bank.
WQ-9: Use Seeding for Erosion Control, Weed Suppression, and Site Improvement	Disturbed areas shall be seeded with native seed as soon as is appropriate after activities are complete. An erosion control seed mix will be applied to exposed soils down to the ordinary high water mark in streams. 1. The seed mix should consist of California native grasses, (for example *Hordeum brachyantherum*; *Elymus glaucus*; and annual *Vulpia microstachyes*) or annual, sterile hybrid seed mix (e.g., *Regreen*™, a wheat x wheatgrass hybrid). 2. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable, or have other appropriate erosion control measures in place.
WQ-10: Prevent Scour Downstream of Sediment Removal	After sediment removal, the channel will be graded so that the transition between the existing channel both upstream and downstream of the work area is smooth, and continuous between the maintained and non-maintained areas, and does not present a sudden vertical transition (wall of sediment) or other blockage that could erode once flows are restored to the channel.

BMP Number and Title	BMP Text
WQ-11: Maintain Clean Conditions at Work Sites	The work site, areas adjacent to the work site, and access roads will be maintained in an orderly condition, free and clear from debris and discarded materials on a daily basis. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. For activities that last more than one day, materials or equipment left on the site overnight will be stored as inconspicuously as possible, and will be neatly arranged. Any materials and equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.
WQ-12: Manage Well or Exploratory Boring Materials	All materials or waters generated during drilling, well or exploratory boring construction, well development, pump testing, or other activities associated with wells or exploratory borings, will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case will these materials and/or waters be allowed to enter, or potentially enter, on- or off-site storm sewers, dry wells, or waterways. Such materials/waters must not be allowed to move off the property where the work is being completed.
WQ-13: Protect Groundwater from Contaminates Via Wells or Exploratory Borings	Any substances or materials that may degrade groundwater quality will not be allowed to enter any well or boring. Lubricants used on drill bits, drill pipe, or tremie pipe will not be comprised of oily or greasy substances or other materials that may degrade groundwater quality. Well openings or entrances will be sealed or secured in such a way as to prevent the introduction of contaminants.
WQ-15: Prevent Water Pollution	Oily, greasy, or sediment laden substances or other material that originate from the project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway. The project will not increase the turbidity of any watercourse flowing past the construction site by taking all necessary precautions to limit the increase in turbidity as follows: 1. where natural turbidity is between 0 and 50 NTU, increases will not exceed 5 percent; 2. where natural turbidity is greater than 50 NTU, increases will not exceed 10 percent; 3. where the receiving water body is a dry creek bed or storm drain, waters in excess of 50 NTU will not be discharged from the project. Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream

BMP Number and Title	BMP Text
	of the discharge site. Natural watercourse turbidity measurements will be made prior to initiation of project discharges, preferably at least 2 days prior to commencement of operations.
WQ-16: Prevent Stormwater Pollution	To prevent stormwater pollution, the applicable measures from the following list will be implemented: 1. Soils exposed due to project activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall. In creeks, the channel bed and areas below the Ordinary High Water Mark are exempt from this BMP. 2. The preference for erosion control fabrics will be to consist of natural fibers; however, steeper slopes and areas that are highly erodible may require more structured erosion control methods. No non-porous fabric will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff, but only if there are no indications that special-status species would be impacted by the application. 3. Erosion control measures will be installed according to manufacturer's specifications. 4. To prevent stormwater pollution, the appropriate measures from, but not limited to, the following list will be implemented: ▪ Silt Fences ▪ Straw Bale Barriers ▪ Brush or Rock Filters ▪ Storm Drain Inlet Protection ▪ Sediment Traps or Sediment Basins ▪ Erosion Control Blankets and/or Mats ▪ Soil Stabilization (i.e., tackified straw with seed, jute or geotextile blankets, etc.) ▪ Straw mulch. 5. All temporary construction-related erosion control methods shall be removed at the completion of the project (e.g., silt fences). 6. Surface barrier applications installed as a method of animal conflict management, such as chain link fencing, woven geotextiles, and other similar materials, will be installed no longer than 300 feet, with at least an equal amount of open area prior to another linear installation.

BMP Number and Title	BMP Text
Transportation and Traffic	
TR-1: Use Suitable Public Safety Measures	Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.

Chapter 3
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1 Introduction

3.1.1 Introduction to Environmental Setting and Impact Analysis

Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures,* of this ~~D~~EIR contains 13 sections that describe the environmental resources and environmental impacts of the proposed project. Sections 3.2 through 3.14 contain the following information about each resource topic:

- description of the environmental setting and background information about the resource topic to help the reader understand the resources that could be affected by the proposed project;
- summary of federal, state, and regional statutes, regulations, plans, and policies that are relevant to project activities or affected environmental resources;
- discussion of the criteria and thresholds used in determining the significance of the proposed project's environmental impacts;
- discussion of the impacts of the proposed project on environmental resources, including the significance of each impact and a summary table of impacts and levels of significance;
- discussion of BMPs from the District's Handbook (SCVWD 2014) and listed in Table 2-3 that would be applied to project activities to avoid or minimize impacts; and
- description of mitigation measures that would allow the District to avoid, minimize, or compensate for any significant impacts.

Appendix B includes relevant local plans and policies for each resource topic.

This EIR has been prepared at a project level. According to State CEQA Guidelines Section 15161, a project-level EIR should focus primarily on the changes in the environment that would result from development of all phases of the project, including construction and operation. Each section of Chapter 3 examines the construction and operation phases of the proposed project. Note that the proposed project's operational impact analysis evaluates the effects of new operation and maintenance activities that would occur within the project area, in addition to or beyond those existing maintenance activities already addressed under the District's ongoing SMP.

During the course of the EIR evaluation, it was determined that four CEQA checklist resource topics would result in no impacts based on the nature and scope of the proposed project activities. As such, the following resource topics have been eliminated from further analysis: agriculture and forestry resources, mineral resources, population and housing, and public services. A brief summary and description of these resource topics, along with the rationale for the no impact conclusions, are provided below in Section 3.1.3.

3.1.2 Impact Terminology and Use of Language in CEQA

The categories used to designate impact significance are described below:

- *No Impact (NI)* A project is considered to have no impact if there is no potential for impacts, or if the environmental resource does not exist within the project area or the area of potential effect. For example, there would be no impacts related to wastewater disposal if the project would not involve the production of wastewater.
- *Less than Significant (LS)* This determination applies if there is some impact, but the degree of impact does not qualify as significant according to the impact significance criteria for that resource.
- *Less than Significant with Mitigation (LM)* This determination applies to impacts that exceed significance criteria, but for which feasible mitigation is available to reduce the impacts to a less-than-significant level.
- *Significant (S)* This determination applies to impacts that exceed significance criteria without mitigation.
- *Significant and Unavoidable (SU)* This determination applies to impacts that are significant but (1) no feasible mitigation has been identified to reduce the impact to a less-than-significant level; or (2) feasible mitigation has been identified but the residual impact remains significant after mitigation is applied. Therefore, the impact is considered significant and unavoidable.

The analysis of potential impacts and mitigation measures is based on predetermined significance criteria. The significance criteria used in this EIR are generally taken from the Environmental Checklist Form included in Appendix G of the State CEQA Guidelines.

Where impacts are significant, feasible mitigation measures are presented. The ~~D~~EIR evaluates the effectiveness of identified mitigation measures to reduce significant impact to less-than-significant levels.

In some cases, when impacts are not significant and thus no mitigation is required, the ~~D~~EIR nevertheless discusses mitigation measures developed to address other significant impacts but would also reduce a less-than-significant impact in another topic area.

3.1.3 Sections Eliminated from Further Analysis

Agriculture and Forestry Resources

The project area is not used or zoned for agricultural or forestry activities. According to the California Department of Conservation (CDOC), the project area is located on land designated "urban and built-up land" (CDOC 2014, 2016). As a result, the proposed project would not

alter land use designations or farmland/timberland classifications designated at either the local or state level. No Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest lands, or lands under a Williamson Act contract would be converted by or conflict with the proposed project. Therefore, no impact on agriculture or forestry resources would result.

Mineral Resources

The project area does not have any designated mineral resources zones, nor does it contain any significant oil or gas resource–producing areas. According to the CDOC's Division of Mines and Geology (which became the California Geological Survey in 2006), the project area is classified as MRZ-1, a mineral resource zone in which adequate information indicates that no significant mineral deposits are present, or in which it is judged that little likelihood exists for their presence (Stinson et al. 1987). In addition, the proposed project would not involve any activities that could directly affect mineral production sites or prevent future availability of mineral resources. Therefore, no impact on mineral resources would result.

Population and Housing

The proposed project would provide flood protection along Lower Penitencia Creek and would primarily take place within the District's ROW. Throughout the construction phase, approximately 40 construction workers would be employed. It is anticipated that the regional or local labor force could meet the project's construction and workforce requirements. Although some workers might temporarily relocate from other areas, the increase in workers would be temporary and minimal. Operation and maintenance activities of the proposed project would be conducted by the District's existing workforce.

The proposed project does not include construction of new homes or businesses and would not remove obstacles to growth by extending any existing roads, water supply facilities, wastewater facilities, or other infrastructure. The proposed project would not displace any housing units or people. Additionally, the project area is surrounded by existing urban development. Ongoing and future redevelopment of the area is addressed by the City of Milpitas General Plan, which serves as a blueprint for land uses and development density in the City of Milpitas. The proposed project would not modify the general plan or change the types or densities of land uses allowed in the project vicinity. As such, the proposed project would not induce substantial population growth or result in impacts related to displacement of people or housing. There would be no impact on population and housing.

Public Services

The proposed project involves flood protection improvements along Lower Penitencia Creek and would not induce growth or increase population of the area. Therefore, it would not increase the need for public services or government facilities, including fire protection, police protection, schools, parks, or other services. During project construction, potential incidents could require law enforcement, fire protection, or emergency services; however, the project is located within an urbanized area of Milpitas and is currently served by existing public services (e.g., police and fire protection, schools, and parks). The temporary increase in such incidents would not be substantial and would not result in the need to construct new or physically altered governmental facilities to maintain acceptable service ratios or response times or meet performance objectives. Operation and maintenance activities described in Chapter 2, *Project Description*, would not be substantially different from existing maintenance and operation activities; therefore, operation of the proposed project would not change the

demand for public services and would not create a need for new or physically altered governmental facilities to maintain acceptable service ratios or response times or meet performance objectives of public service providers. Construction and operation of the proposed project would not substantially affect public services.

3.2 Aesthetics

3.1.1 Overview

This section describes concepts and terminology used in this section of the EIR to discuss aesthetic resources; the existing aesthetic resources within the project area; and pertinent state regulations regarding the protection of visual and scenic resources. The impacts on scenic resources, public views of scenic vistas, visual character of the potentially affected area, and light and glare effects from construction and operation of the proposed project are evaluated. Applicable BMPs are identified, and mitigation is proposed to address the impacts found to be significant.

Concepts and Terminology

Visual character, *visual quality*, and *visual sensitivity* are three terms used throughout this section. Visual character is the unique set of landscape features that combines to make a view, including native landforms, water, and vegetation patterns, as well as built features such as buildings, roads, and other structures. Visual quality is the intrinsic appeal of a landscape or scene due to the combination of natural and built features in the landscape. Natural and built features combine to form unique perspectives with varying degrees of visual quality, which is rated in this analysis as high, moderate, or low. A high visual quality rating indicates the presence of visual resources that are unique or exemplary of the region's natural or cultural scenic amenities. A moderate visual quality rating indicates visual resources typical or characteristic of the region's natural and/or cultural visual amenities. A low visual quality rating refers to areas generally lacking in natural or cultural visual resource amenities typical of the region.

Visual sensitivity reflects the level of interest or concern that viewers and responsible land management agencies have for a particular visual resource, with visual quality taken into account. Visual sensitivity is a measure of how noticeable proposed changes might be in a particular setting and is determined based on the distance from a viewer, the contrast of the proposed changes, and the duration that a particular view would be available to viewers. For example, areas such as scenic vistas, parks, trails, and scenic roadways typically have a high visual quality and visual sensitivity because these locales are publicly protected, appear natural, view durations are typically long, and close-up views are more commonly available.

3.1.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal regulations are applicable to aesthetics in relation to the proposed project.

State Laws, Regulations, and Policies

California Scenic Highway Program

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California. The state highway system includes designated scenic highways and those that are

eligible for designation as scenic highways. There are no state-designated scenic highways in Milpitas (California Department of Transportation [Caltrans] 2016); therefore, the proposed project would not be subject to the Scenic Highway Program.

3.1.3 Environmental Setting

Regional Setting

The City of Milpitas is characterized as a predominantly urban community located at the base of the Diablo Range and just east of the southern end of the San Francisco Bay. The foothills are sparsely settled and form a backdrop for many of the east-facing views from Milpitas.

According to the *City of Milpitas General Plan* (City of Milpitas 2002), the foothills and the tree-lined Coyote Creek corridor provide Milpitas with a scenic backdrop and visual reference points. General Plan Figure 4-6 shows specific hillsides, ridges, visually significant vegetation, and scenic routes that are critical in shaping the City's scenic identity. To maintain and improve the character and views of scenic resources from streets and maximize access to parks, open space, and other resources, the general plan establishes a well-integrated network of scenic routes. These are streets or corridors that pass through an area of scenic value, provide connectivity between such areas, or provide distant views of scenic resources. The general plan identifies various scenic resources, including scenic corridors, scenic connectors, major visual gateway, visually significant hilltop or ridge, visually significant vegetation, and visually significant hillsides. The following discussion describes how these terms are used in the general plan and describes designated scenic corridors and scenic connectors within the project area:

> *Scenic corridors* are located along designated streets that pass through an area of scenic value and are subject to special development controls for the purpose of retaining and enhancing nearby views or maintaining unobstructed distant views. There are no scenic corridors in the project vicinity.
>
> *Scenic connectors* are designated streets connecting or providing access to scenic corridors or distant views. Scenic connectors may not necessarily traverse an area of scenic value, but it is recommended that special design treatments (e.g., landscaping, undergrounding of utilities, and street furnishings) be undertaken to provide visual continuity with the scenic corridors. In the project vicinity, I-880 is a designated scenic connector; however, views of Lower Penitencia Creek are mostly obscured by the highway itself.
>
> *Major visual gateways* are generally located at the terminus of a scenic corridor and scenic connector. The I-880 and Dixon Landing Road junction is designated as a major visual gateway in the general plan.
>
> *Visually significant vegetation* generally occurs adjacent to creeks to the east of the urbanized area of Milpitas. There is no visually significant vegetation in the project vicinity.
>
> *Visually significant hilltops or ridges* includes hilltops or ridges where scenic views are likely available; however, the project area is not located in these areas.

Visually significant hillside includes hillsides to the east of the urbanized area of Milpitas. The project area is not located in these areas.

Project Vicinity

The project area is characterized by the Lower Penitencia Creek channel itself and the surrounding land uses, including open space in the vicinity of the Coyote Creek/Lower Penitencia Creek confluence, single-family homes and condominiums, and commercial and office/industrial park buildings. Lower Penitencia Creek and the vegetation and trees within and along the channel provide important visual features as it introduces a natural element and variety into the developed urban landscape. The following viewer groups have visual access to the project site: recreation users, residents, motorists, office workers, and individuals that attend the nearby Hindu temple referred to as BAPS Shri Swaminarayan Mandir.

The visual quality, viewer types and volumes, and viewer exposures associated with the proposed project are described below. **Figure 3.2-1** shows the photo viewpoint locations, and **Figure 3.2-2** includes representative photos of the project area from public viewpoints. The following text describes key views of each project reach along with the visual quality and sensitivity of those views. Following the photos and descriptions, **Table 3.2-1** summarizes the viewer sensitivity of the major viewer types that would be affected by the proposed project.

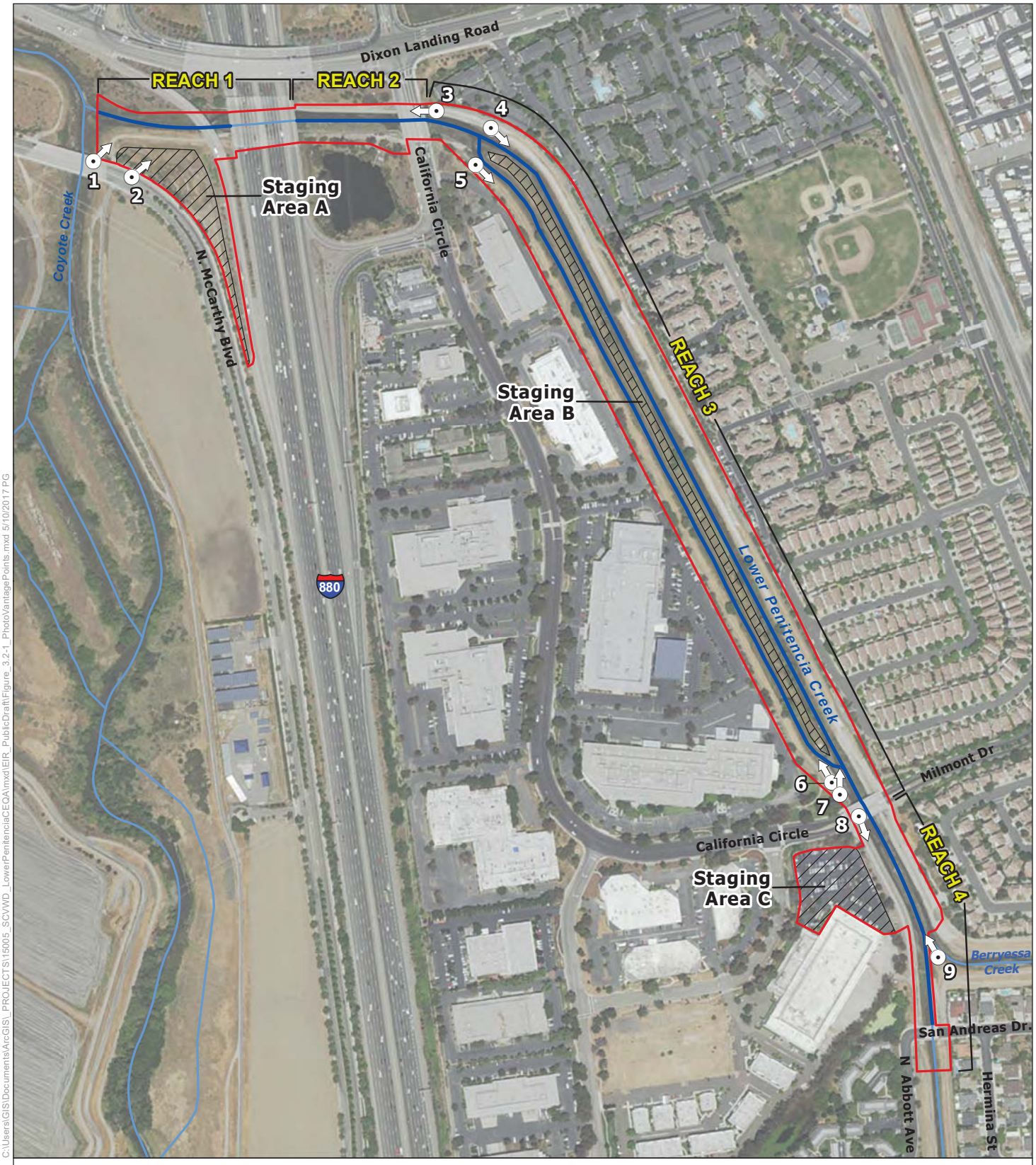
Viewer Exposure, Visual Quality, and Visual Sensitivity

Reach 1

Reach 1 is visible to motorists and recreationists.

Motorists. For motorists traveling on North McCarthy Boulevard, views of Reach 1 are available from a short segment of the road. Outside that segment, views of the creek are obscured due to the road's elevation above the reach and the railing located along the road. Similarly, fleeting views looking westward at Reach 1 are also available from the I-880 southbound on-ramp, which is considered a scenic connector in the *City of Milpitas General Plan* (2002) but is not a state-designated scenic highway. Due to the high speed of travel on I-880 and because views of the creek are somewhat obscured by the highway itself, no photos of Reach 1 were captured from this highway. For these reasons, the visual sensitivity of motorists is considered low.

Recreationists. In comparison to motorists, recreationists (e.g., walkers and joggers) using the sidewalks along North McCarthy Boulevard would have clearer and longer duration views of Reach 1, consisting of the creek channel, some trees, grasses and other low-lying shrubs, and the District maintenance road. Figure 3.2-2, Photo 1 shows a view of Reach 1 looking northeast from the sidewalk along the northbound side of North McCarthy Boulevard. Figure 3.2-2, Photo 2 presents a close-up view (looking eastward) of the proposed Reach 1 levee setback area and Staging Area A from the sidewalk along the eastern side of North McCarthy Boulevard. The creek and low-lying vegetation in the Reach 1 work area provide visual contrast to the nearby urban environment, are characteristic of the region's natural visual amenities, and are judged to have moderate visual quality.



N

0 200 400 800
Feet

Photo Vantage Point and View Direction

Project Boundary

Staging Area

Prepared by:
Horizon WATER and ENVIRONMENT

Figure 3.2-1
Vantage Points for Photos

Lower Penitencia Creek Improvements Project

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Photo 1. View of Reach 1 looking eastward from North McCarthy Boulevard (June 26, 2015)

Photo 2. View of proposed Staging Area A south of Reach 1 from North McCarthy Boulevard looking eastward (June 26, 2015)

Figure 3.2-2.
Views of the Project Site

Lower Penitencia Creek
Improvements Project

Photo 3. View of east side of Reach 2 from California Circle looking westward (June 26, 2015)

Photo 4. View of northern segment of Reach 3 looking southeast from the Penitencia Creek Trail (north side of creek) (June 26, 2015)

Figure 3.2-2.
Views of the Project Site

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Photo 5. View of northern portion of Reach 3 looking southeast from District's maintenance road (on south side of creek) (June 26, 2015)

Photo 6. View of southern portion of Reach 3 looking north from District's maintenance road (west of creek); photo taken on June 26, 2015, prior to sediment removal and vegetation management activities as part of the District's SMP

Figure 3.2-2.
Views of the Project Site

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Photo 7. View of southern portion of Reach 3 looking north from Milmont Drive; photo taken on October 30, 2015, after the District performed channel maintenance, including sediment removal

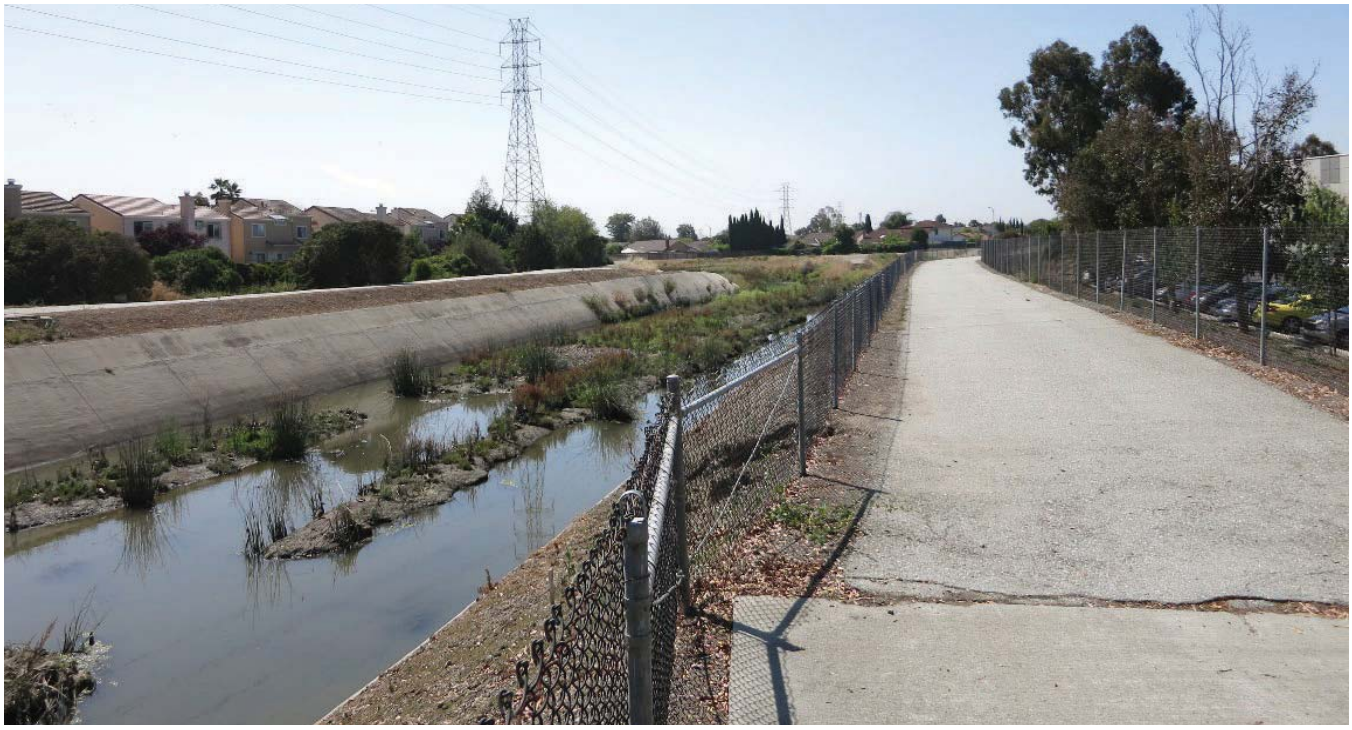

Photo 8. View of Reach 4 looking south from the District's maintenance road (on west side of creek) near Milmont Drive (June 26, 2015)

Figure 3.2-2.
Views of the Project Site

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Photo 9. View of southern end of Reach 4 looking north from the District's maintenance Road at the confluence of Berryessa Creek and Lower Penitencia Creek (June 26, 2015)

Figure 3.2-2.
Views of the Project Site

Lower Penitencia Creek
Improvements Project

The sidewalk on the east side of North McCarthy Boulevard parallels the Coyote Creek Pedestrian and Bicycle Trail, which is located 200 to 400 ft. to the west and connects to North McCarthy Boulevard near the confluence of Lower Penitencia and Coyote Creek. The Coyote Creek trail offers recreationists a nearby off-road alternative to the North McCarthy Boulevard sidewalk. Based on observations by District staff at various times of year, the east sidewalk along North McCarthy Boulevard receives low to moderate use by recreationists. For these reasons, the visual sensitivity for recreationists is considered moderate.

Reach 2

Reach 2 is primarily visible to motorists traveling on Dixon Landing Road and California Circle, and pedestrians using the sidewalks along the south side of Dixon Landing Road and east side of California Circle.

Motorists. For motorists passing Reach 2 on California Circle, views facing west toward the channel are fleeting and somewhat obstructed by the road itself and the railing at the creek crossing. Similarly, for motorists passing Reach 2 on Dixon Landing Road, views of the site are fleeting and obstructed due to topography and the presence of vegetation. Thus, the visual sensitivity for motorists is considered low.

Recreationists. Figure 3.2-2, Photo 3 shows a view of Reach 2 from the sidewalk on the east side of California Circle and characterizes a typical view for pedestrians or joggers using this sidewalk. As shown, views of Reach 2 are largely screened by the road and railing. Mature trees located on the outboard side of the levee and maintenance road and some ruderal vegetation can be seen from this viewpoint but the creek channel is not visible. These natural elements provide pleasing visual contrast to the surrounding urban landscape; thus, the visual quality is considered moderate. From California Circle, the visual sensitivity of pedestrians is considered low to moderate. In addition, views of Reach 2 are available from the southern sidewalk along Dixon Landing Road. Due to the short duration of views for pedestrians passing by the reach and the limited number of pedestrians expected from these perspectives, the visual sensitivity from Dixon Landing Road is considered moderate.

Other viewers of Reach 2 may consist of recreationists using the existing maintenance roads located on the levee crests on both sides of the creek. These maintenance roads are not connected to pedestrian sidewalks, however, so it is anticipated that these maintenance roads are infrequently used by recreationists.

Reach 3

Reach 3 is visible to motorists, recreationists, residents, and other viewers using office space and the nearby Hindu temple referred as BAPS Shri Swaminarayan Mandir.

Motorists traveling on California Circle and Milmont Drive have brief views of the northern and southern ends of Reach 3, respectively. Due to the speed of travel, motorists traveling northbound on California Circle have short duration views of the creek channel and maintenance roads. Similarly, motorists traveling on Milmont Drive have short duration views of the creek channel, vegetation lining the channel, and adjacent maintenance roads. Therefore, the visual sensitivity of motorists is considered low to moderate.

Recreationists using the Penitencia Creek Trail on the north/east bank of the creek in Reach 3 have unobstructed, close-up views of Reach 3. Recreationists who use the District

maintenance road on the south/west bank of the creek also have close-up views of this reach. Figure 3.2-2, Photo 4 shows a representative view of the creek corridor from the perspective of recreationists using the public trail along Reach 3. Photo 4 is taken from the Penitencia Creek Trail north of the creek looking southeast. Because the creek and its vegetation present provide pleasing visual contrast to nearby residential and office park development, the visual quality of Reach 3 is considered moderate. Views from this location are dominated by the creek and its natural vegetation. Electric transmission lines, residential development, and trees lining the trail are also visible. Figure 3.2-2, Photo 5 presents the perspective of a recreationist located on the maintenance road south of the creek, which is not open to public use; however, unauthorized use may occur. At the time this photograph was taken, construction of the Waterstone and iStar residential developments was underway on the parcels west of Reach 3, as is evident by the metal fencing (west of the channel).

Figure 3.2-2, Photos 6 and 7 show views of the southern end of Reach 3 facing north near Milmont Drive. Photo 6 was taken on June 26, 2015; Photo 7 was taken near the same location on October 30, 2015, shortly after sediment removal took place as part of the District's SMP. Both photos are presented to show the varying visual conditions of the project area before and after creek maintenance. Since the creek, vegetation, and trees provide visual contrast to the surrounding residential and office park development, the visual quality is moderate and the visual sensitivity is considered moderate for recreationists using the District's maintenance roads. From the perspective of recreationists using Penitencia Creek Trail, the visual sensitivity is considered moderate to high.

Residents. Other viewers of this reach (with varying levels of visibility) include residents located east and west of the creek. For many residents to the east, vegetation lining the maintenance road and trail, and the levee bank itself screen views of the creek. In some cases, views from residences east of Reach 3 are not available due to changes in elevation and topography. At the northeastern end of Reach 3, some residents situated on the second floor of apartment buildings may have clearer views than those situated at the bottom floor where views of the creek are obstructed by trees and vegetation along the maintenance road. Similarly, from Palisades Drive, some residents have partial views of Reach 3 from the second floor of homes but most views from the first floor are blocked due to the presence of fencing. While CEQA does not require an evaluation of visual effects on private residents, the visual sensitivity of residents to the east of Reach 3 is considered moderate.

Although no one lives in the iStar and Waterstone residential developments (west of Reach 3) yet, the closest residents to the project site will have close-up views of Reach 3. Residents on the bottom floor of buildings situated closest to the creek would have partial views of the creek, though wooden fencing installed around the perimeter of the development partially screens views of the creek. Clearer views of the creek channel may be accessible from the second and third story of these developments. Due to proximity to the project area, the visual sensitivity of the iStar and Waterstone residents are considered moderate.

Other Viewers. Partial views of Reach 3 are also available from an office building and a Hindu temple located west of the creek. Most close-up views of Reach 3 are available from the parking lot adjacent to these buildings. Due to topography, the presence of fencing and vegetation, and because office workers and individuals at the Hindu temple are expected to be focused on indoor activities, limited views of the creek are likely available from the office building and temple. The visual sensitivity of these viewers is considered low.

Reach 4

Reach 4 is visible to motorists driving along Milmont Drive and San Andreas Drive, recreationists using the public trail and maintenance road along the creek, residents, and an office building to the west of Reach 4.

For **motorists** passing by, views of Reach 4 are available from Milmont Drive and San Andreas Drive, although fleeting and somewhat obstructed by the chain-link fence at the creek crossings. Thus, the visual sensitivity for motorists is considered low to moderate.

Recreationists. Figure 3.2-2, Photos 8 and 9 show representative views of Reach 4 from the perspective of recreationists using Penitencia Creek Trail (also serves as the District's maintenance road). Photo 8 shows a view from Milmont Drive (looking south) and Photo 9 shows a view from the Penitencia Creek Trail/maintenance road at the confluence of Lower Berryessa Creek and Lower Penitencia Creek. From the viewpoint shown in Photo 8, views consist of the creek, residential uses to the east, office buildings and a parking lot to the west, electrical transmission lines, and trees and shrubs scattered along the roads. Views from the perspective of Photo 9 primarily include the concrete-lined creek channel, as well as the maintenance roads and nearby vegetation on both sides of the creek. Because the creek and vegetation provide pleasing visual contrast to the surrounding development, the visual quality of Reach 4 is moderate. From the perspective of recreationists using the maintenance roads, the visual sensitivity is moderate.

Residents on Summerwind Drive, San Andreas Drive and North Abbott Avenue may have partial views of the creek in Reach 4. The level of visibility for these residences varies due to the presence of trees and fencing. Views of Reach 4 are likely clearer from the second floor of these residences. The visual sensitivity of these residents is considered moderate.

Other Viewers. Lastly, some office workers using the building at 380 Fairview Way could have foreground views of Reach 4. Most close-up views of Reach 4 are available from the parking lot and are of short duration. Due to topography and presence of fencing and vegetation, limited views of Reach 4 are likely available from the office building. The visual sensitivity of office workers is considered low.

Table 3.2-1. Summary of Visual Sensitivity Findings Based on Viewer Types, Visual Exposures, and Visual Quality

Viewer Type/ Location	Visual Quality	View Exposure	Reach	Visual Sensitivity
Motorists				
I-880	Moderate	Foreground/middleground distance Obstructed view due to highway itself High number of viewers Short view duration	Reach 1	Low
North McCarthy Boulevard	Moderate	Foreground distance Partially obstructed view due to road and railing Moderate number of viewers Short view duration	Reach 1	Low
Dixon Landing Road	Moderate	Foreground distance Partially obstructed view due to road/topography High number of viewers Short view duration	Reach 2	Low
California Circle	Moderate	Foreground distance Partially obstructed view due to road Moderate number of viewers Short view duration	Reaches 2 and 3	Low to Moderate
Milmont Drive/ San Andreas Drive	Moderate	Foreground distance Unobstructed view Low to moderate number of viewers Short view duration	Reaches 3 and 4	Low to Moderate
Recreationists				
Penitencia Creek Trail	Moderate	Foreground distance Unobstructed view Moderate number of viewers Moderate to long view duration	Reach 3	Moderate to High
Unauthorized use of levee access roads adjacent to Reach 2	Moderate	Foreground distance Unobstructed view Low number of viewers Moderate to long view duration	Reach 2	Moderate
North McCarthy Boulevard adjacent to Reach 1	Moderate	Foreground distance Unobstructed view Low number of viewers Moderate to long view duration	Reach 1	Moderate

Viewer Type/ Location	Visual Quality	View Exposure	Reach	Visual Sensitivity
Dixon Landing Road sidewalk	Moderate	Foreground distance Unobstructed view Low number of viewers Moderate to long view duration	Reach 2	Moderate
California Circle sidewalk	Moderate	Foreground distance Partially obstructed view due to road and railing Low number of viewers Moderate to long view duration	Reaches 2 and 3	Low to Moderate
Unauthorized use of levee access roads adjacent to Reaches 3 and 4	Moderate	Foreground distance Unobstructed view Moderate number of viewers Moderate to long view duration	Reaches 3 and 4	Moderate
Residents				
Residences on Dixon Landing Road (Mill Creek Apartments), Alegra Terrace, Cil Del Sol, Palisades Drive, Elkwood Drive, Summerwind Drive, and San Andreas Drive and North Abbott Avenue; residences at the Waterstone and iStar residential developments (on California Circle)	Moderate	Foreground to background distance Obstructed to unobstructed view Long view duration	Reaches 3 and 4	Moderate
Office Buildings Hindu Temple				
Offices on California Circle and Fairview Way and Hindu Temple at BAPS Shri Swaminarayan Mandir	Moderate	Foreground to background distance Obstructed to unobstructed view Long view duration	Reaches 3 and 4	Low

3.1.4 Impact Analysis

Methodology

This section evaluates whether construction and operation of the proposed project would result in significant impacts related to aesthetic resources. The visual analysis is based on

field observations, aerial and ground-based photographs of the reaches, and information from the *City of Milpitas General Plan*.

Visual effects were assessed based on the significance criteria listed below. The evaluation of temporary or short-term visual impacts considers whether construction activities could substantially degrade the existing visual character or quality of the site or surrounding area, as well as the duration over which any such changes would occur. Because of their short-term nature, construction activities occurring in an area for less than 1 year are typically considered to have a less-than-significant effect on visual quality. However, construction activities occurring in an area for more than 1 year have been evaluated for significant visual impacts.

Activities with long-term visual effects, such as construction of new or altered structures, grading of roads, removal of trees, and introduction of new sources of light and glare, can permanently alter the landscape in a manner that could affect the existing visual character or quality of the area, depending on the perspective of the viewer. To determine impact potential, the impact analysis considers the visual sensitivity of the project area.

This analysis takes into consideration potential visual effects on future residents at the Waterstone and iStar residential developments. Although these developments were being constructed at the time this EIR was prepared, these projects will be completed before construction of the proposed project begins. Given the high demand of housing in the Milpitas area, it is likely that these residential units would be occupied by the time construction of the proposed project begins. For this reason and because of their close proximity to the project site, this section evaluates the project's short-term and long-term effects on views from the Waterstone and iStar developments.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact on aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Impact Summary **Table 3.2-1** summarizes impacts of the proposed project on aesthetic resources.

Table 3.2-2. Summary of Impacts Aesthetics

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
AES-1: Have a substantial adverse effect on a scenic vista	NI	None	NI
AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	NI	None	NI
AES-3: Substantially degrade the existing visual character or quality of the site and its surroundings	LS	None	LS
AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	LS	None	LS

Notes:

NI = No Impact; LS = Less than Significant

Environmental Impacts

Impact AES-1: Have a substantial adverse effect on a scenic vista (No Impact)

There are no scenic vistas in the project area designated by Caltrans or the City of Milpitas. As such, the proposed project would have no impact on scenic vistas. No further discussion regarding this criterion is presented.

Impact AES-2: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway (No Impact)

As described in Section 3.2.3, "Environmental Setting," above, there are no state-designated scenic highways in the project vicinity. There is no potential for the project to damage or otherwise affect scenic resources such as trees, rock outcroppings, or historic buildings along a scenic highway. No impact would occur.

Impact AES-3: Substantially degrade the existing visual character or quality of the site and its surroundings (Less than Significant)

Construction Impacts

Construction of the proposed project could result in temporary impacts on the visual character and quality of the site and its immediate vicinity. As described in Chapter 2, *Project Description*, project construction would be spread over 2 years, with the majority of work occurring during the dry season between June and October. The presence of operating equipment and materials, site preparation, and earth-moving activities would be most noticeable during the construction phase. In general, construction activities would include

vegetation removal and excavation, especially when constructing the wetland bench in Reach 1. Large quantities of soil would be moved to construct the wetland bench and the relocated levee in Reach 1, and a large volume of sediment would be removed from Reaches 2 and 4. In addition, excavation and sheet pile wall installation work would be noticeable during construction of the ~~Reaches 2, 3 and 4~~ floodwalls along all project reaches. Some concrete form work would be seen during construction of the San Andreas Drive headwalls.

While fleeting views of the above-described activities would be available from nearby roads, sidewalks, and overpasses, the Penitencia Creek Trail would be closed for the duration of project construction each year. The District access roads would also be closed to the public throughout the duration of project construction. As such, trail users or unauthorized trail users would not have views of construction activities.

Views of construction equipment and activities would be most noticeable to residents immediately west and east of Reaches 3 and 4. Views of construction activities would also be visible to people working in the office buildings that have direct line-of-sight views of the project area to the west in Reaches 3 and 4. Due to topography and the presence of vegetation, trees, and fencing, residents on the second floor of residential buildings would have clearer views of the work areas than would residents on the first floor. From the perspective of office workers located in the buildings west of Reaches 3 and 4, workers on the floors above the ground floor would have clearer and unobstructed views of construction activities that occur in Reach 3. Workers in the buildings just west and south of Staging Area C may have unobstructed and close-up views of this staging area. Temporary views of the Reach 3 work area may also be visible from the nearby Hindu temple.

Construction activities associated with individual project elements would be short term (i.e., completed within approximately 4 months) at a given work area, and overall construction would be completed within 2 years. Throughout this time, construction activities, equipment, and materials in work areas and staging areas would be visible from public roads such as North McCarthy Boulevard, California Circle, Milmont Drive, San Andreas Drive, and residences and offices near Reaches 3 and 4. Tree and shrub removal would also occur along Reaches 1, 2 ~~and~~ 3, and 4 to accommodate the new replacement levee and floodwalls. Earth-moving activities and heavy equipment would be visible, and vehicles have potential to generate dust clouds, which could be distracting to nearby receptors. Implementation of District BMPs AQ-1 (Dust Control Measures) and WQ-11 (Maintain Clean Conditions at Work Sites) would help reduce dust emitted from operating construction equipment and ensure work areas are kept tidy. Construction activities and construction traffic are common visual elements in urbanized areas; traffic associated with the proposed project would be temporary, would appear similar to existing construction activities and construction traffic from the nearby Waterstone and iStar development projects, and would not substantially degrade the project area's visual character. Therefore, during the construction phase, effects on the visual quality and character of the project area and surrounding area would be less than significant.

Operational Impacts

Once construction is complete, the primary project elements that would result in a permanent visual change are the relocated and raised levee and wetland bench in Reach 1; the headwalls at the San Andreas Drive bridge; the floodwalls along Reaches 1, 2, 3, and 4;

the raised levee along Reach 4; and tree removal along Reaches 1, 2, and 3. Operational and maintenance effects of each project element are described below.

Setback Replacement Levee. Shifting the south levee in Reach 1 farther south and raising it by approximately 2.5 feet would result in a visual change. The relocated levee would be hydroseeded, which would consist of distributing native and naturalized grass seeds and mulch. Implementation of District BMP BI-8 would require that a qualified biologist or vegetation specialist select ecologically appropriate seed control mixes, which would ensure that newly planted vegetation appears consistent with vegetation seen in the project vicinity. Similar to current practice, maintenance activities would include vegetation management, trash and debris removal, and maintenance road grading.

From the viewpoint shown in Figure 3.2-2, Photo 1, the raised levee could partially block views of I-880 in the background, but the replacement levee would not detract from views of the creek or the foothills in the background. Given the moderate visual sensitivity of pedestrians and low visual sensitivity from the perspective of motorists using North McCarthy Boulevard, the Reach 1 replacement levee would not have a substantial adverse effect on the site's visual character or visual quality.

Wetland Bench. The proposed wetland bench in Reach 1 would be constructed to increase channel capacity and improve aquatic habitat. Within this reach, the wetland bench would be approximately 50 feet wide and planted with salt-tolerant wetland vegetation. Per District BMP BI-8, to the extent feasible, the wetland bench would be designed to include local native plant species. As described above, the District would conduct routine maintenance to remove trash and debris.

Because the wetland bench would be established along the existing channel and would appear similar to existing vegetation found in and along the creek, this project component would not result in a substantial adverse effect on the site's visual character or quality.

San Andreas Drive Bridge Headwalls. New concrete headwalls would be constructed on the downstream and upstream faces of the San Andreas Drive bridge. The headwalls would connect with the east and west bank levees and new floodwalls. The headwalls would be approximately 70 feet long, 1 foot wide, and approximately 6.5 feet tall. The headwalls would block views of the creek and substantially alter views for motorists using North Abbott Avenue and San Andreas Drive. Recreationists using the Penitencia Creek Trail/maintenance road west of Reach 4 would also have views of the new headwalls but would continue to have views of the creek channel. Thus, from the perspective of recreationists, the headwalls would not substantially affect sensitive views. As shown in Table 3.2-1, the visual sensitivity is low-to-moderate from the perspective of motorists but is moderate to high from the perspective of recreationists that use the trail. Given the low-to-moderate visual sensitivity of motorists and because view durations would be short in duration, this particular component of the project would not result in a substantial adverse effect on the site's visual character or quality.

Floodwalls. New steel sheet pile floodwalls would be installed on top of the levees in Reaches 1, 2, 3, and 4. In Reaches 2 and 4, the floodwalls would be 6 feet tall; in Reach 3, they would be 5.5 feet tall. Reach 3 would also have a pedestrian crossing over the east levee floodwall to allow for continued use of the existing Penitencia Creek Trail. As discussed in Chapter 2, the pedestrian crossing would consist of earthen ramps on both sides of the floodwall. While most of the floodwalls would be on the outboard side of the levees, the eastern floodwall within Reach 3 (from Milmont Drive to the point at which the

Penitencia Creek Trail merges with the District's maintenance road) would be on the inboard side of the maintenance road.

As indicated in Table 3.2-1, the visual sensitivity of this area is considered moderate-to-high from the perspective of recreationists using the Penitencia Creek Trail and the visual sensitivity is moderate from the perspective of unauthorized recreationists using District maintenance roads. For nearby residents, the visual sensitivity is moderate and for office workers, the visual sensitivity is low. Motorists on nearby roads also have a low to moderate visual sensitivity.

The floodwalls would introduce a new vertical built element to the project area. **Figure 3.2-3,** Simulations 1 and 2, show photo simulations of the Reach 3 floodwalls looking west from the Penitencia Creek Trail and Mill Creek Apartments, both of which are located east of the channel. Note that these simulations represent what the floodwalls could look like; the color of the floodwalls has not been determined as the project is in the preliminary design phase. As shown in Figure 3.2-3, the new floodwalls would have a linear, articulated form. As shown in Simulation 1, the floodwall and new residential development would be clearly visible to recreationists using the Penitencia Creek Trail and District maintenance roads. Since most of the floodwalls would be on the outboard side of the levee and maintenance roads, recreationists using the northern portion of the Penitencia Creek Trail and the District maintenance roads would continue to have views of the creek and vegetation in and around the creek. The portion of floodwall that would be installed on the inboard side of the District's maintenance road (east side of Reach 3 between Milmont Drive and the point where the road merges with the Penitencia Creek Trail) is not open to the public and therefore would not affect views of the creek from this perspective.

The following discussion describes the effects on nearby residential views. From the perspective of residences located east of Reach 3, views of the eastern floodwall would be partially visible at varying degrees due to the presence of trees, shrubs, carports, and topography. As shown in Figure 3.2-3, Simulation 2, the floodwalls on both sides of the channel would be visible from the second floor of the Miller Creek Apartments. The eastern floodwall would obstruct views of the creek channel from this particular perspective.

West of Reach 3, residents at the Waterstone and iStar developments that are adjacent to the project area (approximately 10 feet away) would have views of the new floodwalls. The new residences are being constructed on concrete pads such that the ground floor would be at the same elevation as the levee crest. **Figure 3.2-3, Simulations 3 and 4,** show simulations of the new Reach 3 floodwall from the perspective of residents at the Waterstone development. Simulation 3 presents a close-up view of the proposed floodwall and fence line from the perimeter of the development; the bottom photo shows a simulated view of the floodwall from the interior of the Waterstone development. As shown in these simulations, from the ground level, an approximately 1-foot portion of the Reach 3 floodwall would be visible but the majority of the floodwall would be screened by the wooden fence.

From the ground level, views looking eastward toward the creek channel would be screened, though views of the hillsides in background would still be visible. From the second and third floors of the new Waterstone and iStar residences located adjacent to the floodwall, views of the creek channel would be available.

Simulation 1. Simulated view of Reach 3 floodwall looking southwest from Penitencia Creek Trail.

Simulation 2. Simulated view of Reach 3 floodwalls looking southwest from Mill Creek Apartments.

Source: SCVWD 2017

Figure 3.2-3.
Simulations of Proposed Reach 3 Floodwalls

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Simulation 3. Simulated view of Reach 3 floodwall (west bank) looking east from eastern perimeter of the Waterstone development.

Simulation 4. Simulated view of Reach 3 floodwall (west bank) looking east from interior of the Waterstone development.

Source: SCVWD 2017

Figure 3.2-3.
Simulations of Proposed Reach 3 Floodwalls

Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Other views of the floodwalls would be available at varying degrees from residences located east of Reaches 3 and 4 (e.g., from Palisades Drive, Cil Del Sol, Summerwind Drive, and San Andreas Drive). Some views would be partially obstructed by existing topography, fencing, trees and shrubs. Due to angle and height views of the channel may still be available from the second floor of some homes.

Similarly, the floodwalls may be partially visible from office buildings and the Hindu temple to the west of the project area. However, since office workers and individuals at the temple would likely be focused on indoor activities and given their low visual sensitivity, effects on these viewers would be insubstantial. Additionally, motorists traveling on public roads (e.g., California Circle, Milmont Drive, and San Andreas Drive) would have short duration views of the floodwalls. Due to the speed of travel and because motorists should be focused on safe driving, the floodwalls would not substantially degrade views for motorists.

Based on the above discussion and simulations presented, the floodwalls would be consistent with the linear form of the channel and adjacent levees. While such structures currently do not exist in the project area, floodwalls such as the ones proposed, are commonly seen along flood control channels. As described in Chapter 2, although the color coating of the floodwalls has not been selected, the District would select a color coating that blends in with the surrounding environment. For these reasons, the proposed floodwalls would not substantially degrade the project area's visual character and visual quality. This impact is less than significant.

Raised Levee. On the east bank, the existing earthen levee would be raised by about 5.5 feet, from Milmont Drive to the Lower Berryessa Creek confluence, where it would connect to an existing raised levee along Lower Berryessa Creek. The modified levee would be visible from Milmont Drive and recreationists using Penitencia Creek Trail on the west bank of Reach 4. The fencing along the channel reach would substantially block views of the raised levee from adjacent residences. Given the moderate visual sensitivity and because the levee would not detract from views of the creek or the foothills in the background, the raised levee would not substantially degrade the project area's visual character and visual quality. This impact would be less than significant.

Tree and Shrub Removal. As noted above, tree and shrub removal would occur along portions of Reaches 1, 2, 3, and 4 to accommodate the replacement levee and new floodwalls. An estimated total of 33~~22~~ live trees with diameter at breast height (dbh) of 6 inches or more would be removed during project construction.

In particular, in Reach 1, some vegetation located at the proposed locations of the setback levee and wetland bench would be removed during construction. This vegetation consists primarily of low ground cover, with scattered small shrubs. One~~No~~ tree~~s~~ with a dbh of 6 inches or more would be removed in Reach 1. ~~Five~~Four live trees with dbh of 6 inches or more located on the south bank of Reach 2 would be removed to accommodate the ramp that would be constructed behind the floodwall. One tree with dbh of 6 inches or more would be removed on the north bank of Reach 2. In Reach 3, existing primarily non-native trees and shrubs would be removed along the outboard sides of the east bank and west bank levees. In Reach 3, 17 live trees with dbh of 6 inches or more would be removed. In Reach 4, ten live trees with dbh of 6 inches or more would be removed~~a small number of trees and shrubs~~ on the east bank south of Milmont Drive would be removed during construction of the raised levee in this area. ~~None of the trees that would be removed in Reach 4 have dbh exceeding 6 inches.~~ From the perspective of recreationists using the Penitencia Creek Trail, removal of trees and vegetation along in Reach 1 and on the outboard levee slopes in Reaches 2, 3, and 4 would be

noticeable. This vegetation provides a pleasing visual contrast to the surrounding urban development. The vegetation to be removed at Reach 1 consists primarily of non-native of low ground cover and the creation of a wetland bench vegetated with native plants in this reach would improve the overall esthetics of this Reach 1. Trees would be removed in Reaches 1, 2, 3, and 4; however, they would be replaced in compliance with the City of Milpitas Tree Maintenance and Protection ordinance, which is described in more detail in Section 3.4, *Biological Resources*. Implementation of BMP BI-8 would improve aesthetics by ensuring plants and vegetative ground cover are well suited to the local soil and climatic conditions; thereby reducing the potential for unsightly failure of the plantings. BMPs AQ-1 and WQ-11 would prevent excessive dust generation which could temporarily reduce visibility in the project area and improve the cleanliness and appearance of the construction areas when viewed by the general public.

This impact would be less than significant.

Impact AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (Less than Significant)

Construction Impacts

Project construction would generally occur between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday. Construction may occur infrequently on weekends. Because nighttime construction would occur infrequently and would be of short duration, adverse effects on nighttime views would be less than significant. Any glare generated by construction equipment or vehicles would be minor relative to the numerous existing sources of glare from the surrounding urban environment (e.g., vehicle windows, metallic fencing, and building sidings). As such, light or glare effects would be less than significant.

Operational Impacts

No new lighting would be installed for the proposed project. The wetland bench in Reach 1 and hydroseeded levees throughout the project area would not generate any new sources of glare but would help reduce glare in the project vicinity.

The new headwalls at the San Andreas Drive bridge would be composed of concrete, which has a smooth finish and would not generate a substantial source of glare. The new floodwalls in Reaches 2, 3, and 4 could be a substantial source of glare due to the length of added steel surfaces and lack of vegetative cover that could filter sunlight reflecting upon these structures. Glare is typically generated by smooth reflective surfaces. The top two photos in Figure 2-5 show representative steel sheet pile floodwalls, and it is expected that the floodwalls for the proposed project would appear similar. As shown in Figure 2-5, the floodwalls would be composed of smooth coated steel and would be painted. Since the District would select neutral color and non-reflective coating for the sheet pile walls, the finish of the floodwalls would not generate a new substantial source of glare. This impact is less than significant.

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3.3 Air Quality

3.3.1 Overview

This section evaluates the proposed project's air quality impacts. The section first describes the air quality regulatory and environmental settings. The impact evaluation begins by describing the significance criteria and methodology used to evaluate significance, and then identifies the impacts of the proposed project with regard to air quality. Applicable District BMPs are identified and mitigation measures are described for impacts that are determined to be significant.

Air quality is described for a specific location as the concentration of various pollutants in the atmosphere. Air quality conditions at a particular location are a function of the type and amount of air pollutants emitted into the atmosphere, the size and topography of the regional air basin, and the prevailing meteorological conditions.

3.3.2 Regulatory Setting

Federal Laws, Regulations, and Policies

The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient emission limits, the National Ambient Air Quality Standards (NAAQS), for six criteria air pollutants: particulate matter of aerodynamic radius of 10 microns or less (PM_{10}), particulate matter of aerodynamic radius of 2.5 microns or less ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), ground-level ozone (O_3), and lead (Pb). Of these criteria pollutants, particulate matter and ground-level ozone pose the greatest threats to human health.

Table 3.3-1 shows the current attainment status for the NAAQS in the project area's air basin.

Table 3.3-1. Attainment Status of the Federal and State Ambient Air Quality Standards

Contaminant	Averaging Time	Concentration	State Standards Attainment Status[1]	Federal Standards Attainment Status[2]
Ozone (O_3)	1-hour	0.09 ppm	N	See footnote 3
	8-hour	0.070 ppm	N	N See footnote 3
Carbon Monoxide (CO)	1-hour	20 ppm	A	
		35 ppm		A
	8-hour	9.0 ppm	A	A[4]
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm	A	
		0.100 ppm[6]		U
	Annual arithmetic mean	0.030 ppm	A	
		0.053 ppm		A

Contaminant	Averaging Time	Concentration	State Standards Attainment Status[1]	Federal Standards Attainment Status[2]
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	A	
		0.075 ppm		A
	24-hour	0.04 ppm	A	
Particulate Matter (PM_{10})	24-hour	50 µg/m^3	N	
		150 µg/m^3		U
	Annual arithmetic mean	20 µg/m^3	N	
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 µg/m^3		N[7]
	Annual arithmetic mean	12 µg/m^3	N	U/A
Sulfates	24-hour	25 µg/m^3	A	
Lead (Pb)[8]	30-day average	1.5 µg/m^3	A	
	Calendar quarter	1.5 µg/m^3		A
	Rolling 3-month average	0.15 µg/m^3		A
Hydrogen Sulfide	1-hour	0.03 ppm	U	
Vinyl Chloride[8] (chloroethene)	24-hour	0.010 ppm	U	
Visibility Reducing Particles	8 hour (10:00 to 18:00 PST)	See footnote 5	U	

A – attainment ppm – parts per million

N – non-attainment µg/m^3 – micrograms per cubic meter

U – unclassified

Notes:

1 California standards for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility-reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements that are excluded include those that the California Air Resources Board (CARB) determines would occur less than once per year on average.

2 National standards shown are the "primary standards" designed to protect public health. National air quality standards are set by USEPA at levels determined to be protective of public health with an adequate margin of safety. National standards other than for ozone, particulates, and those based on annual averages are not to be exceeded more than once per year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.075 ppm (75 parts per billion) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met by spatially averaging annual averages across officially designated clusters of sites and then determining if the 3-year average of these annual averages falls below the standard.

3 The national 1-hour ozone standard was revoked by USEPA on June 15, 2005. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 ppm to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. The attainment status provided in this table for the NAAQS ozone standard is based on the 2008 8-hour NAAQS standard of 0.075 ppm since there are not yet available attainment status determinations for the 2015 standard.

[4] In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.

[5] Statewide Visibility-Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

[6] To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average of nitrogen dioxide at each monitoring station within an area must not exceed 0.100 ppm (effective January 22, 2010).

[7] On January 9, 2013, USEPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard.

[8] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure below which there are no adverse health effects determined.

Sources: CARB 2015; USEPA 2015a, 2015b, 2015c, and 2016; Bay Area Air Quality Management District (BAAQMD) 2016a

USEPA and, in California, the California Air Resources Board (CARB) regulate various stationary sources, area sources, and mobile sources of air pollutant emissions. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known at the federal level as hazardous air pollutants (HAPs). In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles, as well as other releases of toxic chemicals.

State Laws, Regulations, and Policies

CARB sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. Table 3.3-1 provides the California ambient air quality standards (CAAQS) and their corresponding attainment status for the proposed project's air basin. Milpitas and the project area are located in Santa Clara County within the San Francisco Bay Area Air Basin, which is managed by the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the basin and to develop and implement strategies to attain the applicable federal and state standards.

CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications. Airborne Toxic Control Measures (ATCMs), including the following relevant measures, are implemented to address sources of TACs:

- ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater
- ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- ATCM to Reduce Particulate Emissions from Diesel-Fueled Engines Standards for Non-vehicular Diesel Fuel
- ATCM for Stationary Compression Ignition Engines

In addition to ATCMs, TACs are controlled under several regulations in California, including the Tanner Air Toxics Act, Air Toxics Hot Spots Information Act, and Assembly Bill (AB) 2588: Air Toxics "Hot Spots" Information and Assessment Act. In addition, Proposition 65 (the Safe

Water and Toxic Enforcement Act of 1996) requires the state to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. Proposition 65 requires businesses to notify Californians about substantial amounts of chemicals in the products they purchase or that are released into the environment.

Regional Laws, Regulations, and Policies

Bay Area Air Quality Management District

The BAAQMD is the primary agency that regulates sources of air pollution in the nine San Francisco Bay Area (Bay Area) counties to achieve and maintain air quality standards. The district adopts and enforces rules and regulations, issues air quality permits for equipment that emits air pollutants, and monitors air quality and meteorological conditions. BAAQMD has local air quality jurisdiction over the proposed project area.

BAAQMD 2010 Clean Air Plan

The Bay Area 2010 Clean Air Plan details planned efforts to improve Bay Area air quality and protect public health, while simultaneously updating the Bay Area 2005 Ozone Strategy to comply with state air quality planning requirements. The 2010 Clean Air Plan contains a control strategy that includes measures for stationary and area sources, mobile sources, transportation controls, land use and local impacts, energy and climate, and additional measures to control ozone and its precursors, PM_{10}, $PM_{2.5}$, and TACs (BAAQMD 2010a).

Although the Bay Area 2010 Clean Air Plan is the current adopted plan, the BAAQMD has developed the *Spare the Air-Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area Draft 2017 Clean Air Plan* (Draft 2017 Plan), which if adopted would supersede the 2010 plan (BAAQMD 2017).

Particulate Matter Plan

On January 9, 2013, USEPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ standard (78 Federal Register 1760; January 9, 2013). This USEPA rule suspends key SIP requirements as long as monitoring data continue to show that the Bay Area attains the standard. Despite this USEPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until the BAAQMD submits a "redesignation request" and a "maintenance plan" to USEPA, and USEPA approves the proposed redesignation.

The BAAQMD has developed various rules, programs, and measures to identify and control sources of PM, including general PM emission requirements, a Winter Spare the Air program, and control measures identified in the 2010 Clean Air Plan (BAAQMD 2016b). The draft 2017 Plan includes a variety of control measures to reduce PM emissions, including but not limited to expanding the BAAQMD's fugitive dust visible emissions limits to a wider array of sources, reducing DPM emissions from emergency generators, and developing a rule to prevent mud/dirt trackout from construction and other sites (BAAQMD 2017).

BAAQMD 2005 Ozone Strategy

The Bay Area 2005 Ozone Strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control

measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and other agencies (BAAQMD 2006).

BAAQMD Rules

The BAAQMD supports incentive programs to reduce criteria pollutant emissions within the district. BAAQMD's Carl Moyer Program funds control projects for off-road and on-road emission sources. The Transportation Fund for Clean Air (TFCA) Program likewise provides financial incentives for on-road vehicle retrofits.

The proposed project may be subject to the following BAAQMD rules:

- **Regulation 2 Permits:** outlines the air permitting program including exemptions and sources needing permitting
  - **Regulation 2, Rule 1 – Permits General Requirements** outlines permitting requirements and exemptions.
  - **Regulation 2, Rule 2 – New Source Review** outlines permitting process for new sources.
  - **Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants** outlines guidance for evaluating TAC emissions and their potential health threats.
- **Regulation 6, Rule 1 – Particulate Matter** restricts emissions of PM.
- **Regulation 8, Rule 15 – Emulsified and Liquid Asphalts** limits emissions of volatile organic compounds (VOCs) caused by paving materials.
- **Regulation 9, Rule 8 – Stationary Internal Combustion Engines** limits emissions of NO_X and CO from stationary internal combustion engines of more than 50 horsepower.

3.3.3 Environmental Setting

San Francisco Bay Air Basin – Santa Clara Valley Region

CARB has divided California into regional air basins according to topographic and air drainage features. The following discussion provides climate and meteorological information associated with the Santa Clara Valley's climatological subregion of the San Francisco Bay Air Basin, which includes Milpitas.

The northwest-southeast–oriented Santa Clara Valley is bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, San Francisco Bay to the north, and the convergence of the Gabilan and Diablo Ranges to the south. Temperatures are warm in summer under mostly clear skies, although a relatively large diurnal temperature range results in cool nights. Winter temperatures are mild, except for very cool but generally frostless mornings. At the northern end of the Santa Clara Valley, mean maximum temperatures at the San Jose International Airport range from the high 70s (in degrees Fahrenheit [°F]) to the low 80s during the summer to the high 50s or low 60s during the

winter; mean minimum temperatures range from the high 50s during the summer to the low 40s during the winter. Farther inland, where the moderating effect of San Francisco Bay is not as strong, temperature extremes are greater. For example, temperatures in San Jose can be more than 10 °F warmer on hot summer afternoons and more than 10°F cooler during cold winter nights. Rainfall amounts are modest, ranging from 13 inches in the lowlands to 20 inches in the hills.

The wind patterns in the Santa Clara Valley are influenced greatly by the terrain, resulting in a prevailing flow generally parallel to the Valley's northwest-southeast axis, with a north-northwesterly sea breeze extending up the valley during the afternoon and early evening and a light south-southeasterly drainage flow occurring during the late evening and early morning. In summer, a convergence zone is sometimes observed in the southern end of the valley between Gilroy and Morgan Hill, when air flowing from Monterey Bay through the Pajaro Gap is channeled northward into the south end of the Santa Clara Valley and meets with the prevailing north-northwesterly winds. Wind speeds are greatest in the spring and summer, and least in the fall and winter seasons. Nighttime and early morning hours have light winds and are frequently calm in all seasons, while summer afternoons and evenings are quite breezy. Strong winds are rare, coming only with an occasional winter storm.

The air pollution potential of the Santa Clara Valley is high. The valley has a large population and the largest complex of mobile sources in the Bay Area, making it a major source of carbon monoxide, particulate, and photochemical air pollution. In addition, photochemical precursors from San Francisco, San Mateo, and Alameda Counties can be carried along by the prevailing winds to the Santa Clara Valley, making it also a major ozone receptor. Geographically, the valley tends to channel pollutants to the southeast with its northwest/southeast orientation and concentrate pollutants by its narrowing to the southeast. Meteorologically, on high-ozone, low-inversion summer days, the pollutants can be recirculated by the prevailing northwesterly winds in the afternoon and the light drainage flow in the late evening and early morning, increasing the impact of emissions substantially. On days with high particulate and carbon monoxide levels during late fall and winter, clear, calm, and cold conditions associated with a strong surface-based temperature inversion prevail (BAAQMD 1998).

Project Area

The project area is adjacent to I-880 (a 10-lane highway) and commercial and residential areas. In addition, the project area is located approximately 2,000-3,000 feet east of the San Jose–Santa Clara Regional Wastewater Facility's drying beds and lagoons.

Existing Air Quality Conditions

Air Monitoring Data

USEPA, CARB, and local air districts (including the BAAQMD) operate an extensive air monitoring network to measure progress toward attainment of the NAAQS and CAAQS. **Table 3.3-2** shows the most recent three years of available data. The closest station is the San Jose station.

Table 3.3-2. Air Monitoring Data for 2013-2015

Monitoring Station	Pollutant Standard		2015		2014		2013	
	Pollutant	State/Federal Standards	No. Exceed[1]	Maximum Concentration	No. Exceed[1]	Maximum Concentration[1]	No. Exceed[1]	Maximum Concentration[1]
San Jose (Jackson Street)	PM_{10} 24-hour	50/150 µg/m^3	1/0	58 µg/m^3	1/0	55 µg/m^3	5/0	58 µg/m^3
	$PM_{2.5}$ 24-hour	NA/35 µg/m^3	NA/2.1	49.4 µg/m^3	NA/2	60.4 µg/m^3	NA/6	57.7 µg/m^3
	Ozone 8-hour	0.070 ppm	2/2	0.081 ppm	0/0	0.066 ppm	1/1	0.079 ppm
	Ozone 1-hour	0.09 ppm	0/0	0.094 ppm	0/0	0.089 ppm	0/0	0.093 ppm
	CO 8-hour	9.0 ppm	0/0	1.8 ppm	0/0	1.9 ppm	0/0	2.5 ppm
	CO 1-hour	20 ppm	0/0	2.4 ppm	0/0	2.4 ppm	0/0	3.1 ppm
	NO_2 1-hour	0.18/0.1 ppm	0/0	0.049 ppm	0/0	0.058 ppm	0/0	0.059 ppm
	SO_2 24-hour	0.04 ppm / N/A	0/NA	0.0011 ppm	0/NA	0.0009 ppm	0/NA	0.0014 ppm
	SO_2 1-hour	0.25/0.075 ppm	0/0	0.0031 ppm	0/0	0.003 ppm	0/0	0.0025 ppm

Notes:

CO = carbon monoxide; NO_2 = nitrogen dioxide; $PM_{2.5}$ = particulate matter of 2.5 micrometers or less; PM_{10} = particulate matter of 10 micrometers or less; SO_2 = sulfur dioxide; NA = not available; ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter

1. Indicates the number of exceedance days recorded annually at this monitoring station for a particular constituent compared to that constituent's NAAQS and CAAQS. The first number is the state value and the second number is the federal value if they are different.

Source: CARB 2016a, BAAQMD 2016a

Air Pollutants

Carbon Monoxide

CO is an odorless, colorless gas that is highly toxic. CO is formed by the incomplete combustion of fuels and is emitted directly into the air. Ambient CO concentrations normally are considered a localized effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic, forming pollutant hot spots. CO concentrations are also influenced by wind speed and atmospheric mixing. Under inversion conditions, CO concentrations may be distributed more uniformly over an area to some distance from vehicular sources. CO binds with hemoglobin, the oxygen-carrying protein in blood, and reduces the blood's capacity for carrying oxygen to the heart, brain, and other parts of the body. At high concentrations, CO can cause heart difficulties in people with chronic diseases, impair mental abilities, and cause death. (BAAQMD 2010b, CAPCOA 2017).

Nitrogen Oxides

Nitrogen oxides (NO_X) are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and PM. NO_2, the major component of NO_X, is a reddish-brown gas that is toxic at high concentrations. NO_X result primarily from the combustion of fossil fuels under high temperature and pressure. Fuel combustion, primarily from on-road and off-road motor vehicles, and industrial sources are the major sources of this air pollutant. (BAAQMD 2010b, CAPCOA 2017).

Volatile Organic Compounds

VOCs are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and/or may themselves be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs are also commonly referred to as reactive organic gases (ROG). (BAAQMD 2010b, SBCAPCD 2010).

Ozone

O_3 is a reactive gas consisting of three oxygen atoms. In the stratosphere, ozone exists naturally and shields the Earth from harmful incoming ultraviolet radiation. In the troposphere (the lowest region of the atmosphere), however, it is a secondary pollutant that is formed when NO_X and VOC react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground-level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests, foothill communities, and agricultural crops, as well as some human-made materials, such as rubber and plastics. (BAAQMD 2010b, CAPCOA 2017).

Particulate Matter

PM is a complex mixture of extremely small particles and liquid droplets. PM is made up of multiple components, including acids, organic chemicals, metals, and soil or dust particles. Particle size is directly linked to the potential for causing health problems. PM_{10} is of concern because these particles pass through the throat and nose and are deposited in the thoracic region of the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. PM_{10} is typically found near roadways and around dusty industrial sites. $PM_{2.5}$, which is found in smoke and haze, penetrates even more deeply into the thoracic and alveolar regions of the lungs. (BAAQMD 2010b, CAPCOA 2017).

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. Suspended SO_2 particles contribute to poor visibility and are a component of PM_{10}. (CAPCOA 2017).

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. Historically, the major sources of lead emissions have been mobile and industrial sources. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage. Lead poisoning can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. (BAAQMD 2010b, CAPCOA 2017).

In the past, gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. Because the use of leaded fuel has been mostly phased out, ambient concentrations of lead have decreased dramatically.

Hydrogen Sulfide

Hydrogen sulfide (H_2S) is associated with geothermal activity, oil and gas production and refining, sewage treatment plants, and confined animal feeding operations. H_2S is extremely hazardous in high concentrations and can cause death. (OEHHA 2000).

Sulfates

Sulfates are the fully oxidized, ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds result primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates is comparatively rapid and complete in urban areas of California due to regional meteorological features. (CARB 2009).

CARB's sulfate standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels that exceed the standard include decreased ventilatory function, aggravation of asthmatic symptoms, and increased risk of cardiopulmonary disease. Sulfates are particularly effective in degrading visibility and, because they are usually acidic, can harm ecosystems and damage materials and property.

Vinyl Chloride

Vinyl chloride is a colorless gas that does not occur naturally; it is formed when substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC), which is used in plastic products such as pipes, wire and cable coatings, and packaging materials. (Agency for Toxic Substances & Disease Registry 2006).

Toxic Air Contaminants

TACs are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Hundreds of different types of TACs exist, with varying degrees of toxicity. Many TACs are confirmed or suspected carcinogens or are known or suspected to cause birth defects or neurological damage. For some chemicals, such as carcinogens, no threshold exists below which exposure can be considered risk free. Examples of TAC sources associated with the proposed project are fossil fuel combustion sources and chemicals used in the automobile maintenance area.

Sources of TACs include stationary sources, area-wide sources, and mobile sources. USEPA maintains a list of 187 TACs, identified federally as HAPs. These HAPs are included on CARB's list of TACs, along with additional chemicals identified as TACs in California (CARB 2016b). According to the *California Almanac of Emissions and Air Quality* (CARB 2013), many researchers consider diesel particulate matter (DPM) to be a primary contributor to health risk from TACs because particles in diesel exhaust carry many harmful organic compounds and metals, rather than being a single substance. According to estimates by CARB, outdoor

(ambient) DPM concentrations in 2012 have decreased by 68 percent from 1990 levels (from approximately 1.8 μg/m^3 to less than 0.6 μg/m^3) (CARB 2016c).

Sensitive Receptors

Sensitive receptors are those segments of the population most susceptible to the effects of poor air quality: children, the elderly, and individuals with serious pre-existing health problems affected by air quality (e.g., asthma) (CARB 2005). Examples of locations that contain sensitive receptors are residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities. Residences include houses, apartments, and senior living complexes. Medical facilities can include hospitals, convalescent homes, and health clinics. Playgrounds include play areas associated with parks or community centers.

In general, sensitive receptors near the project area are located east or south of the project area. Sensitive receptors include residences, schools (Curtner Elementary School and Joseph Weller Elementary School), daycare facilities (Crescent Montessori Preschool and Kiran Childcare), medical facilities (Wellbound of Milpitas and Santa Clara Valley Medical Center), and assisted living facilities (Good Samaritan Care Home and Capri Homes Inc.). Approximate distances between each project reach and these sensitive receptors are shown in **Table 3.3-3**.

Table 3.3-3. Estimated Sensitive Receptor Distances from Project Area

Project Reach	Approximate Distance to Sensitive Receptor Type (feet)				
	Residence	School	Daycare/ Preschool	Medical	Assisted Living
Reach 1 – Coyote Creek to I-880	720	4,994	3,402	2,018	6,072
Reach 2 – I-880 to California Circle	163	4,424	2,812	1,454	5,650
Reach 3 -California Circle to Milmont Drive	10*	2,254	253	5,755	1,174
Reach 4 - Milmont Drive to San Andreas Drive	77	1,468	251	5,031	607
* This value indicates the distance between the project site and the closest residences of the iStar and Waterstone developments (currently underway).					

3.3.4 Impact Analysis

Methodology

This discussion describes the methodology used to evaluate whether construction and operation of the proposed project would result in significant impacts related to air quality and odors. Once construction is complete, operation of the proposed project would be similar to existing conditions and would generally entail typical maintenance activities that are currently conducted (e.g., mowing the channel banks, removing vegetation along maintenance roads, maintenance road grading, graffiti removal, and fence repair). Some additional maintenance activities, such as periodic visual inspection of the floodwalls,

headwalls, and Reach 1 replacement levee, would be conducted. Repair of structures would be conducted on an infrequent and as-needed basis. Routine sediment removal activities would likely be decreased or eliminated compared to existing conditions, and such activities would be conducted under the District's SMP. No substantially new long-term operational sources of emissions would be generated by the project that are not already covered by the SMP. The majority of maintenance activities conducted within the project area would be the same as those conducted under the District's SMP; the operational emissions of the SMP are addressed in the SMP Subsequent EIR (SCVWD 2012). The newly installed floodwalls and San Andreas Drive bridge headwalls would be visually inspected one to two times per year, and repairs would only be conducted if damage threatens the integrity of the structure. Because such inspections would be conducted infrequently and would generate a minimal increase in emissions compared to existing conditions, this impact analysis evaluates construction emissions generated by the project but does not evaluate future maintenance and operational activities.

During construction of the proposed project, the combustion of fossil fuels for operation of fossil-fueled construction equipment, material hauling, and worker commute vehicles would result in construction-related emissions of criteria air pollutants. These emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 and based on the construction equipment, phasing, duration, and worker quantities summarized in **Appendix C** (Air Quality and Greenhouse Gas Emissions). These assumptions were generally based on similar project types and the excavation and fill volumes presented in the District's Planning Study Report (SCVWD 2016). Since publication of the DEIR, project design has advanced and the excavation and fill volumes have been reduced; mainly the net import value would be about 3,430 cy and all excavated soil would be reused on-site. As such, the assumptions used to estimate the project's construction emissions are overestimated and the calculated emissions in Appendix C are considered conservative.

Construction activities in each reach were separated into multiple construction phases to account for differences in activities, number of workers, duration of construction activities, and construction equipment needs. These phases generally included site preparation, earthwork/grading or concrete placement, and planting (i.e., revegetation of the site). For the purposes of estimating emissions associated with each construction phase and to identify the potential maximum daily emissions if multiple phases were performed concurrently, the construction schedules and durations identified in **Table 3.3-4** were used.

The CalEEMod output files are provided in Appendix C, which also contains all of the applicable inputs.

Table 3.3-4. Potential Construction Schedules Assumed in Air Quality Analysis

Construction Phase	Approximate Construction Start Date	Approximate Construction End Date
Reach 1 – Site Preparation	6/15/2018	6/28/2018
Reach 2 – Site Preparation		
Reach 4 – Site Preparation		
Reach 1 – Grading	6/30/2018	9/28/2018
Reach 2 – Floodwall Activities		
Reach 4 – Floodwall Activities		

Construction Phase	Approximate Construction Start Date	Approximate Construction End Date
Reach 1 – Planting	9/30/2018	10/12/2018
Reach 2 – Hydroseeding/Winterization		
Reach 4 – Hydroseeding/Winterization		
Reach 3 – Site Preparation	6/15/2019	6/28/2019
Reach 3 – Floodwall Activities	7/1/2019	9/27/2019
San Andreas Drive Bridge		
Reach 3 – Hydroseeding/Winterization	9/30/2019	10/11/2019

Source: Appendix C, Air Quality and Greenhouse Gas Emissions.

Emissions were compared to applicable thresholds of significance for construction emissions, as detailed by BAAQMD.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would have a significant effect related to air quality if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard established by USEPA or CARB, or contribute substantially to an existing or projected air quality violation, in comparison to the BAAQMD thresholds below;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial air pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

BAAQMD Thresholds

The BAAQMD has established mass emission thresholds of significance (BAAQMD 2010b) to determine if air emissions would contribute to an existing or projected air quality violation, result in a cumulatively considerable contribution to an existing air quality violation, or result in a cumulatively considerable net increase of a criteria pollutant such that the air basin would be in nonattainment for CAAQS or NAAQS. Although the BAAQMD established significance thresholds for construction- and operation-related emissions previously (BAAQMD 1999), the 2010 thresholds were selected for this analysis since the 1999 construction-related significance thresholds were primarily limited to PM_{10} emissions. ~~At the time of Draft EIR preparation, the BAAQMD was not recommending use of these construction thresholds due to ongoing litigation on unrelated thresholds.~~ In May 2017, the BAAQMD initiated an effort to update its CEQA Guidelines including release of a May 2017 version of the guidelines. The May 2017 Guidelines Update includes revisions made to the 2010 Guidelines to incorporate the California Supreme Court's opinion in California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369. The BAAQMD is currently working to update outdated references, links, analytical methodologies

or other technical information in the May 2017 Guidelines Update. The thresholds in the May 2017 Guidelines Update remain the same as those shown in the 2010 Guidelines. In view of the Supreme Court's opinion, local agencies may continue to rely on the BAAQMD thresholds after determining that those thresholds reflect an appropriate measure of a project's impacts. ~~However, the~~The District considers ~~these~~the BAAQMD thresholds (presented in **Table 3.3-5**) to be appropriate for use in this analysis because they are based on substantial evidence developed by the BAAQMD as the level to ensure attainment of air quality standards.

Table 3.3-5. BAAQMD Construction Air Quality Thresholds of Significance

Pollutant	Average Daily Emissions (pounds per day)
ROG	54
NO_X	54
PM_{10} (Exhaust)	82
$PM_{2.5}$ (Exhaust)	54
$PM_{10}/PM_{2.5}$ (Fugitive Dust)	Best Management Practices (BMPs)
Local CO	None

Source: BAAQMD 2010b

The BAAQMD recommends implementation of BMPs for all projects to reduce fugitive dust emissions. With implementation of fugitive dust BMPs, the BAAQMD considers the impact of fugitive dust emissions to be less than significant.

The BAAQMD established screening criteria that specify an acceptable distance between sensitive receptors and common sources of odors, such as landfills and wastewater treatment plants. The BAAQMD also specifies that an odor source with five or more confirmed complaints per year averaged over 3 years would be considered to have a significant impact on receptors within the screening distance. The BAAQMD acknowledges that a lead agency has discretion under CEQA to use established odor detection thresholds or other significance thresholds for CEQA review. Because the proposed project does not involve any odor sources included in the BAAQMD's screening criteria, this analysis uses a qualitative assessment of potential odor sources and their impact.

Impact Summary

Table 3.3-6 summarizes air quality impacts of the proposed project.

Table 3.3-6. Summary of Impacts – Air Quality

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
AQ-1. Conflict with or obstruct implementation of the applicable air quality plan	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
AQ-2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation	S	Mitigation Measure AQ-1	LM
AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	S	Mitigation Measure AQ-1	LM
AQ-4: Expose sensitive receptors to substantial pollutant concentrations	LS	None	LS
AQ-5: Create objectionable odors affecting a substantial number of people	S	Mitigation Measure AQ-2	LM

LS = Less than Significant; LM = Less than Significant with Mitigation; S = Significant

Environmental Impacts

Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plans (Less than Significant)

The proposed project would have a significant impact if it would conflict with or impair implementation of applicable air quality plans. Applicable air quality plans include the Bay Area 2001 Ozone Attainment Plan, Bay Area 2010 Clean Air Plan, the Draft 2017 Plan, and *City of Milpitas General Plan* (2002).

The Bay Area 2001 Ozone Attainment Plan contains a control strategy that includes stationary-source, mobile-source, and transportation measures to reduce ozone and ozone precursors. The Bay Area 2010 Clean Air Plan contains a control strategy that includes measures for stationary sources, mobile sources, transportation controls, land use and local impacts, energy and climate, and additional measures to control ozone and its precursors (ROG and NO_X), PM_{10}, $PM_{2.5}$, and TACs. The 2017 Draft Plan (BAAQMD 2017) similarly provides ozone control strategies related to numerous potential ozone precursor sources, including stationary sources, transportation, natural and working lands, waste management, energy, and buildings. In particular, policy TR 19, which provides incentives for lower emission trucks, and policy TR 22, which provides incentives for the use of lower-emitting construction equipment, would reduce transportation- and construction-related ozone precursor emissions (BAAQMD 2017). The *City of Milpitas General Plan* has transportation and land use policies that aim to improve air quality in the City of Milpitas.

The proposed project would not include activities covered in the Bay Area 2010 Clean Air Plan or the Bay Area 2001 Ozone Attainment Plan. The proposed project would involve temporary construction emissions, would not result in induced growth, and would not result in a permanent new source of emissions. In addition, the proposed project would not affect land uses anticipated in the *City of Milpitas General Plan* for long-range air quality planning,

and would not facilitate further growth. In-channel construction activities, which includes most of the project construction, would occur only during the summer dry season from June 15 through October 15 over two years. Because construction would occur during two four-month periods, construction emissions generated by the project would not conflict with applicable air quality plans, and this impact would be less than significant.

Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation (Less than Significant with Mitigation)

The proposed project would emit criteria pollutants through the combustion of fossil fuels by construction equipment, worker vehicles, and material hauling trucks. In addition, the proposed project's grading and excavation activities would disturb soils and generate fugitive dust (particulate matter emissions). Implementation of District BMP AQ-1 would reduce NO_X and other criteria pollutant emissions by minimizing idling times of construction equipment and ensuring that all equipment is properly maintained and tuned in accordance with manufacturer's specifications. In addition, the dust control measures included in District BMP AQ-1 would minimize fugitive dust emissions during project construction activities and would be in compliance with the BAAQMD's requirements. As demonstrated in the emissions calculations presented in **Table 3.3-7**, **Table 3.3-8**, and Appendix C, the proposed project would result in construction emissions of NO_X that exceed the BAAQMD thresholds for grading activities proposed in Reach 1 and other construction activities proposed within Reaches 1, 2, and 4, if they were performed concurrently. As shown in Table 3.3-7, with implementation of District BMP AQ-1 in accordance with the BAAQMD's requirements, all pollutants except NO_X would be lower than the BAAQMD significance thresholds. These construction emissions would not be permanent or contribute to added emissions once construction of the proposed project is complete. The emissions would, however, contribute to existing air quality impairments during the construction period. Since the proposed project's NO_X emissions would still exceed the BAAQMD NO_X significance criteria even with implementation of District BMP AQ-1, this impact is significant.

Mitigation Measures

Mitigation Measure AQ-1: Implement Construction NO_X Emission Reductions

The District or its contractor(s) will develop a construction plan demonstrating that off-road equipment (greater than 50 horsepower) and material hauling vehicles used during project construction (i.e., owned, leased, and subcontracted vehicles) will not result in average daily NO_X emissions of more than 54 pounds per day, which will require achieving a project-wide fleet-average of at least 22 percent NO_X reduction compared to unmitigated emissions. As part of developing this construction plan, the District or its contractor(s) will conduct additional air quality modeling to confirm that the NO_X emissions threshold will be met. This limit of 54 pounds per day of NO_x emissions shall be achieved through a combination of approaches, including phasing of construction activities in a manner that reduces the daily emissions generated from the proposed project; the use of late model engines (e.g., Tier 3 or 4 engines), low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or add-on devices such as particulate filters; and/or other options as such become available.

Table 3.3-7. Estimated Criteria Pollutant Emissions during each Phase of Project Construction

Construction Phase	ROG	NO_X	CO	SO_2	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
	Total Construction Emissions (ppd)							
Reach 1 – Site Preparation	2.73	25.65	17.19	2.56	25.97	14.72	6.76	1.41
Reach 2 – Site Preparation	2.80	28.21	24.49	0.03	12.58	1.41	6.76	1.30
Reach 4 – Site Preparation	2.87	28.86	25.07	0.03	12.60	1.46	6.76	1.34
Reach 1 – Grading	5.61	**58.15**	49.20	0.10	3.37	2.50	1.33	2.35
Reach 2 – Concrete Placement	2.12	15.40	19.61	0.04	1.33	0.88	0.35	0.86
Reach 4 – Concrete Placement	2.24	17.11	20.87	0.05	1.47	0.91	0.39	0.88
Reach 1 – Planting	0.84	7.21	8.42	0.02	0.68	0.40	0.18	0.37
Reach 2 – Planting	0.77	6.76	7.89	0.02	0.73	0.32	0.19	0.30
Reach 4 – Planting	1.30	13.44	13.00	0.04	1.15	0.49	0.31	0.45
Reach 3 – Site Preparation	2.69	26.97	23.93	0.03	12.76	1.33	6.78	1.23
Reach 3 – Concrete Placement	2.67	24.10	26.70	0.08	2.20	0.92	0.58	0.88
San Andreas Drive Bridge	1.82	12.87	18.17	0.04	1.24	0.74	0.33	0.72
Reach 3 - Planting	1.48	16.09	15.40	0.05	1.63	0.49	0.41	0.45
BAAQMD Threshold of Significance (ppd)								
BAAQMD Thresholds	54	54	N/A	N/A	BMPs	82	BMPs	54

Notes:

Emissions are based on construction assumptions provided in Appendix C.

CO = carbon monoxide; NO_X = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; ppd = pounds per day; ROG = reactive organic gases; SO_2 = sulfur dioxide; — = no emissions or no emissions calculated as *de minimis*. N/A = no applicable thresholds. BMPs = best management practices. **Bold** font = emissions that would exceed the applicable air quality significance threshold.

Table 3.3-8. Estimated Criteria Pollutant Emissions during Construction, Combined by Construction Phase

Construction Phase	Approximate Construction Start Date	Approximate Construction End Date	ROG	NO_X	CO	SO_2	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
			Total Construction Emissions (ppd)							
Reach 1 – Site Preparation Reach 2 – Site Preparation Reach 4 – Site Preparation	6/15/2018	6/28/2018	8.40	**82.72**	66.76	2.62	51.16	17.58	20.29	4.05
Reach 1 – Grading Reach 2 – Concrete Placement Reach 4 – Concrete Placement	6/30/2018	9/28/2018	9.97	**90.66**	89.69	0.19	6.17	4.29	2.07	4.08
Reach 1 – Planting Reach 2 – Planting Reach 4 – Planting	9/30/2018	10/12/2018	2.92	27.40	29.32	0.08	2.57	1.21	0.68	1.12
Reach 3- Site Preparation	6/15/2019	6/28/2019	2.69	26.97	23.93	0.03	12.76	1.33	6.78	1.23
Reach 3 – Concrete Placement San Andreas Drive Bridge	7/1/2019	9/27/2019	4.49	36.97	44.87	0.11	3.45	1.66	0.91	1.61
Reach 3 – Planting	9/30/2019	10/11/2019	1.48	16.09	15.40	0.05	1.63	0.49	0.41	0.45
			Peak Daily Emissions (ppd)							
			9.97	**90.66**	89.69	2.62	51.16	17.58	20.29	4.08
			BAAQMD Threshold of Significance (ppd)							
BAAQMD Thresholds			54	54	N/A	N/A	BMPs	82	BMPs	54
Exceed Significance Thresholds?			N	**Y**	--	--	N	N	N	N
Unmitigated Average Daily NOx (ppd)			--	**66**	--	--	--	--	--	--
Average Daily NOx (ppd) with Mitigation			--	52	--	--	--	--	--	--
Exceed Significance Thresholds after Mitigation?			N	N	--	--	N	N	N	N

Notes: Emissions are based on construction assumptions provided in Appendix C.

CO = carbon monoxide; NO_X = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; ppd = pounds per day; ROG = reactive organic gases; SO_2 = sulfur dioxide, — = no emissions or no emissions calculated as *de minimis*. N/A = no applicable thresholds. BMPs = best management practices. **Bold** font = emissions that exceed the applicable air quality significance threshold.

Significance After Mitigation

Implementation of **Mitigation Measure AQ-1** would ensure that emissions from individual construction phases for each reach and combined reach emissions would not exceed the BAAQMD's significance thresholds, particularly for NO_X. Appendix C includes unmitigated emissions as well as potential mitigated emissions should the District and/or its contractor decide to use Tier 3 engines for the primary construction equipment (all excavators, dozers, scrapers, and backhoes/loaders). As illustrated in Appendix C and Table 3.3-8, use of Tier 3 engines per Mitigation Measure AQ-1 would be sufficient to reduce NO_X emissions by at least 22 percent such that the average daily emissions were less than the BAAQMD threshold of 54 pounds per day. Thus, Mitigation Measure AQ-1 would be a feasible and effective measure to reduce the significance of this impact. Therefore, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, this impact would be less than significant with mitigation.

Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (Less than Significant with Mitigation)

~~The nonattainment status of ozone, PM_{10}, and $PM_{2.5}$ is considered a significant cumulative impact.~~ The BAAQMD has established significance thresholds that also apply to cumulative impacts, which were developed considering the other sources of air pollutants and growth of emissions in the air basin. Specifically, a~~A~~ project that does not exceed these significance thresholds would not considerably contribute to any cumulative air quality impacts. As discussed in Impact AQ-2 above, ~~D~~during construction of the proposed project, NO_X emissions would exceed the BAAQMD threshold and thus would result in~~would be~~ a cumulatively considerable net increase of criteria pollutants. This would be a significant impact.

The proposed project's cumulative operation-related criteria for air pollutants and precursor emissions are identical to the thresholds listed in Table 3.3-5 above. ~~These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the air basin's existing air quality conditions.~~ As discussed in Impact AQ-2 above, ~~T~~the project's operational emissions would be minimal and would not exceed the thresholds listed in Table 3.3-5; therefore, the project's operational impacts relating to cumulative air quality effects would be less than significant.

Mitigation Measures

Mitigation Measure AQ-1: Implement Construction NO_X Emission Reductions (see full text of measure in Impact AQ-2 analysis above)

Significance After Mitigation

Implementation of Mitigation Measure AQ-1 would ensure the proposed project's emissions are reduced to a level such that it would not make a considerable contribution to cumulative air quality impacts even when considering the other projects occurring in the area. This impact would be less than cumulatively considerable with mitigation.

Impact AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations (Less than Significant)

The closest sensitive receptors to the proposed project's construction reaches would be the occupants of residences located approximately 10-720 feet from the various reaches (Table 3.3-3). The pollutants of concern and TACs that would affect sensitive receptors are particulates, specifically PM_{10} and $PM_{2.5}$ contained in fugitive dust, and DPM from construction equipment. As discussed in Impact AQ-2, implementation of District BMP AQ-1 would involve dust control measures, such as periodic watering of disturbed areas, to reduce fugitive dust emissions during construction. In-channel construction activities, which include most of the project construction, would occur only during the summer dry season from June 15 through October 15 over two years. Because construction would occur during two four-month periods, construction (8 months total over a two-year timeframe), and that construction activities occurring within a specific reach near a specific sensitive receptor would take place during only a portion of that period, project construction would not emit substantial quantities of DPM. DPM exposure for short durations is generally not quantified, as cancer potency factors are based on lifetime exposure and there is considerable uncertainty in trying to evaluate the cancer risk from project activities that would last only a small fraction of a lifetime (California Governor's Office of Environmental Health Hazard Assessment 2015). With implementation of District BMP AQ-1, the proposed project would not pose long-term or substantial health risks to nearby residents and workers in the vicinity of the project's construction reaches. The impact on sensitive receptors from fugitive dust and other TACs would be less than significant.

Impact AQ-5: Potential to create objectionable odors affecting a substantial number of people during construction (Less than Significant with Mitigation)

Construction activities associated with the proposed project would not generate permanent or long-term objectionable odors but could generate odors related to excavated material and the operation of gasoline- or diesel-powered equipment. Odors may also be associated with decaying organic material contained in excavated or dredged material. Although District BMP AQ-2 would be implemented and requires that potentially odorous materials be removed as soon as possible, which would eliminate the odor impact to nearby residents. However, it is possible that some excavated or dredged material could not be immediately removed from the project site. If this material remains on site and is located in close proximity to sensitive receptors, it might cause odor impacts to nearby sensitive receptors. Therefore, this impact would be significant.

Mitigation Measures

Mitigation Measure AQ-2: Locate Stockpiles of Odorous Materials at a Distance from Sensitive Receptors

The District will require that contractors handle stockpiles of potentially odorous excavated or dredged material, or other potentially odorous materials, in a manner that avoids affecting residential areas or other sensitive receptors to the extent feasible. Stockpiles will be placed as far as possible from these receptors and will be covered if immediate off-site disposal is not feasible.

Significance After Mitigation

Implementation of **Mitigation Measure AQ-2** would ensure that any stockpiled material remaining on the project site would be placed at a distance as far as possible from sensitive receptors until they could be removed. Therefore, the potential for the proposed project to create objectionable odors that would affect a substantial number of people would be less than significant with mitigation.

3.4 Biological Resources

3.4.1 Overview

This section describes the potential for the proposed project to affect open water, wetland, riparian, and upland habitats and the plant and wildlife species that might use these habitats. Specifically, this section discusses federal, state, and local regulations relevant to vegetation and wildlife resources that might be affected by the proposed project; describes the existing environmental setting in the project area; and identifies special-status plant and wildlife species and sensitive habitats potentially affected by the proposed project. This section also describes District BMPs that would reduce project-related effects and proposes mitigation measures to avoid or reduce significant impacts on biological resource.

3.4.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Endangered Species Act

The Endangered Species Act (ESA) (16 U.S. Government Code [USC] Section 1531 *et seq*.; 50 Code of Federal Regulations [CFR] Parts 17 and 222) provides for the conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. Section 7 of the ESA (16 USC Section 1531 *et seq*.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The San Francisco Bay is officially listed as Essential Fish Habitat (EFH) related to the Pacific Coast Salmon Fishery Management Plans (FMP) and, in the South Bay, the Central Valley fall-run Chinook salmon (*Oncorhynchus tshawytscha*) represents this FMP (Pacific Fishery Management Council 1999). However, Chinook are not known to spawn in any creeks flowing into the project area, and although occasional strays may be found in these creeks, they are expected to occur in the project area irregularly at best.

A number of fish species regulated by the Coastal Pelagics and Pacific Groundfish FMPs, such as the leopard shark (*Triakis semifasciata*), English sole (*Parophrys vetulus*), starry flounder (*Platichthys stellatus*), big skate (*Raja binoculata*), northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), and jack mackerel (*Trachurus symmetricus*), occur in tidal habitats of South San Francisco Bay and may occasionally disperse upstream into the reach

of Lower Penitencia Creek in the project area, which is tidally influenced. Thus, NMFS may consider these waters to be EFH related to all three of the aforementioned FMPs.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC Chapter 7, Subchapter II) prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Most actions that result in take or the permanent or temporary possession of a migratory bird constitute violations of the MBTA. The act also prohibits the destruction of a nest that contains eggs or young. USFWS is responsible for overseeing compliance with the MBTA. All native bird species in the project area are protected by the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668; 50 CFR Part 22) prohibits take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) and their occupied and unoccupied nests. USFWS administers the Bald and Golden Eagle Protection Act. Suitable nesting habitat for bald and golden eagles is not present in the project area.

Clean Water Act

The Clean Water Act (CWA) (33 USC Section 1251) establishes the basic structure for regulating discharges of pollutants (including dredged or fill material) into waters of the United States, including wetlands, and for regulating quality standards for surface waters. The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

CWA Section 404 prohibits the discharge of dredged or fill material into waters of the U.S., including wetlands, without a permit from USACE. CWA Section 401 requires that an applicant for a federal license or permit that allows activities with the potential to result in a discharge to waters of the U.S., including wetlands, obtain a state Section 401 water quality certification.

River and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 prohibits the creation of any obstruction to the navigable capacity of waters of the U.S., including discharge of fill and the building of any wharfs, piers, jetties, and other structures without congressional approval or authorization by the Chief of Engineers and Secretary of the Army (33 USC Section 403). Navigable waters of the U.S., as defined in 33 CFR Part 329.4, include all waters subject to the ebb and flow of the tide, and/or those which are presently or have historically been used to transport commerce. The shoreward jurisdictional limit of tidal waters is further defined in 33 CFR Part 329.12 as "the line on the shore reached by the plane of the mean (average) high water."

As mentioned above, Section 404 of the CWA authorizes USACE to issue permits to regulate the discharge of dredged or fill material into waters of the U.S. If a project also proposes to discharge dredged or fill material and/or introduce of other potential obstructions in navigable waters of the U.S., a Letter of Permission (i.e., Section 10 permit) authorizing these impacts must be obtained from USACE under Section 10 of the Rivers and Harbors Act.

Because the entire reach of Lower Penitencia Creek within the project area is tidally influenced, the proposed project would affect waters currently under Section 10 jurisdiction, which includes all areas of the site at or below the elevation of the mean high water (MHW) line of approximately 7 feet North American Vertical Datum of 1988 (NAVD88); this is the long-term average over the most recent tidal epoch (1983–2001) based on the benchmark datum for the nearest station to the site (Gold Street Bridge, Alviso Slough; Station 9414551) (National Oceanic and Atmospheric Administration [NOAA] 2004).[1] Impacts on current Section 10 waters would require a Letter of Permission from USACE. However, the project occurs entirely outside historical Section 10 waters, as verified by reviewing the extent of historical sloughs, which are depicted on historical maps with a double-blue line, and therefore, landside activities proposed as part of the proposed project would not require a Letter of Permission.[2]

State Laws, Regulations, and Policies

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) works in coordination with the nine regional water quality control boards (RWQCBs) to preserve, protect, enhance, and restore water quality. The project area falls under the jurisdiction of the San Francisco Bay RWQCB, which may, under the Porter-Cologne Water Quality Control Act (Porter-Cologne), issue Waste Discharge Requirements for projects that could discharge pollutants into waters of the state. The RWQCB has authority to regulate activities that could result in a discharge of dredged or fill material under the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne). The SWRCB has recently developed a Preliminary Draft Water Quality Control Policy that addresses numerous policy elements, including development of a wetland definition and description of methodology to be used in defining wetlands as part of waters of the state (SWRCB 2016).

Pursuant to Section 401 of the CWA, projects that are regulated by USACE must obtain a water quality certification from the RWQCB. This certification ensures that the proposed project would meet state water quality standards. Under Porter-Cologne, the SWRCB and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits for certain point-source and non-point-source discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources. Although a discharge may be eligible for coverage under the general permit, the RWQCB may determine that a project would be better regulated under an individual permit or waste discharge requirements.

[1] Benchmark MHW line data for the Gold Street Bridge, Alviso Slough (NOAA 2004) are relative to the mean lower low water (MLLW) at the monitoring station (8.7 feet). Differences between MLLW and the NAVD88 datum were calculated using the guidance provided by Foxgrover et al. (2005).

[2] The dataset used to determine the extent of historical sloughs integrates several sources of data describing the historical features of tidal marshes in the region, and was developed by the San Francisco Estuary Institute (SFEI 2015). The primary source is the maps of the U.S. Coast Survey (later U.S. Coast and Geodetic Survey), a federal agency renowned for the accuracy and detail of its 19th-century maps of America's shoreline. In most parts of the country, these maps provide the best early pictures of coastal and estuarine habitats prior to substantial Euro-American modification.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code [F&G Code] Chapter 1.5, Sections 2050–2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) and the CEQA Guidelines provide guidance in evaluating impacts of projects on biological resources and determining which impacts will be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under CEQA Guidelines Section 15065, a project's effects on biotic resources are deemed significant where the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"
- "threaten to eliminate a plant or animal community"
- "substantially reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to species listed on the federal and state lists of protected species, Section 15380(b) of the State CEQA Guidelines provides that a species not listed on these lists may be considered rare if the species can be shown to meet certain specified criteria. CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists." Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but they do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered in this analysis in accordance with Section 15380(b).

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed rankings for plant species of concern in California in the *CNPS Inventory of Rare and Endangered Plants*. Lichens, vascular plants, and non-vascular plants are ranked using the California Rare Plant Rank (CRPR) system:

Rank 1A: Plants considered extinct

Rank 1B: Plants rare, threatened, or endangered in California and elsewhere

Rank 2A: Plants considered extinct in California but more common elsewhere

Rank 2B: Plants rare, threatened, or endangered in California but more common elsewhere

Rank 3: Plants about which more information is needed review list

Rank 4: Plants of limited distribution-watch list

These CNPS rankings are further described using the following threat code extensions:

.1: seriously endangered in California
.2: fairly endangered in California
.3: not very endangered in California

Although CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants designated as CRPR 1B or 2 are, in general, considered to meet CEQA's Section 15380 criteria, and adverse effects on these species may be considered significant. Impacts on plants that are designated as CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as CRPR 1B or 2 species, impacts on them are less frequently considered significant.

Compliance with State CEQA Guidelines Section 15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of "special concern" are tracked in the California Natural Diversity Database (CNDDB 2016). Further, CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB and using NatureServe's (2016) standard heritage program methodology (also see California Department of Fish and Game [CDFG] 2007). CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP's) currently accepted list of vegetation alliances and associations (CDFG 2010).

California Fish and Game Code

The California Fish and Game Code (F&G Code) includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA), CESA, and requirements for notification of lake or streambed alteration.

The NPPA (F&G Code Sections 1900–1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized under limited circumstances.

CESA (F&G Code Sections 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. CDFW may issue an incidental take permit authorizing take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.

F&G Code Sections 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, species that are fully protected from all forms of take are listed in Section 3511 (birds), Section 5515 (fish), Section 4700 (mammals), and Section 5050 (amphibians).

CDFW regulates activities that will interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. Section 1602 of the F&G Code requires that CDFW be notified of lake or streambed alteration activities. If CDFW subsequently determines that such an activity might adversely affect an existing fish and wildlife resource, the agency has the authority to issue a streambed alteration agreement, including requirements to protect biological resources and water quality.

Along Lower Penitencia Creek, CDFW jurisdiction under Section 1602 of the F&G Code may extend up to the top of bank. In two areas where the riparian tree canopy extends (barely) landward of the top of bank, the landward canopy edge demarcates the likely lateral limit of CDFW jurisdiction. Impacts on these areas would require a Section 1602 Lake and Streambed Alteration Agreement. All native bird species, as well as most other native vertebrates, that occur in the project area are protected by the F&G Code.

McAteer-Petris Act

The McAteer-Petris Act, enacted on September 17, 1965, serves as a legal provision under California state law to preserve San Francisco Bay from indiscriminate filling. The act initially established the San Francisco Bay Conservation and Development Commission (BCDC) as a temporary state agency charged with preparing a plan for the long-term use of San Francisco Bay. In August 1969, the McAteer-Petris Act was amended to make BCDC a permanent regulatory agency to incorporate the policies of the Bay Plan (BCDC 2012). The area of BCDC jurisdiction is defined in California Government Code Sections 66610-66611. California Government Code Sections 66610-66611(e)(2) states that the BCDC has jurisdiction over Coyote Creek and its branches in Santa Clara and Alameda Counties, to the easternmost point of Newby Island. The northwestern edge of the project area, just upstream from the confluence of Lower Penitencia Creek and Coyote Creek is approximately 800 feet from the eastern edge of the Newby Island property. Therefore, the project area is located outside of BCDC jurisdiction.

Local Laws, Regulations, and Policies

City of Milpitas Code of Ordinances

The City of Milpitas has the Tree Maintenance and Protection Ordinance, which serves as a tree protection and heritage tree program. Under this program, it is unlawful to remove, without a permit issued by the city Department of Public Works, trees within the city limits that meet the following criteria:

- All trees (including non-natives) that have a 56-inch or greater circumference of any trunk measured 4.5 feet from the ground and located on developed residential property;
- All trees that have 37-inch or greater circumference of any trunk measured 4.5 feet from the ground and located on developed commercial or industrial property;
- All trees that have a 37-inch or greater circumference of any trunk measured 4.5 feet from the ground, when removal relates to any transaction for which zoning approval or subdivision approval is required; any tree existing at the time of a zoning or subdivision approval and that was a specific subject of such approval or otherwise covered by previously mentioned provisions;
- All trees that have a 37-inch or greater circumference of any trunk measured 4.5 feet from the ground and located on a vacant, undeveloped, or underdeveloped property; or
- All heritage trees or groves of trees.

Heritage tree designation may be applied by resolution of the City Council to individual trees or a grove of trees of any size or species within the City of Milpitas that are distinctive, of

special historical value, or of significant community benefit. A tree or grove of trees may be designated as a heritage tree or heritage tree grove upon a finding that it is unique and of importance to the community because of any of the following factors: (1) it is an outstanding specimen or grove of a desirable species; (2) it is one of the largest or oldest trees or groves of trees in Milpitas; or (3) the tree or grove of trees possesses distinctive form, size, age, location, and/or historical significance.

City of Milpitas General Plan

The Open Space and Environmental Conservation Element of the *City of Milpitas General Plan* (2002) contains several policies regarding protection of biological resources. Policy 4.b-G-1c calls for protection and conservation of open spaces which are necessary for wildlife habitats and unique ecological patterns. Policy 4.d-P-5 requires developments to conform, where feasible, to natural landforms, avoid excessive grading and disturbance of vegetation and soils, retain native vegetation and significant trees, and maintain natural drainage patterns. Policy 4.d-P-4 calls for the preservation, creation, or restoration of riparian corridors and wetlands. Where possible, development should be set back from these areas sufficiently to maximize habitat values (City of Milpitas, 2002).

Other policies that provide for protection of biological resources and are relevant to the proposed project include the following:

4.b-G-2: Preserve and protect populations and supporting habitat of special-status species within the Planning Area, including species that are state or federally listed as Rare, Threatened, or Endangered, all federal "candidate" species for listing and other species proposed for listing, and all California Species of Special Concern.

4.b-I-2: Preserve remaining stands of trees.

4.b-I-3: Recreation use of essentially virgin areas should be centered around activities which have a minimally disruptive effect on natural vegetation.

4.b-I-4: Require a biological assessment of any project area where sensitive species are present, or where habitats that support known sensitive species are present.

4.b-I-5: Utilize sensitive species information acquired through biological assessments, project land use, planning, and design.

4.d-G-1: Protect and enhance the quality of water resources in the Planning Area.

3.4.3 Environmental Setting

Surveys and Methods

To assist in identifying existing biological conditions in the project area, the following information sources were reviewed:

- The District's 2011 *Stream Maintenance Program (SMP) Update Final Subsequent Environmental Impact Report* (SCVWD 2012); the SMP Update biological assessments

prepared for USFWS (H. T. Harvey & Associates 2011a) and NMFS (H. T. Harvey & Associates 2012); and the CESA incidental take permit application for the SMP Update (H. T. Harvey & Associates 2011b);

- *Preliminary Delineation of Wetland and Other Waters for the Lower Penitencia Creek Improvements Project* (H. T. Harvey & Associates 2016; included as Appendix D of this ~~D~~EIR);
- *Dixon Landing Road/ I-880 Interchange Potential Additional Wetland Mitigation Sites* (H. T. Harvey & Associates 1996a);
- *Dixon Landing Road/I-880 Interchange Mitigation and Monitoring Plan* (H. T. Harvey & Associates 1996b);

This analysis also relies on data on special-status wildlife species occurrences compiled by the District since 2001; CNDDB records (2016); the *Breeding Bird Atlas of Santa Clara County* (Bousman 2007a); *California Bird Species of Special Concern* (Shuford and Gardali 2008); and unpublished records of bird observations in the general project vicinity, defined as a 5-mile radius surrounding the project area (Santa Clara County Bird Data, unpublished).

The analysis for plants involved review of all species on current CNPS CRPR 1A, 1B, 2A, and 2B lists in the Milpitas, California U.S. Geological Survey (USGS) 7.5-minute quadrangle and the surrounding eight quadrangles (Newark, Niles, La Costa Valley, Mountain View, Calaveras Reservoir, Cupertino, San Jose West, and San Jose East). Because quadrangle-level results are not maintained for CRPR 3 and 4 species, a search was also conducted of the CNPS Inventory records for these species occurring in Santa Clara County (CNPS 2016). In addition, the CNDDB (2016) was queried for natural communities of special concern that occur within the project region.

Surveys for biological resources, including special-status species, have been conducted in the project area and vicinity as part of the District's planning efforts for the region (e.g., EDAW 2008; SCVWD 2008). Surveys have also been conducted as part of the SMP, which requires the assessment of habitat suitability for special-status species prior to the implementation of stream maintenance activities. The discussion below summarizes previous surveys and monitoring efforts that were used in developing the environmental setting for the proposed project.

Vegetation Mapping

In 2010, Aerial Information Systems, Inc. (AIS) mapped vegetation types over most of the project area. Vegetation types were mapped using aerial photograph interpretation and interactive computer digitization. The vegetation classification system was based on *A Manual of California Vegetation* (Sawyer et al. 2009). Each vegetation type was coded to the group level (or alliance level, where possible) and assigned a cover class density for the vegetation type mapped. Because the AIS mapping was done at a relatively coarse scale, and because sediment excavation and vegetation removal maintenance activities occurred within the project area subsequent to the AIS mapping, the boundaries of the communities as mapped by AIS were field verified within the project area by qualified H. T. Harvey & Associates plant ecologist Maya Goklany, M.S. This effort was conducted concurrently with the reconnaissance survey on June 23, 2015, and during a wetland delineation survey that took place from November 3 through November 5, 2015. Where field conditions were other

than as represented in the AIS mapping, a global positioning system (GPS) unit was used to record actual field conditions.

More than 50 individual trees exist in the project area, including native species such as the red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Fremont cottonwood (*Populus fremontii*), and ash (*Fraxinus* sp.), as well as nonnatives such as the blackwood acacia (*Acacia melanoxylon*), London plane (*Platanus hybrida*), and eucalyptus (*Eucalyptu*s spp.). Trees are located on the inboard and outboard slopes of existing levees, on a berm that stretches from California Circle to Milmont Drive between the main channel and the secondary channel (Reach 3), and in Staging Area A. At least 36 trees within the project area are of sufficient diameter to be protected by the City ordinance. However, no trees in the project area have been designated as heritage trees by the City of Milpitas (D. Gordillo, pers. comm.).

Jurisdictional Waters and Wetland Delineation Survey

The entire project area was surveyed for areas potentially meeting the regulatory definition of waters of the U.S./state by Ms. Goklany from November 3 through November 5, 2015, and again on September 15, 2016. The survey used the three-parameter approach described in the "Routine Determination Method" section of the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), which documents the presence/absence of hydrophytic vegetation, hydric soils, and wetland hydrology. The survey utilized updated data forms, vegetation sampling methods, and hydric soil and hydrology indicators developed specifically for the Arid West region (USACE 2008). See **Appendix D**.

As described in the preliminary wetland delineation, 9.89 acres of potentially jurisdictional waters of the U.S. are present in the project area. Other jurisdictional waters subject to Section 404 of the CWA include tidal aquatic habitat within the Lower Penitencia Creek channel. Jurisdictional wetlands subject to Section 404 of the CWA that were evident during the November 2015 and September 2016 wetland delineation (Appendix D) include a non-tidal seasonal saline wetland and three disjunct patches of coastal brackish marsh. An artificial, concrete-lined ditch excavated in uplands near Reach 1, but that supports hydrophytic vegetation, is expected to be non-jurisdictional (subject to USACE concurrence) due to its artificial hydrology and the fact that it does not discharge to Lower Penitencia Creek or any other jurisdictional waters. Potential waters of the U.S. are subject to verification by USACE. A Section 404 permit from USACE, with an associated Section 401 water quality certification from the RWQCB, would be required for discharges of dredged or fill material into waters of the U.S.

In addition to the 9.89 acres of waters of the U.S. occurring below the ordinary high water mark (OHWM) the Lower Penitencia Creek channel contains 6.78 acres of land located between the OHWM and the top of the channel bank. This area is primarily vegetated with grasses and ruderal ground cover, but scattered trees and shrubs are also present (see, Appendix D). This area includes small sections of hardscape, including concrete ramps, concrete bank linings, and concrete retaining walls. Levees run along the outer edge of the project area and were created from placement of fill material when the existing developments were constructed. Thus, the top of bank (associated with Lower Penitencia Creek) is the topographic hinge point at the top of the inboard side of the levee, which demarcates the bank-full capacity of the channel. Vegetated areas between the OHWM and the top of bank are considered riparian habitat. Mostly non-native vegetation is also located on the outboard side of levees in reaches 1, 2, 3, and 4. The vegetation on the outboard side of the levees is

separated from the creek channel by existing maintenance roads located on the levee crests, and is therefore not riparian habitat.

Previous Fisheries Surveys

In 2008, the District performed fish relocations at a maintenance activity work site within Lower Penitencia Creek upstream of the project area (SCVWD 2008). Fish species, disposition, and abundance data were collected in samples, and summaries of the fish captured and released (natives) or sacrificed (non-natives) were prepared, thus providing information on fish potentially present in the project area.

Previous Amphibian Surveys

Annually, between 2004 and 2010, the District conducted general presence/absence surveys for amphibians in Lower Penitencia Creek as part of the preconstruction BMPs for the aquatic spray work conducted under the SMP (L. Porcella, 2011, pers. comm.), thus providing information on amphibians potentially occurring in the project area.

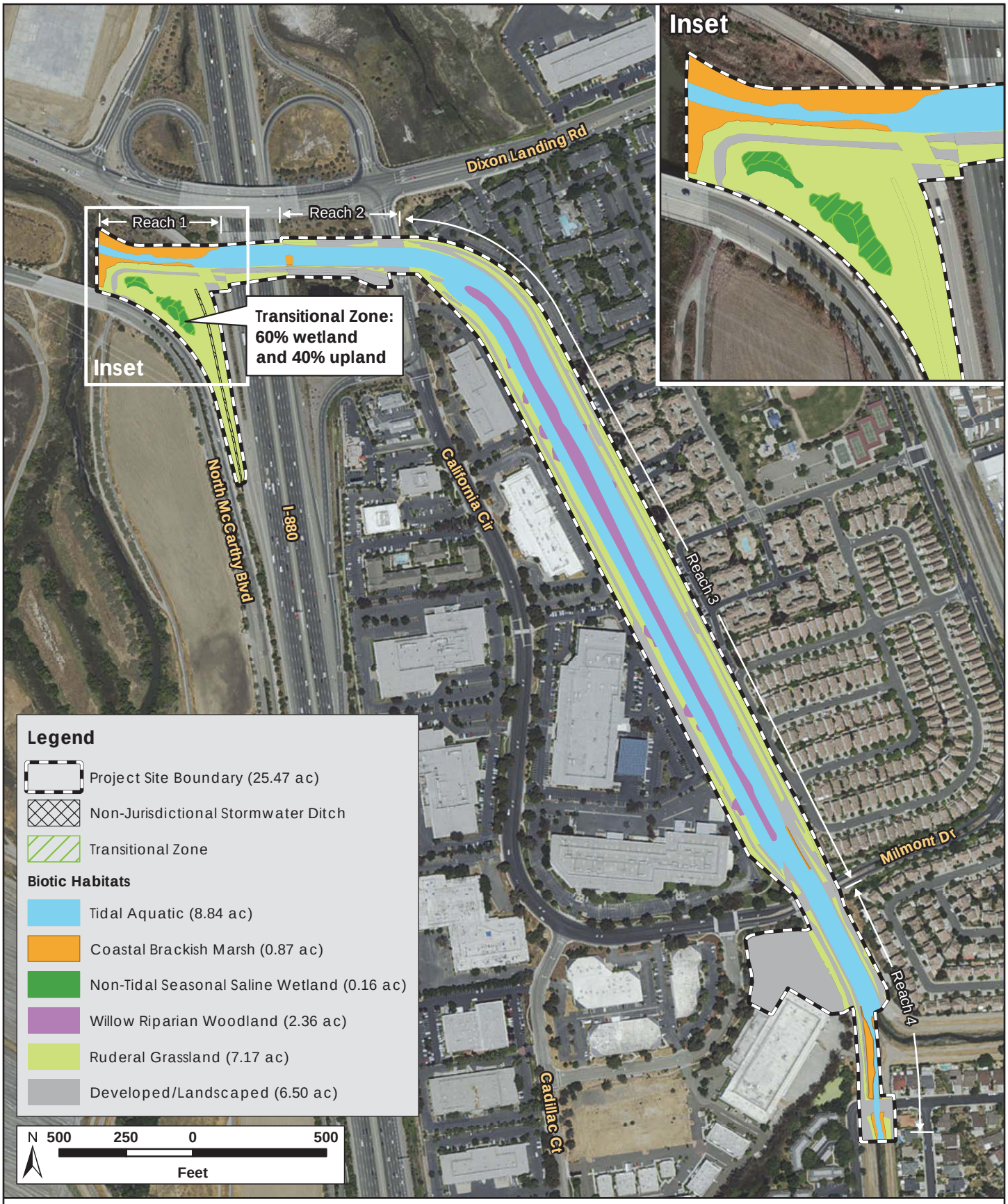
Bird Surveys

In 2007 and 2008, EDAW conducted a habitat assessment, burrow mapping study, and standardized protocol surveys for burrowing owl (*Athene cunicularia*) along sections of multiple District-managed waterways, including Lower Penitencia Creek (EDAW 2008). The study was designed to comply with the District's Biodiversity Monitoring Plan and to monitor burrowing owl distribution, abundance, and trends within the SMP program area.

On June 23 and November 3, 2015, H. T. Harvey & Associates wildlife ecologist Craig Fosdick, M.S., conducted a focused field assessment to determine the potential suitability of habitat for burrowing owls within and immediately adjacent to the project area. During that survey, he also assessed habitat suitability for several other special-status species within and immediately adjacent to the project area, including the California Ridgway's rail (*Rallus obsoletus obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), tricolored blackbird (*Agelaius tricolor*), Alameda song sparrow (*Melospiza melodia pusillula*), Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*).

Mammal Surveys

On June 23 and November 3, 2015, Mr. Fosdick conducted a focused field assessment of habitat in the project area for its potential suitability for the salt marsh harvest mouse. The focus of the assessment was the brackish tidal marshes in the lowermost project reaches (see **Figure 3.4-1**) and vegetation, dominated by Pacific pickleweed (*Salicornia pacifica*). Mr. Fosdick also conducted focused surveys for nests of San Francisco dusky-footed woodrats (*Neotoma fuscipes annectens*) and potential bat roosting habitat throughout the project area.



Source: H.T. Harvey 2017

Figure 3.4-1. Biotic Habitats Map

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Vegetation and Land Cover

Six general habitat types were identified within the 25.47-acre project area: tidal aquatic, developed/landscaped, ruderal grassland, willow riparian woodland, coastal brackish marsh, and non-tidal seasonal saline wetland. **Table 3.4-1** provides a summary of the habitat acreages on the site and Figure 3.4-1 shows their distribution and extent. Descriptions of the typical plant and animal species found in each habitat type are provided below. The descriptions are based on the results of the reconnaissance surveys conducted for the project area and the biologists' decades of experience working in similar habitats in the South Bay Area.

Table 3.4-1. Habitat Acreages in the Project Area

Habitat	Area (acres)*
Tidal aquatic	8.84
Ruderal grassland	7.17
Developed/Landscaped	6.50
Willow riparian woodland	2.36
Coastal brackish marsh	0.87
Non-tidal seasonal saline wetland	0.16
Total	***25.90+***

* Values are subject to rounding errors.

+ Total is greater than the acreage of the project site due to the occurrence of 0.43 acres of overlap of tidal aquatic habitat and willow riparian woodland (i.e., riparian tree canopy overhangs the aquatic habitat).

Source: H. T. Harvey and Associates 2016; Appendix D.

Tidal Aquatic

Vegetation. Aquatic or open water habitats are permanently or semi-permanently flooded and support less than 5 percent vegetation cover in emergent or submerged states. In the project area, aquatic habitat (8.84 acres) is represented by non-wetland areas within the active channel of Lower Penitencia Creek and storm drain outfalls (0.02 acre) (Figure 3.4-1). The entire extent of the creek within the project boundary is tidally influenced.

In October 2015, sediment and vegetation were removed from the Lower Penitencia Creek channel as part of regular and ongoing maintenance activities conducted by the District under its SMP, which underwent separate environmental review and permitting. Following completion of the maintenance activities, aquatic habitat was identified by the presence of standing or running water during both low and high tides, and a lack of vegetation. Because field indicators of the HTL were not evident in all portions of the project area, surveys were scheduled to occur during high tide to aid in mapping the lateral limits of the channel and to help estimate the HTL elevation in these areas. To further aid in determining the HTL, tidal elevation data for 2015 were compiled for the NOAA station nearest the project area (Gold Street Bridge, Alviso Slough; Station 9414551), which indicate that high tides during 2015 reached an elevation of approximately 10 feet NAVD88 (NOAA 2015). The entire portion of

the channel in the project area up to approximately 10 feet NAVD88 is within the HTL elevation for the area.

Wildlife. Lower Penitencia Creek provides relatively lower quality habitat for most wildlife species compared to that in naturally formed streams, due to its channelized nature, the lack of high-quality habitat complexity such as riffle and pool complexes and well-developed riparian woodland, and regular disturbance of habitats and associated species due to ongoing maintenance. The creek flows through a mix of urban, business park, and light industrial settings before emptying into Coyote Creek.

In 2008, the District relocated fish within two reaches of Lower Penitencia Creek (upstream of the project area) as part of the SMP (SCVWD 2008). Eight species of fish were identified during the relocations. Five species were non-native: common carp (*Cyprinus carpio*), western mosquitofish (*Gambusia affinis*), fathead minnow (*Pimephales promelas*), red shiner (*Cyprinella lutrensis*), and yellowfin goby (*Acanthogobius flavimanus*). Three species were native: California roach (*Lavinia symmetricus*), prickly sculpin (*Cottus asper*), and three-spined stickleback (*Gasterosteus aculeatus*). The non-native crayfish (*Procambarus clarkii*) is also likely present in the channel.

Common bird species using the tidal aquatic habitat include great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), great egret (*Ardea alba*), mallard (*Anas platyrhynchos*), and American coot (*Fulica americana*). Insectivores such as dragonflies, bats, and fly-catching birds forage aerially over the channel, while herons and egrets forage in the channel. Common amphibians, such as the native Sierran chorus frog (*Pseudacris sierrae*) and western toad (*Anaxyrus boreas*), as well as the non-native American bullfrog (*Lithobates catesbeianus*), breed and forage in the channel. Raccoon (*Procyon lotor*) tracks were observed under the North McCarthy Boulevard bridge, and raccoons forage on the edge of this habitat.

Developed/Landscaped

Vegetation. Within the project boundaries, developed areas include gravel and impermeable surfaces (such as concrete and asphalt) along trails, as well as roadways and parking lots. Landscaped areas are present within the parking lots and along North McCarthy Boulevard. Landscaping includes young planted trees, such as London plane and oak (*Quercus* spp.). Developed/landscaped areas within the project boundaries total 6.50 acres.

Wildlife. Developed/landscaped habitat generally supports only a few relatively common wildlife species, rather than a diverse wildlife community. Common species using the developed/landscaped habitat in the project area include the common raven (*Corvus corax*), Anna's hummingbird (*Calypte anna*), red-shouldered hawk (*Buteo lineatus*), northern mockingbird (*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), American goldfinch (*Spinus tristis*), lesser goldfinch (*Spinus psaltria*), bushtit (*Psaltriparus minimus*), and, in winter, white-crowned sparrow (*Zonotrichia leucophrys*) and golden-crowned sparrow (*Zonotrichia atricapilla*). Common mammal species that occur in the developed/landscaped habitats include the native raccoon and striped skunk (*Mephitis mephitis*) and the non-native Norway rat (*Rattus norvegicus*).

On June 23 and November 3, 2015, H. T. Harvey & Associates biologist Craig Fosdick conducted a focused inspection of bridges to look for evidence of nesting birds and habitat

for roosting bats. Evidence of cliff swallow colonies was observed on both the North McCarthy Boulevard bridge over Coyote Creek, which is adjacent to but outside the project area, and the I-880/Nimitz Freeway on-ramp bridge over Lower Penitencia Creek. Unoccupied cliff swallow nests could serve as roosts for certain species of bats, such as the Brazilian free-tailed bat (*Tadarida brasiliensis*). On the North McCarthy Boulevard bridge, cracks and crevices in the bridge structure itself may also provide potential bat roosting habitat.

Ruderal Grassland

Vegetation. Ruderal grassland (7.17 acres) is present along the outermost edges of the project area along the maintenance roads and trails atop the levees. Ruderal grassland also occurs along the streambanks of the Lower Penitencia Creek channel. These areas are dominated by non-native grasses, such as wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), and Bermuda grass (*Cynodon dactylon*), and non-native forbs such as Italian thistle (*Carduus pycnocephalus*). All of the dominant species in this habitat are rated as "moderately" invasive by the California Invasive Plant Council (Cal-IPC 2016) and have substantial, but not severe, ecological impacts. Other common species present include fat hen (*Atriplex prostrata*), wild radish (*Raphanus sativus*), mustard (*Brassica* sp.), prickly lettuce (*Lactuca serriola*), and cheeseweed (*Malva parviflora*). Prior to the recent sediment removal activities in the Lower Penitencia Creek channel, ruderal grassland on the streambanks may have extended below the HTL; however, this was not evident during the survey conducted in November 2015 because herbaceous vegetation had been removed below this elevation.

Ruderal grassland habitat was also observed in the area surrounding the non-tidal seasonal saline wetland, and in patches interspersed throughout the transitional zone of the marsh (Figure 3.4-1). Dominant species in this area include perennial grasses, such as Idaho fescue (*Festuca idahoensis*), Harding grass (*Phalaris aquatica*), and smilo grass (*Stipa mileacea*), and forbs such as bristly ox-tongue (*Helminthotheca echioides*).

Wildlife. The ruderal grasslands in the project area are relatively small, generally occur either in long linear patches or in small patches, and are separated from larger grasslands in the region by extensive urbanization. Human disturbance in the ruderal grassland habitat in the project area is frequent, as paved levee-crest trails are open for public use on the east bank of Reach 3 and the west bank of Reach 4. As such, this habitat contains common species, such as the red-tailed hawk (*Buteo jamaicensis*), common raven, northern mockingbird, black phoebe, Say's phoebe, and California towhee, rather than species typically associated with extensive, contiguous grasslands. Other common bird species using this habitat in winter include white-crowned sparrows and golden-crowned sparrows.

The scattered trees in the ruderal grasslands provide perches and foraging opportunities for some common species that might not otherwise occur in ruderal grasslands, such as the red-shouldered hawk, Anna's hummingbird, bushtit, house finch, and American goldfinch. Other common wildlife species occurring in ruderal grasslands in the project area are the western terrestrial garter snake (*Thamnophis sirtalis*), western toad, house mouse (*Mus musculus*), California vole (*Microtus californicus*), valley pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), striped skunk, and raccoon.

Willow Riparian Woodland

Vegetation. Willow riparian woodland habitat (2.36 acres) in the project area currently supports riparian tree species such as Fremont cottonwood, arroyo willow, and red willow.

Most of this habitat type occurs on a berm that stretches from California Circle to south of Milmont Drive in the center of the main channel of Lower Penitencia Creek (Figure 3.4-1). The berm is below the top-of-bank elevation but above the OHW and HTL of the stream. The berm supports ruderal grassland and riparian habitat (including riparian trees, shrubs, and herbaceous vegetation). Most of the herbaceous plant community on the berm is composed of "highly" invasive species, which are known to have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment, and most are widely distributed ecologically (Cal-IPC 2016). On the berm, highly invasive species include common fennel (*Foeniculum vulgare*), English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), and broadleaved pepperweed (*Lepidium latifolium*). Harding grass, smilo grass, and wild radish are also prevalent in the understory of this habitat.

Recent (2015) District maintenance activities resulted in relatively few impacts on the riparian trees in the area, with the exception of removing some tree limbs, but did temporarily remove herbaceous vegetation. As such, the existing conditions of the berm at the time of the July 2015 survey included a barren understory with scattered and mature willows. The barren understory was a temporary condition, however, and the herbaceous vegetation is expected to begin to regrow within one growing season. Additional disjunct patches of willow riparian woodland have been mapped along the outer edges of the main stream channel where willow and Fremont cottonwood trees occurred. The understories of these patches are contiguous with the adjacent ruderal grassland described above.

Wildlife. In general, relatively few species and individuals are expected to use the willow riparian woodland habitat in the project area because of the sparse distribution of trees and the accompanying lack of foraging and cover resources. Nevertheless, common bird species that make use of this habitat include the common raven, northern mockingbird, black phoebe, Say's phoebe, house finch, California towhee, and American goldfinch. In winter, white-crowned sparrows and golden-crowned sparrows may be found in this habitat. As herbaceous riparian vegetation re-establishes, bird species more strongly associated with riparian habitat, such as the San Francisco common yellowthroat and Alameda song sparrow, are expected to nest and forage here. Raccoons may use this habitat to access tidal aquatic habitat for foraging opportunities, and Norway rats and house mice may forage in this habitat.

Coastal Brackish Marsh

Vegetation. Coastal brackish marsh habitat, totaling 0.87 acre, was documented in the project area in small, disjunct patches immediately east and west of the I-880 overpass and just north and south of the Milmont Drive bridge at the southern end of the project alignment (Figure 3.4-1). Coastal brackish marsh generally occurs below the HTL of the Lower Penitencia Creek channel, although the northernmost patch extends several feet above this demarcation. As such, these wetlands are exposed to full tidal influence and receive freshwater input from the upper watershed, incident rainfall, and stormwater runoff. Coastal brackish marsh is dominated by California tule (*Schoenoplectus californica*), with fat hen along its landward edge. Prior to recent sediment and vegetation removal in the stream channel, coastal brackish marsh was much more prevalent in the project area, as observed during a site visit in June 2015.

Wildlife. Coastal brackish marsh supports moderate diversity of common species of amphibians, reptiles, birds, and mammals. Common amphibians occurring in this habitat include the native Sierran chorus frog and western toad, and the non-native bullfrog. Bird species found in this habitat during the nesting season include the American coot, black-crowned night-heron (*Nycticorax nycticorax*), great blue heron, great egret, snowy egret, gadwall (*Anas strepera*), mallard, black phoebe, and marsh wren (*Cistothorus palustris*). Cliff swallows (*Petrochelidon pyrrhonota*) and northern rough-winged swallows (*Stelgidopteryx serripennis*) forage above this habitat and the surrounding area. Wintering birds found in coastal brackish marsh habitat include the white-crowned sparrow, golden-crowned sparrow, and subspecies of song sparrow other than the Alameda song sparrow. Mammals using this habitat include the raccoon and the California vole.

Non-tidal Seasonal Saline Wetlands

Vegetation. There is 0.16 acre of non-tidal seasonal saline wetlands present at the northern end of the project area, between the on-ramp for I-880 and North McCarthy Boulevard (Figure 3.4-1). Historically, this area occurred outside of sloughs of San Francisco Bay. Aerial images from 1993 (Google Inc. 2016) indicate that this area was hydrologically isolated from the Bay and was comprised of upland habitat types at that time. Several years later, the area became a wetland mitigation site for the Coyote Creek Flood Protection Project (H. T. Harvey & Associates 1996a, 1996b). In approximately 2003, the Dixon Landing/I-880 Interchange Project excavated an area of the mitigation site to install a Pacific Gas and Electric (PG&E) gas pipeline. Native soil was used as fill material following the completion of the project, and hydrophytes recolonized the site.

Within the project boundaries, non-tidal seasonal saline wetlands occur outside of the Lower Penitencia Creek channel in a concave depression that serves as a stormwater basin. During large storm events, fresh water from incident rainfall and runoff collects in the basin and is delivered to Lower Penitencia Creek through a culvert. The culvert outlet is situated above the HTL elevation, and thus, the marsh is not tidally influenced under normal circumstances, although it is possible that during king tides of great magnitude brackish water enters this culvert and washes into the basin. A wetland delineation survey (H. T. Harvey & Associates 2016) and analysis of historical aerial images (Google Inc. 2016) indicate that the center of the non-tidal seasonal saline wetland (approximately 0.07 acre at the lowest elevation within this habitat type) retains water for a longer period than the transitional zone along the outer margins of the wetlands.

The plant community in this portion of the wetlands is dominated by hydrophytic species, such as Pacific pickleweed and alkali bulrush (*Bolboschoenus maritimus*). The outer margins of the non-tidal seasonal saline wetlands are composed of a mosaic of wetland and upland patches, and are considered a transitional zone between the two habitat types. Approximately 60 percent of the transitional zone supports wetland vegetation; 0.10 acre of non-tidal seasonal saline wetland is interspersed in this zone with patches of ruderal grassland (Figure 3.4-1).

Wetland patches in the transitional zone are dominated by Pacific pickleweed, in addition to other strongly hydrophytic species such as spreading alkali weed (*Cressa truxillensis*) and alkali heath (*Frankenia salina*). In addition, tall wheatgrass (*Elymus ponticus*), a species that is known to occur in wet and alkaline soils (Natural Resources Conservation Service [NRCS], no date), dominates swaths in the outer margins of the non-tidal seasonal saline wetlands.

Other marginally hydrophytic species observed in the transitional zone include saltgrass (*Distichlis spicata*), seaside barley (*Hordeum marinum*), and broadleaved pepperweed, the latter of which is highly invasive (Cal-IPC 2016).

Wildlife. The non-tidal seasonal saline wetland habitat in the project area is relatively small and isolated, and therefore provides relatively limited habitat for associated wildlife species. Many of the species that occur on the site are common species that are not strongly associated with this habitat, but also occur in adjacent habitats. Such species include the raccoon, California vole, house mouse, northern mockingbird, black phoebe, and song sparrow. Wintering birds found in this habitat include the white-crowned sparrow and golden-crowned sparrow. Amphibians such as the western toad, and snakes such as the western terrestrial garter snake may also use non-tidal seasonal saline wetland habitat. However, in general, the relatively small size of this habitat patch and its relative isolation from similar habitat likely limit the use of this patch of habitat for most species.

Special-status Species

For the purposes of this EIR, special-status plant and wildlife species are those species that meet one or more of the following criteria:

- Species that are listed as threatened or endangered under ESA (50 CFR Part 17.12 for listed plants, 50 CFR Part 17.11 for listed animals);
- Species that are candidates for possible future listing as threatened or endangered under ESA (76 FR 66370);
- Species that are listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR Section 670.5);
- Plants listed as rare under the NPPA (F&G Code Section 1900 et seq.);
- Plants considered by CNPS to be "rare, threatened, or endangered in California";
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380); and
- Animals fully protected in California (F&G Code Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Special-status Plants

CNPS (2016) and the CNDDB (2016) identify 71 special-status plant species as potentially occurring in the nine 7.5-minute USGS quadrangles containing and/or surrounding the project area for CRPR 1 and 2 plants, and in Santa Clara County for CRPR 3 and 4 plants (see **Appendix E** for a full list of these species). Fifteen of these 71 special-status plant species have been documented by the CNDDB in the project vicinity, and these records are shown in **Figure 3.4-2**.

Fourteen of the 15 special-status plant species identified during the background review were determined to be absent from the project area for one or more of the following reasons:

- A lack of specific habitat (e.g., vernal pools) and/or edaphic requirements (e.g., serpentine soils) for the species in question;
- The elevation range of the species is outside of the range in the project area; or

- The species has been extirpated from the site vicinity.

Most of the CNDDB records in the project vicinity document extirpated populations of special-status plant species. With the exception of two records for Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*, CRPR 1B.1), the remaining extant populations of other special-status plant species in the site vicinity occur in vernal pool complexes north of the area in the City of Fremont, such as the Pacific Commons Preserve in Don Edwards National Wildlife Refuge. These complexes, some of which have undergone ecological restoration, occur within the margin of historical sloughs of San Francisco Bay and support a mosaic of vernal pools, connecting swales, and native grasslands, which provide suitable habitat for these special-status plant species. Soils in the vernal pool complexes of Don Edwards National Wildlife Refuge are saline-alkaline and are almost exclusively part of the Pescadero soil series (NRCS 2016). Comparable habitat types and edaphic conditions do not exist in the project area; although soils in the project area are saline and potentially alkaline, they are comprised of non-native, imported fill in the Urbanland soil series and native soil in the Campbell series. Additionally, the project site is outside of the historical slough margin and lacks the microtopography (e.g., hummocks) that is typical of vernal pool habitat. As such, all special-status plant species with the exception of Congdon's tarplant were determined to be absent from the project area.

Congdon's tarplant has the potential to occur in the project area based on the presence of marginally suitable habitat and records of extant populations in the project vicinity. It is an annual herb in the composite family (Asteraceae) that is endemic to California. Congdon's tarplant has a variable blooming period extending from May through November. It occurs in valley and foothill grassland habitat, floodplains, and swales, particularly those with alkaline substrates; and in disturbed areas with non-native grasses such as various species of wild oats, ripgut brome, Italian ryegrass, and seaside barley (SCVWD 2011; Baldwin et al. 2012; CNDDB 2016; CNPS 2016).

Congdon's tarplant occurs in Alameda, Contra Costa, Monterey, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, and Solano Counties (CNDDB 2016). Two populations of Congdon's tarplant have been documented by the CNDDB in the project vicinity; one occurs in swales and seasonal wetlands on the San Jose–Santa Clara Regional Wastewater Treatment Plant property, and the other occurs in seasonal wetland and disturbed ruderal grassland habitats in Sunnyvale Baylands Park. Ruderal grasslands in the project area are considered marginal habitat for this species because the site is underlain by soils in the Urbanland series that may be saline, but are not generally considered alkaline.

Special-status Animals

The legal status and potential for occurrence of special-status wildlife species known to occur or potentially occurring in the general vicinity of the project area are given in **Table 3.4-2**. Expanded descriptions are included in **Appendix F** for those species that are known to occur in the project area; for which potentially suitable habitat occurs within or in the general vicinity of the project area; for which the site is accessible to animals from known populations; and for which resource agencies have expressed particular concern, such that more expanded discussion is required. Species that are listed in Table 3.4-2 but not discussed in detail in Appendix F have no reasonable expectation of occurrence in the project area. CNDDB records of special-status animals in the project area vicinity are shown in **Figure 3.4-3**.

Several special-status species identified during the background review were determined to be absent from the project area because of a lack of suitable habitat and/or isolation of the project area from known populations by urbanization and associated barriers to dispersal. These species are the California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), long-eared owl (*Asio otus*), California least tern (*Sterna antillarum browni*), western snowy plover (*Charadrius alexandrinus nivosus*), California Ridgway's rail (*Rallus obsoletus obsoletus*) San Francisco dusky-footed woodrat, short-eared owl (*Asio flammeus*), salt marsh wandering shrew (*Sorex vagrans halicoetes*), and Townsend's big-eared bat (*Corynorhinus townsendii*). These species are present in some less urbanized settings in the South Bay.

A number of other special-status animal species are addressed in greater detail below because they are known to breed or could potentially breed in the project area or its vicinity; occur fairly commonly as non-breeders in the project area (and thus could be substantially affected by proposed project activities); and/or are of particular concern to regulatory agencies. These are the Central Valley fall-run Chinook salmon, Central California Coast steelhead, green sturgeon (*Acipenser medirostris*), longfin smelt, western pond turtle (*Actinemys marmorata*), golden eagle, American peregrine falcon, white-tailed kite, northern harrier (*Circus cyaneus*), burrowing owl, loggerhead shrike, San Francisco common yellowthroat, Alameda song sparrow, yellow warbler (*Setophaga petechia*), tricolored blackbird, Bryant's savannah sparrow, salt marsh harvest mouse, pallid bat (*Antrozous pallidus*), and western red bat (*Lasiurus blossevillii*).

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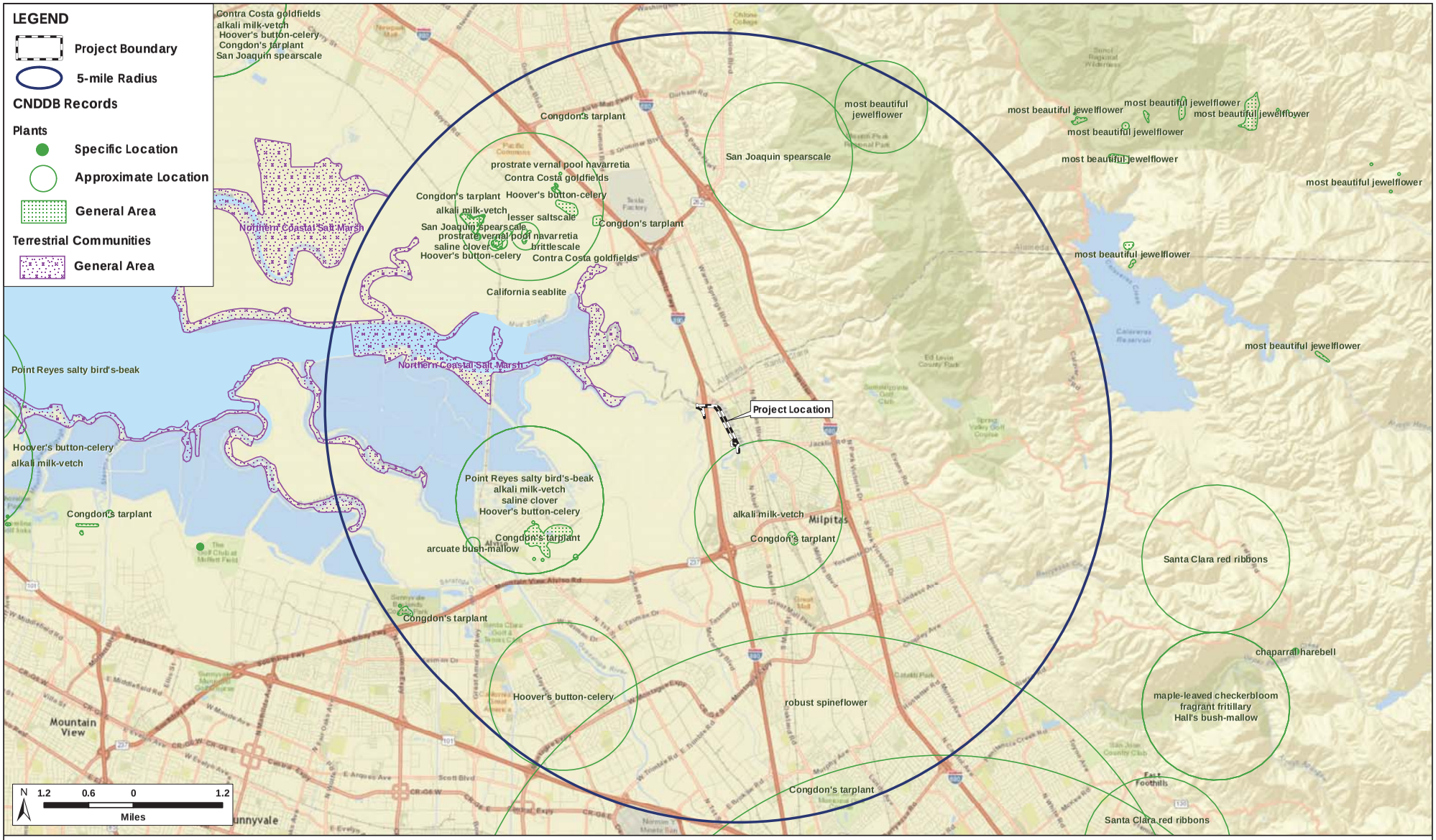

Source: H.T. Harvey 2017

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Figure 3.4-2. CNDDB Records for Plants

Lower Penitencia Creek Improvements Project

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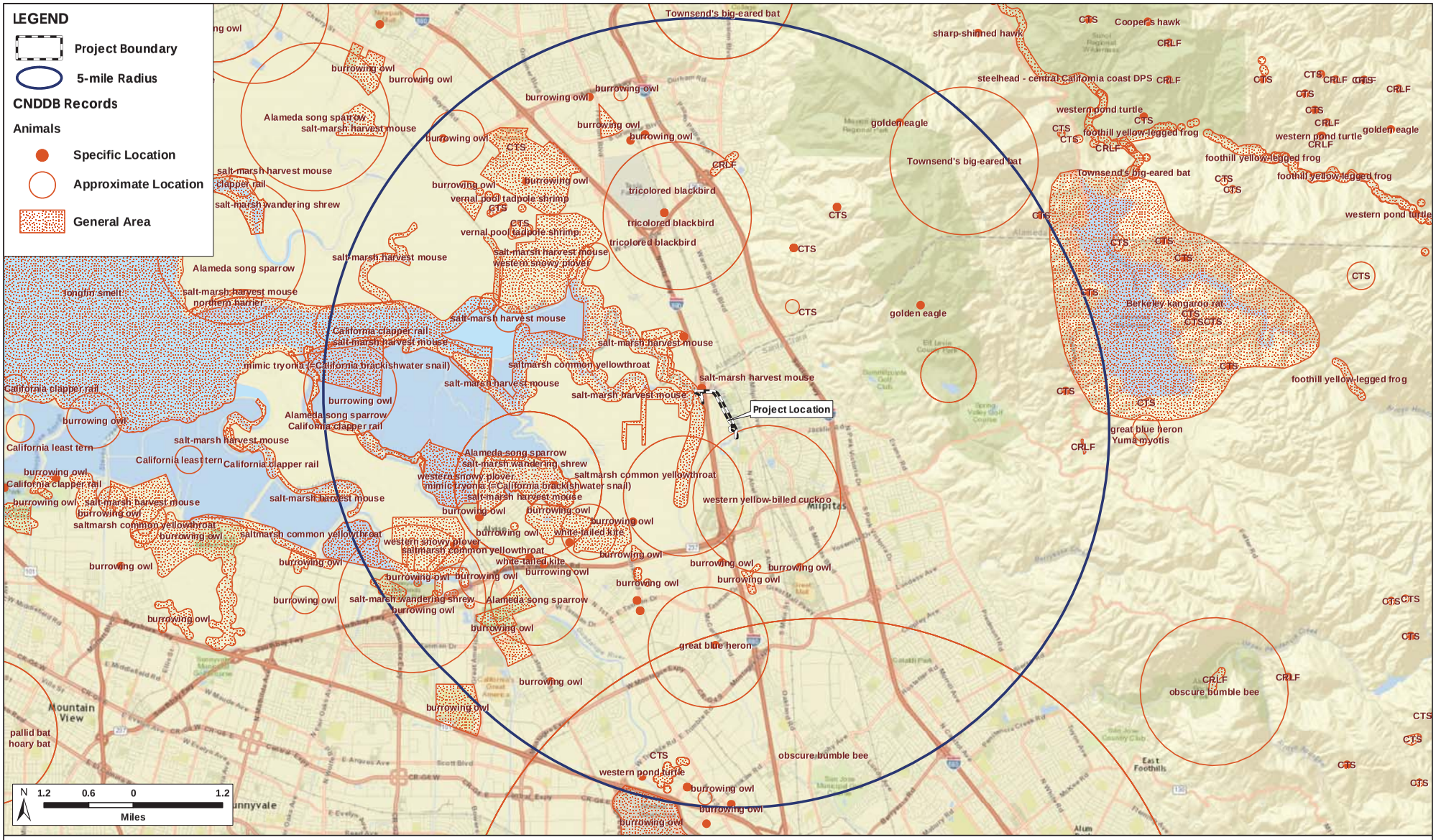

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Figure 3.4-3. CNDDB Records for Animals

Lower Penitencia Creek Improvements Project

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Table 3.4-2. Special-Status Plant and Animal Species Known to Occur within the Vicinity of the Project Area

Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	General Habitat	Potential to Occur in the Project Area
Federally Listed and State-listed Species						
Acipenser medirostris	green sturgeon	FT	CSSC	--	Spawns in large river systems such as the Sacramento River; forages in nearshore oceanic waters, bays, and estuaries.	**Absent.** Known to occur in San Francisco Bay, although it apparently occurs only as a rare, nonbreeding visitor in the South Bay and has not been recorded with certainty in Santa Clara County. This species is not expected to occur in Lower Penitencia Creek due to its highly modified nature and lack of suitable spawning conditions, and due to its distance from open waters of San Francisco Bay. Designated critical habitat for this species (NMFS 2009), which includes all tidally influenced areas of San Francisco Bay, San Pablo Bay, and Suisun Bay up to the elevation of mean higher high water, does not extend to the project area. Along Coyote Creek/Coyote Slough, critical habitat does not extend upstream from a point approximately 600 feet downstream of the confluence of Lower Penitencia Creek and Coyote Creek. Thus, critical habitat is not present in the project area, and this species is not expected to occur in the project area.
Spirinchus thaleichthys	longfin smelt	--	ST, CSSC	--	Spawns in fresh water in the upper end of San Francisco Bay; occurs year-round in the South Bay.	**Absent as Breeder.** Fish sampling in Coyote Slough and the Island Ponds has detected the species only in January and March, suggesting that it may be absent during the summer (Hobbs et al. 2012). Species may be present in the tidal reaches of sloughs in the South Bay. Stray individuals could occur within the reach of Lower Penitencia Creek in the project area, which is tidally influenced, albeit likely infrequently and in small numbers (if at all), and only from late fall to early spring.
Oncorhynchus mykiss	Central California Coast steelhead	FT	--	--	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats. Steelhead usually cannot survive long in pools or streams with water temperatures above 70°F.	**Absent as Breeder.** The species has not been documented in the project area and suitable spawning habitat is not present anywhere in Lower Penitencia Creek. However, small numbers of stray, individual steelhead associated with spawning streams elsewhere in the South Bay could occasionally wander into the project area to forage. Because no suitable spawning habitat occurs within the project area or upstream, this species is not expected to spawn or occur regularly in Lower Penitencia Creek.
Ambystoma californiense	California tiger salamander	FT	ST	--	Vernal or temporary pools in annual grasslands or open woodlands.	**Absent.** Populations located on the valley floor have been extirpated due to habitat loss, and the species is now considered absent from most of the valley floor, including the project area and the surrounding vicinity (H. T. Harvey & Associates 1999a, 2011b; SCVWD 2011).
Rana draytonii	California red-legged frog	FT	CSSC	--	Streams, freshwater pools, and ponds with emergent or overhanging vegetation.	**Absent.** Populations located on the valley floor have been extirpated due to habitat loss and the introduction of predators such as non-native fishes and bullfrogs. The species is now considered absent from most of the valley floor, including the project area and the surrounding vicinity (H. T. Harvey & Associates 1997; SCVWD 2011).
Rallus obsoletus	California Ridgway's rail	FE, SE, SP	--	--	Salt marsh habitat dominated by pickleweed and cordgrass (*Spartina* spp.).	**Absent.** California Ridgway's rails typically nest in broad marshes with well-developed tidal channels (conditions that are absent from the project area). Suitable foraging habitat is also absent from the project area, and potential foraging habitat downstream of the project area (for several hundred yards) is marginal at best. Therefore, the California Ridgway's rail is not expected to occur in the project area.
Laterallus jamaicensis coturniculus	California black rail	--	ST, SP	--	Breeds in fresh, brackish, and tidal salt marsh.	**Absent.** The California black rail occurs in the South Bay primarily as a scarce winter visitor, although some birds have recently begun over summering and breeding in the Alviso area. Suitable foraging and nesting habitat is not present in the project area. Additionally, potential foraging habitat downstream of the project area (for several hundred yards) is marginal at best. Therefore, the California black rail is not expected to occur in the project area.
Charadrius alexandrinus nivosus	western snowy plover	FT	CSSC	--	Sandy beaches on marine and estuarine shores and salt pans in San Francisco Bay saline-managed ponds.	**Absent.** No suitable nesting or foraging habitat is present on or adjacent to the project area.

Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	General Habitat	Potential to Occur in the Project Area
Sterna antillarum browni	California least tern	FE	SE, SP	--	Nests along the coast on bare or sparsely vegetated, flat substrates. In the South Bay, nests in salt pans and on an old airport runway. Forages for fish in open waters.	**Absent.** The species does not nest in the project area, and no suitable roosting or foraging habitat is present on or adjacent to the project area.
Agelaius tricolor	tricolored blackbird	--	CSSC	--	Nests near fresh water in dense emergent vegetation.	**Absent as breeder.** The species typically nests in extensive stands of tall emergent herbaceous vegetation in non-tidal freshwater marshes and ponds, which are not present in the project area. Not known to nest in tidal habitats in the South Bay, and it has not been recorded nesting in the project area (Rottenborn 2007a). However, the species is known to forage adjacent to the project area during the nonbreeding season (Cornell Lab of Ornithology 2016) and could occur in the project area during the nonbreeding season.
Corynorhinus townsendii	Townsend's big-eared bat	--	SSC	--	Roosts in caves and mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats.	**Absent.** No known extant populations occur on the Santa Clara Valley floor, and no roosting habitat is present in the project area.
Reithrodontomys raviventris	salt marsh harvest mouse	FE	SE, SP	--	Salt marsh habitat dominated by common pickleweed.	**May Be Present.** Ostensibly suitable habitat for the salt marsh harvest mouse is present in the project area in the form of a small patch of pickleweed and alkali bulrush between North McCarthy Boulevard and I-880, a small patch of coastal brackish marsh between I-880 and Coyote Creek, and adjacent uplands dominated by ruderal grassland habitat. However, the species is unlikely to occur in the project area due to the limited extent of potential suitable habitat within the project boundaries; the low quality of such habitat (with only sparse and limited pickleweed and alkali bulrush); the isolation of potential habitat areas from larger expanses of more suitable habitat because of the presence of roads and unsuitable habitat; the location of the project site at the extreme periphery of the species' range; and the low probability that a viable population can be sustained at and very close to the site for all the reasons listed previously. Nevertheless, the potential for individuals to move occasionally through this portion of the project area cannot be excluded. The species is not expected to occur in any other portion of the project area (i.e., areas east of I-880) due to a lack of suitable habitat.
California Species of Special Concern						
Oncorhynchus tshawytscha	Central Valley fall-run Chinook salmon	--	CSSC	--	Cool rivers and large streams that reach the ocean and that have shallow, partly shaded pools, riffles, and runs.	**Absent as Breeder.** Chinook are not known to spawn in Lower Penitencia Creek, and suitable spawning habitat is absent from the project area. Occasional stray Chinook from Central Valley streams may occur in the project area as foragers, as they do in other South Bay streams. However, these stray individuals are expected to occur irregularly and in extremely low numbers, and do not represent a native run.
Rana boylii	foothill yellow-legged frog	--	~~CSSC~~SC	--	Partially shaded shallow streams and riffles with a rocky substrate. Occurs in a variety of habitats in Coast Ranges.	**Absent.** This species is absent from the valley floor and suitable habitat is not present in the project area. The species occurs in less urbanized areas of Santa Clara County but has disappeared from farmed and urbanized areas, as well as many of the perennial streams below major reservoirs (H. T. Harvey & Associates 1999b).
Actinemys marmorata	western pond turtle	--	CSSC	--	Permanent or nearly permanent water in a variety of habitats	**May Be Present.** Although breeding populations have been extirpated from most urbanized areas in the project region, individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley. It is possible that small numbers of western pond turtles occur in the project area, in which case nesting could potentially occur on the sides of the levees along Lower Penitencia Creek.
Circus cyaneus	northern harrier	--	CSSC (nesting)	--	Nests in marshes and moist fields; forages over open areas.	**Absent as Breeder.** Suitable nesting habitat is not present in the project area, although wintering or migrating individuals may occasionally forage in the project area.

Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	General Habitat	Potential to Occur in the Project Area
Asio flammeus	short-eared owl	--	CSSC (nesting)	--	Riparian bottomlands with tall, dense willows and cottonwood stands (also dense live oak and California Bay along upland streams); forages primarily in adjacent open areas.	**Absent.** Suitable nesting or foraging habitat for long-eared owls is not present in the project area. This species is a rare resident and occasional winter visitor in Santa Clara County (Noble 2007).
Asio otus	long-eared owl	--	CSSC (nesting)	--	Nests in marshes and moist fields; forages over open areas.	**Absent.** The long-eared owl has been recorded nesting in the project region only in the Palo Alto Flood Control Basin, although it has not been confirmed nesting there since the 1970s. Determined to be absent from the project area.
Athene cunicularia	burrowing owl	--	CSSC	--	Nests and roosts in open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	**Absent as Breeder.** Suitable nesting habitat is not present in the project area, and no burrowing owls, California ground squirrels, or their burrows were observed during site visits. However, dispersing or wintering individuals may occur in the project area as foragers, albeit irregularly and in very low numbers.
Lanius ludovicianus	loggerhead shrike	--	CSSC (nesting)	--	Nests in tall shrubs and dense trees; forages in grasslands, marshes, and ruderal habitats.	**Absent as Breeder.** Nests in locations in the region where open grassland, ruderal, or agricultural habitat with scattered brush, chaparral, or trees provide perches and nesting sites (Bousman 2007b), although populations seem to have declined in recent years as suitable habitat has been increasingly developed. No suitable nesting habitat exists in the project area; however, individuals may occasionally occur on the site as migrants or foragers. Because this species is only considered a species of special concern when nesting, it would not be considered a special-status species if it occurs on the project site as a migrant.
Setophaga petechia	yellow warbler	--	CSSC (nesting)	--	Nests in riparian woodlands.	**Absent as Breeder.** Prefers riparian corridors with adjacent open space (rather than in heavily developed areas) and an overstory of mature cottonwoods and sycamores, a mid-story of box elders and willows, and a substantial shrub understory (Bousman 2007c). No suitable nesting habitat exists in the project area, but this species occurs as a migrant during the spring and fall. Because this species is only considered a species of special concern when nesting, it would not be considered a special-status species if it occurs on the project site as a migrant.
Geothlypis trichas sinuosa	San Francisco common yellowthroat	--	CSSC	--	Nests in herbaceous vegetation, usually in wetlands or moist floodplains.	**Present.** During the June 2015 site visit, singing male common yellowthroats were observed in the lowermost reaches of the project area and suitable marsh nesting habitat is present in these areas. Common yellowthroats nesting in the project area are the special-status subspecies *sinuosa* (San Francisco Bay Bird Observatory 2012). The greatest proportion of nesting records in the region occur within brackish and freshwater marshes near the edge of the Bay and in early-successional riparian habitat in broader floodplains (Bousman 2007d). Nests are typically located in extensive stands of bulrushes in brackish marshes and dense cattail beds in freshwater marshes, but the species also nests in forbs in riparian habitats.
Melospiza melodia pusillula	Alameda song sparrow	--	CSSC	--	Nests in salt marsh, primarily in marsh gumplant (*Grindelia stricta*) and cordgrass along channels.	**May Be Present.** During the June 2015 site visit, singing male song sparrows were observed in Reach 1 of the project area and suitable marsh nesting habitat is present in this reach. The *pusillula* subspecies of song sparrow is endemic to the Central and South Bay. In the project area, this subspecies occurs in the taller vegetation found along tidal sloughs. The location of the interface between populations of the Alameda song sparrow (*pusillula*) and the common race that breeds in freshwater riparian habitats in the region (*gouldii*) is not definitive due to difficulties distinguishing these subspecies in the field, and thus it is unknown whether the individuals observed on the site are of the subspecies *pusillula*, represent *gouldii*, or are intergrades between the two.

Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	General Habitat	Potential to Occur in the Project Area
Passerculus sandwichensis alaudinus	Bryant's savannah sparrow	--	CSSC	--	Nests in pickleweed-dominant salt marsh and adjacent ruderal habitat.	**Absent as Breeder.** This species is not expected to nest in the project area due to a lack of suitable habitat. In the South Bay, the Bryant's savannah sparrow nests primarily in short pickleweed-dominated portions of diked/muted tidal salt marsh habitat and in adjacent ruderal habitats (Rottenborn 2007b). There is only a small contiguous patch of pickleweed in the project area, and no savannah sparrows were observed during the June 2015 site visit. During the nonbreeding season, *alaudinus* and other savannah sparrow subspecies may forage in open areas on or adjacent to the project area.
Sorex vagrans halicoetes	salt marsh wandering shrew	--	CSSC	--	Medium to high marsh with abundant driftwood and common pickleweed.	**Absent.** Formerly more widely distributed in the San Francisco Bay Area, this small insectivorous mammal is now confined to salt marshes of the South Bay (Findley 1955). Salt marsh wandering shrews occur most often in medium to high wet tidal marsh (6 -8 feet above sea level) with abundant driftwood and other debris for cover (Shellhammer 2000). A small patch of pickleweed and alkali bulrush is located between North McCarthy Boulevard and I-880, but the lack of driftwood and other debris in this pickleweed patch makes the habitat unsuitable.
Antrozous pallidus	pallid bat	--	CSSC	--	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	**Absent as Breeder.** This species has been extirpated as a breeder from urban areas close to the Bay, including the project area. Furthermore, there is a low probability that the species occurs in the project vicinity due to urbanization, although individuals from more remote locations could potentially forage within the project area over open habitats on rare occasions. Cliff swallow nests, which can be used as roosting sites by pallid bats, were present on all four bridges, and the North McCarthy Boulevard bridge contains crevices that could also serve as roosting habitat. However, if the species roosts on the site, it is expected to do so only as a nonbreeder and in small numbers.
Lasiurus blossevillii	western red bat	--	CSSC	--	Roosts in foliage in forest or woodlands, especially in or near riparian habitat.	**Absent as Breeder.** Occurs as a migrant and winter resident but does not breed in the project region. Small numbers may occasionally be present in the project area as a migrant and winter resident, roosting in the foliage of trees virtually anywhere in the project area.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	--	CSSC	--	Nests in a variety of habitats, including riparian areas, oak woodlands, and scrub.	**Absent.** Currently, with the exception of records along Coyote Creek and along the edges of the Central Valley, San Francisco dusky-footed woodrats are not known to occur in the more urbanized portions of Santa Clara County (H. T. Harvey & Associates 2010). Furthermore, no woodrats or woodrat nests were observed in the project area during the June 2015 focused survey. Thus, this species is determined to be absent from the project area.
California Rare Plant Rank and State Fully Protected Species						
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	--	--	CRPR 1B.1	Occurs in valley and foothill grassland habitat, floodplains, and swales, particularly those with alkaline substrates, and in disturbed areas with non-native grasses. Variable blooming period extends from May through November.	**May Be Present.** Ruderal grasslands in the project area are considered marginal habitat for this species because the site is underlain by soils in the Urbanland series that may be saline, but are not generally considered alkaline.
Elanus leucurus	white-tailed kite	--	SP	--	Nests in tall shrubs and trees; forages in grasslands, marshes, and ruderal habitats.	**Absent as Breeder.** Suitable nesting habitat is not present in the project area or the adjacent urbanized landscape to the east. However, suitable foraging habitat is present and the species is known to nest along the northern edge of Santa Clara County in open areas edging San Francisco Bay (Mammoser 2007). There are also a number of records from wetlands adjacent to the Bay west of the project area (Cornell Lab of Ornithology 2016). Thus, individuals may occur in the project area as foragers.
Aquila chrysaetos	golden eagle	--	SP	--	Breeds on cliffs or in large trees (rarely on electrical towers); forages in open areas.	**Absent as Breeder.** Suitable nesting habitat is not present in the project area. This species is expected to forage in open habitats within and adjacent to the project area only infrequently, based on the limited number of occurrences recorded in this area by birders (Cornell Lab of Ornithology 2016).

Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	General Habitat	Potential to Occur in the Project Area
Falco peregrinus anatum	American peregrine falcon	--	SP	--	Forages in many habitats; nests on cliffs and tall bridges and buildings.	**Absent as Breeder.** Peregrine falcons are expected to occur as occasional foragers within the project area, but there is no suitable nesting habitat present. This species is known to nest on Mission Peak and in downtown San Jose.

*** List of Abbreviations for Federal and State Species-Status:**

FE = Federally listed as endangered
FT = Federally listed as threatened

SE = State listed as endangered
ST = State listed as threatened
SC = State candidate for listing
SP = State fully protected

CSSC = State species of special concern; "Nesting" indicates that only nesting birds are protected under this status.
CRPR = California Rare Plant Rank
1B = plants are considered rare, threatened, or endangered in California and elsewhere.
0.1 Seriously threatened in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat)

Sources: *Complete information provided in Appendices E and F. Additional sources used to compile Table 3.4-2 include: SCVWD 2012; H.T. Harvey & Associates 1996a, 1996b, 2011a, 2011b, 2012, and 2016.*

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Sensitive Natural Communities

CDFW determines the level of rarity and imperilment of vegetation types and tracks sensitive communities in the CNDDB (2016). In addition to tracking sensitive natural communities, CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009). Global rankings of natural communities and vegetation alliances reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state rankings are a reflection of conditions within California. The sensitivity of natural communities and vegetation alliances are then defined by NatureServe (2015) based on the number of occurrences and extent of the community.

CDFW Natural Communities of Special Concern and CDFW Sensitive Vegetation Alliances determined to occur in the project area are described below.

CDFW Natural Communities of Special Concern. A query of natural communities of special concern in the CNDDB (2016) identified northern coastal salt marsh as occurring within the nine 7.5-minute USGS quadrangles containing or surrounding the project area. However, northern coastal salt marsh was determined to be absent from the project area. This determination was based on the following evidence. As discussed above, Lower Penitencia Creek is a perennial stream with full tidal influence for the entire project alignment. H. T. Harvey & Associates classified the in-stream wetlands in the project area as coastal brackish marsh because they were a monoculture of California tule (genera *Schoenoplectus*), which is not listed as occurring in northern coastal salt marsh by either Holland (1986) or VegCAMP (CDFG 2010). Although the other wetland habitat type in the project area is underlain by saline soil and supports wetlands dominated by halophytic species, such as Pacific pickleweed and alkali bulrush, the area in which these species occur is cut off from tidal influence by the levee that encloses the southern bank of Lower Penitencia Creek. As such, this habitat type was characterized as non-tidal seasonal saline wetland (Figure 3.4-1). Furthermore, this area occurs outside of the margin of historical sloughs of the San Francisco Bay.

As described above, CDFW also considers streams and riparian habitat as sensitive. Along Lower Penitencia Creek within the project area, the CDFW may consider areas below the top of bank as sensitive. In areas where the tree canopy in willow riparian woodland extends above the top of bank, the landward canopy edge demarcates the lateral limit of CDFW-jurisdictional sensitive riparian habitat. However, a non-tidal, concrete-lined ditch excavated in uplands between North McCarthy Boulevard and I-880 is not considered a sensitive habitat type. Although it has developed some patches of low-quality wetland vegetation near Reach 1 because of artificial hydrology inputs such as collection of road runoff, this artificial feature does not have a connection to groundwater or a regular connection to surface water, does not provide special or high-quality wetland functions or values, and is not likely to be considered jurisdictional (Appendix D).

CDFW Sensitive Vegetation Alliances. Several sensitive vegetation alliances occur in the project area based on the dominant species present in willow riparian woodland and non-tidal seasonal saline wetland habitats. Sensitive vegetation alliances present in the project area are the Red Willow Thickets Alliance, Pickleweed Mats Alliance, Salt Marsh Bulrush Alliance, Alkali Heath Marsh Alliance, and the Creeping Ryegrass Turf Alliance.

Protected Trees

As described above, a substantial number of trees exist in the project area (more than 50 individual trees). About 36 trees within the project area are of sufficient diameter to be protected by the City of Milpitas tree ordinance. However, no trees in the project area have been designated as heritage trees by the City of Milpitas (D. Gordillo, pers. comm.).

3.4.4 Impact Analysis

Methodology

The primary adverse effects on biological resources of the proposed project would occur during project construction and the period immediately following construction. Aside from periodic visual inspections of the newly installed floodwalls and headwalls, maintenance activities would be mostly the same as those that currently take place under the SMP. Because the effects of SMP activities are covered in the SMP EIR (SCVWD 2012), the impact analysis does not address such effects in this section.

Impacts (Figure 3.4-4) on biological resources due to the proposed project were systematically evaluated at the project level. These impacts were first evaluated to qualitatively describe how proposed project activities could impact biological resources, and whether impacts would be temporary (i.e., occurring during project construction activities and the period immediately following these activities) or permanent. The impact analysis accounts for District BMPs, which are identified in Chapter 2, *Project Description*. For project impacts that would be significant, feasible mitigation measures are identified, and the significance of the impacts was evaluated to determine if mitigation measures would reduce impacts to a less-than-significant level.

Biological resources would be affected not only by project-related construction activities but also, in a few cases, by mitigation measures. The net effect of these mitigation measures would be beneficial. However, in a few cases, adverse effects on the physical environment may occur during implementation of these measures. For example, although relocation of western pond turtles from work areas may be necessary to avoid mortality of those individuals, some stress on these individuals may occur during relocation. As a result, the effects of BMPs and mitigation measures were also analyzed, where appropriate.

Criteria for Determining Significance

The proposed project would result in a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW and USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Summary

Table 3.4-3 summarizes biological resources impacts of the proposed project.

Table 3.4-3. Summary of Impacts Biological Resources

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance after Mitigation
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	S	Mitigation Measures BIO-1 BIO 13	LM
BIO-1a: Impacts on longfin smelt and steelhead	S	Mitigation Measure BIO-1	LM
BIO-1b: Impacts on essential fish habitat	LS	N/A	LS
BIO-1c: Impacts on western pond turtles	S	BIO-2	LM
BIO-1d: Impacts on burrowing owls	LS	None	LS
BIO-1e: Impacts on the Alameda song sparrow and San Francisco common yellowthroat	S	Mitigation Measures BIO-3 and BIO-4	LM
BIO-1f: Impacts on non-nesting special-status birds	LS	None	LS
BIO-1g: Impacts on salt marsh harvest mouse	S	Mitigation Measures BIO 5 BIO-8	LM
BIO-1h: Impacts on special-status bats	LS	None	LS
BIO-1i: Impacts on Congdon's tarplant	S	Mitigation Measures BIO-9 and BIO-10	LM
BIO-1j: Introduction of invasive species	S	Mitigation Measures BIO-11 and BIO-12	LM
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by	LS	None	LS

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance after Mitigation
the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service			
BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), waters of the U.S., and waters of the state through direct removal, filling, hydrological interruption, or other means	S	Mitigation Measure BIO-13	LM
BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	LS	None	LS
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	NI	None	NI
BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	NI	None	NI

LM = Less than Significant with Mitigation; LS = Less than Significant; S = Significant; NI = No Impact

Environmental Impacts

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant with Mitigation)

The following impact analysis describes the project's adverse effects on special-status species. The analysis is organized by sub-topics and species type. This impact analysis is based on the information included in Table 3.2-4. Species listed in Table 3.2-4 as absent from the project area are not analyzed in this section as they would not be affected by the proposed project. All species listed in Table 3.2-4 as present, may be present, or absent as breeders could potentially be affected by the project and are analyzed in this section, except three bird species which have special status only when nesting and would not be expected to nest at the project site. Those three bird species are the Northern harrier, loggerhead shrike, and yellow warbler.

Impact BIO-1a: Impacts on longfin smelt and steelhead (Less than Significant with Mitigation)

During project construction, longfin smelt (state listed as threatened) and Central California Coast steelhead (federally listed as threatened) could potentially occur, albeit infrequently and in low numbers, in the reach of Lower Penitencia Creek within the project boundary. Neither of these species is expected to spawn in the project area; however, small numbers of these species may occasionally stray into the project area.

The proposed project would not result in the permanent loss of aquatic habitat for fish. However, levee modification and bench excavation in Reach 1 and construction of the new headwalls for the San Andreas Drive bridge in Reach 4 would require temporary dewatering of the affected portions of the channel. In addition, short sections of the secondary channel in Reach 3 would require dewatering to allow construction vehicles to access Staging Area B by means of existing concrete ramps. Further, depending on the layout of equipment needed to construct floodwalls on the south bank of Reach 2 and both banks of Reach 3, it may be necessary to dewater the entire length of Reaches 2 and 3 during construction of the floodwalls. As shown in **Figure 3.4-4**, up to approximately ~~9.71 acres of aquatic habitat, including~~ 0.87 acre of coastal brackish marsh and 8.84 acres of tidal aquatic habitat~~,~~ would be temporarily affected as a result of dewatering. **Table 3.4-4** summarizes temporary and permanent habitat impacts that would occur in the project area.

Table 3.4-4. Temporary and Permanent Habitat Impacts in the Project Area

Habitat	Impacts (acres)	
	Temporary	Permanent
Tidal aquatic (open water)	8.84	0.01
Willow riparian woodland	1.93	<0.01
*Wetlands**		
Coastal brackish marsh	0.87	<0.01
Non-tidal seasonal saline wetland	0.03	0.13
Other		
Ruderal grassland	5.82	0.65
Developed/Landscaped	5.35	0.20
Total	***22.85***	***0.98***

*0.08 acre of the permanent impact on wetlands results from conversion of non-tidal seasonal saline wetland to coastal brackish marsh (i.e., a permanent change in wetland type but not the overall amount of wetlands on the site).

Source: H.T. Harvey 2017

Figure 3.4-4. Habitat Impacts Map

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

In-channel construction activities, including channel dewatering, would be limited to the dry season (i.e., June 15 through October 15) to reduce the potential for longfin smelt and steelhead to be present in the project area when these activities are undertaken. Nevertheless, if individuals of either species were to occur in the reaches to be dewatered, dewatering activities could result in injury or mortality of individuals due to degraded water quality, temporary blockage of migration, stranding in isolated pools, and desiccation. Construction activities may also necessitate the operation of heavy equipment within the streambed (after dewatering). Movement of heavy equipment may compact the substrate, potentially killing benthic invertebrates (which may serve as prey for fish), embedding gravel within finer sediments, and otherwise altering habitat for fish and their prey.

The loss of instream cover, such as vegetation, due to dewatering may adversely affect fish as a result of increased predation caused by a decrease in the availability of escape cover and the alteration of local hydraulics (e.g., increasing water velocity) (Stillwater Sciences 2006), and the loss of refugia during high flows. Vegetation removal also would result in the loss of substrate used by various fish for foraging. However, Lower Penitencia Creek provides relatively low-quality habitat for fish species due to its channelized nature, the lack of high-quality habitat complexity, and regular disturbance of habitats due to frequent maintenance. Thus, the loss of instream cover and habitat is expected to have a less substantial impact on fish than would similar activities on a naturally formed stream.

Furthermore, this habitat is expected to reestablish rapidly following the completion of construction activities. The Instream Wetland Vegetation Regrowth Study (Rankin and Hillman 2000) found 65 percent and 98 percent average regrowth within 1 and 2 years, respectively, after 1997 sediment removal at six non-tidal freshwater study sites. Average regrowth on two tidal study sites was less, at 21 percent and 29 percent after 1 and 2 years, respectively. Regrowth study results on four additional 1998 sediment removal sites found that after 1 year, those sites supported more non-tidal wetland than was present before sediment removal and almost 70 percent of the tidal wetland that was present before sediment removal. Thus, project activities, which would occur at the upper end of tidal influence, are not expected to result in a substantial long-term change in the amount or suitability of aquatic habitat available to steelhead and longfin smelt.

During floodwall installation activities, excavating and replacing soil for the footings, stabilizing, and loss of vegetation on channel banks may result in an increase in erosion and sedimentation. Streambank erosion is a natural process that can be beneficial to fish by providing a source of gravel necessary for high-quality habitat. However, when natural levels of erosion are exceeded, increases in turbidity and sediment input may cause stress on fish because of feeding difficulties or displacement. Additionally, minor spills of petrochemicals, hydraulic fluids, and solvents may occur during vehicle and equipment refueling or because of leaks, adversely affecting water quality and potentially killing or injuring fish. Implementation of District BMPs HM-7, and HM-10 would prevent vehicle cleaning from occurring in the creek channel and minimize the potential for impacts to water due to release of pollutants into the creek water. BMPs WQ-1 through WQ-9 and HM-8would be implemented to minimize the amount of in-channel construction activity, use appropriate equipment in the creek bed, ensure proper maintenance and operation of pumps, stage and stockpile materials where they will not contribute pollutants to the creek stabilize vehicles entrances to prevent eroded soil from washing into the creek, isolate concrete from creek water until it is fully cured, isolate work areas from tidal flows, and reseed disturbed areas to prevent soil erosion, maintain clean conditions at the construction area, and prevent

discharge of oily, greasy, or turbid water to the creek. BMPS BI-3, WQ-11, WQ-15, and WQ-16 would protect water quality by ensuring temporary fill is removed from the construction area when no longer necessary. Construction areas are maintained in a clean condition, water discharges meet turbidity thresholds, and measures are implemented during construction (e.g. silt fences. Straw bales, erosion control mats) to prevent stormwater from eroding soils and washing it into the creek channel. BMPS BI-8 requires that local ecotypes be planted at disturbed areas after construction is complete to stabilize those areas and prevent soil erosion. These measures will minimize the release or pollutants to creek waters; thereby protecting water quality of the aquatic habitat.

The construction of floodwalls would require the installation of sheet piles. Sounds generated by pile driving have the potential to affect fish in several ways, ranging from the alteration of behavior to physical injury or mortality, depending on the intensity and characteristics of the sound, the distance and location of the fish in the channel relative to the sound source, and the size and species of fish involved (Yelverton et al. 1975 as cited in Hastings and Popper 2005; ICF Jones & Stokes and Illingworth and Rodkin Inc. 2009). However, the proposed project's use of a Giken silent piler would reduce effects of pile driving to levels that are not expected to cause injury or mortality of fish.

Although longfin smelt and steelhead are expected to occur infrequently and in low numbers, if at all, in the project area, the proposed project activities described above could affect the primary constituent elements involving estuarine water quality and juvenile and adult foraging habitat for Central California Coast steelhead within these waters. However, such habitat is expected to contribute little to Central California Coast steelhead survival and recovery, given the infrequency with which these species might occur in the project area.

As described above, implementation of District BI-3, BI-8, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize changes in water quality by avoiding routine use of vehicles and equipment in Lower Penitencia Creek between January 1 and June 15, when anadromous fish are most likely to be present; reduce erosion; control sediment; and prevent spills. BMP BI-8 requires use of local ecotypes in revegetation to provide erosion protection and promote habitat restoration and enhancement. By implementing these BMPs, impacts on longfin smelt and steelhead would be minimized. Nevertheless, the proposed project could result in residual impacts on these species because complete avoidance of individuals may not be accomplished while still meeting the proposed project goals. As a result, impacts on special-status fish are conservatively considered significant for purpose of this analysis. Mitigation Measure BIO-1 would be applied to address this impact.

Mitigation Measures

Mitigation Measure BIO-1: Exclude Fish Prior to Dewatering Activities

Prior to conducting dewatering activities, ~~the District will hire~~ a qualified biologist ~~who~~ will use nets to exclude fish from the construction area. During a falling tide, a block net will be placed at the upper end of the reach to be dewatered. Subsequently, qualified biologists will walk from the upper to lower end of the reach with a seine stretched across the channel to encourage fish to move out of the construction area. When the lower end of the construction area is reached, a second block net will be installed to isolate the construction reach. This procedure will be repeated a minimum of three times on each dewatered reach to ensure that no longfin smelt or

steelhead remain in the construction area. Mesh size will not exceed 9.5 millimeters to ensure that longfin smelt are adequately excluded from this area.

Significance After Mitigation

Implementation of **Mitigation Measure BIO-1** would exclude fish from the project area before dewatering begins, thereby minimizing the loss of individual longfin smelt and steelhead. Note that implementation of Mitigation Measure BIO-1 may result in an increased concentration of fish immediately downstream of the project area. Thus, some potential would exist for changes in densities of predators or competitors to result in increased stress, injury, or mortality of individual longfin smelt or steelhead. However, the benefits of the mitigation measure would far outweigh the loss of individuals that would occur if fish were not excluded from the project area prior to dewatering. Further, the use of nets to exclude fish from the construction area does not result in entrapment or physical handling of fish. Rather, this approach simply encourages fish to move out of the project's dewatering area on their own without allowing them to re-enter. As a result, this mitigation measure is not expected to result in the take of steelhead or longfin smelt. For the reasons described above, Mitigation Measure BIO-1 would reduce this impact to less than significant with mitigation.

Impact BIO-1b: Impacts on essential fish habitat (Less than Significant)

As noted in Section 3.4.2, "Regulatory Setting," the Chinook salmon, which is regulated by the Pacific Fishery Management Council's Pacific Coast Salmon FMP (Pacific Fishery Management Council 1999) and designated as a California species of special concern, may occur irregularly in the project area. Although Chinook salmon in the project area have been recognized as strays from hatchery releases (NMFS 1999; Hedgecock 2002), NMFS still considers habitat used by Chinook salmon in the South Bay as EFH. Thus, the reach of Lower Penitencia Creek within the project boundaries could be considered EFH associated with the Pacific Coast Salmon FMP.

Several fish species regulated by the Pacific Groundfish FMP (Pacific Fishery Management Council 2008), such as the leopard shark, English sole, starry flounder, and big skate, occur in tidal habitats of South San Francisco Bay and occasionally disperse upstream into the reaches of Lower Penitencia Creek. Fish regulated by the Coastal Pelagics FMP (Pacific Fishery Management Council 1998), such as the northern anchovy, Pacific sardine, and jack mackerel, also occur in the South Bay, and they could possibly occur in the project area. Because of the presence of at least some species managed by one of these plans, Lower Penitencia Creek within the project boundaries is considered EFH associated with the Pacific Groundfish and Coastal Pelagics FMPs.

The types of effects that project activities could have on these species and the associated EFH that would support them are the same as those described above in Impact BIO-1a. Accordingly, project activities would have limited effects on potential EFH, but such impacts may occur because of in-channel activities associated with levee relocation and bench excavation, as well as associated dewatering activities. During such activities, turbidity may increase, potentially affecting the health or foraging ability of fish in tidal waters. Due to the location of the proposed project at the extreme upper end of tidal influence, abundance of FMP-managed species is expected to be low, and the project area is expected to contribute relatively little to regional populations of such species.

Implementation of District BMPs HM-7, and HM-10 would prevent vehicle cleaning from occurring in the creek channel and minimize the potential for impacts to water due to release of pollutants into the creek water. BMPs WQ-1 through WQ-9 will be implemented to minimize the amount of in-channel construction activity, use appropriate equipment in the creek bed, ensure proper maintenance and operation of pumps, stage and stockpile materials where they will not contribute pollutants to the creek stabilize vehicles entrances to prevent eroded soil from washing into the creek, isolate concrete from creek water until it is fully cured, isolate work areas from tidal flows, and reseed disturbed areas to prevent soil erosion, maintain clean conditions at the construction area, and prevent discharge of oily, greasy, or turbid water to the creek. These measures will minimize the release or pollutants to creek waters; thereby protecting water quality of the aquatic habitat. District BMPs BI-2, BI-3, and BI-8 would minimize changes in water quality by avoiding routine use of vehicles and equipment in Lower Penitencia Creek between January 1 and June 15, when anadromous fish are most likely to be present; reduce erosion; control sediment; and prevent spills. Measure BI-8 requires use of local ecotypes in revegetation to provide erosion protection and promote habitat restoration and enhancement. Due to the limited extent of impacts on tidal waters that could serve as EFH, the loss of EFH and associated effects on fish species regulated by FMPs would be very low. Implementation of District BMPs would reduce impacts on EFH and associated fish species considerably. With implementation of these District BMPs, the proposed project would affect only a very small proportion of EFH and associated species in South San Francisco Bay, and thus the project would not have a substantial effect on these resources. Therefore, project impacts on EFH are considered less than significant.

Impact BIO-1c: Impacts on western pond turtles (Less than Significant with Mitigation)

Suitable habitat for the western pond turtle, a California species of special concern, consists of ponds or instream pools (i.e., slack water environments) with available basking sites, nearby upland areas with clay or silty soils for nesting, and shallow aquatic habitat with emergent vegetation and invertebrate prey for juveniles (Jennings and Hayes 1994). Individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley, and it is possible that small numbers of western pond turtles occur in the project area. If so, it is possible that they could nest in small numbers on the adjacent levees.

Project construction may affect aquatic habitat used by western pond turtles for foraging or dispersal, upland habitat used for nesting, and/or individuals. For example, individual turtles or their eggs may be harmed or killed during project activities due to crushing by construction personnel or equipment, or as a result of desiccation or burying (e.g., during levee relocation or bench excavation). Nests present in the project area may be inadvertently crushed by construction equipment or personnel, or buried during the movement or placement of materials or fill. In addition, petrochemicals, hydraulic fluids, and solvents that were spilled or leaked from vehicles or equipment may kill individuals at any life stage. Any of these effects would be a significant impact. Implementation of District BMPs BI-3, BI-8, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize impacts on western pond turtles during project construction by minimizing the potential for water quality degradation that could impact the species. Implementation of District BMPs HM-7, HM-8 and HM-10 would prevent vehicle cleaning from occurring in the creek channel and minimize the potential for impacts to water due to release of pollutants into the creek water. BMPs WQ-1 through WQ-9 will be implemented to minimize the amount of in-channel construction activity, use appropriate equipment in the creek bed, ensure proper maintenance and operation of pumps, stage and stockpile materials where they will not

contribute pollutants to the creek stabilize vehicles entrances to prevent eroded soil from washing into the creek, isolate concrete from creek water until it is fully cured, isolate work areas from tidal flows, and reseed disturbed areas to prevent soil erosion, maintain clean conditions at the construction area, and prevent discharge of oily, greasy, or turbid water to the creek.. These measures will minimize the release or pollutants to creek waters; thereby protecting water quality of the aquatic habitat. Measure BI-8 requires use of local ecotypes in revegetation to provide erosion protection and promote habitat restoration and enhancement.

District BMP BI-10 would also reduce the potential for entrapment and predation of turtles in work areas. However, should construction activities occur when turtles are present, injury or mortality of individuals could result. Although western pond turtles are found throughout the project region, the species is not particularly abundant and young turtles are seen in relatively few parts of the project region. This suggests that the population may decline substantially in the near future because turtles are not reproducing at a sufficient rate to replace the adult turtles that are reaching the end of their life span. Therefore, construction-related impacts on individual western pond turtles could have a significant impact on the local population and are considered significant.

The proposed project would not result in the permanent loss of aquatic habitat for turtles. However, up to 9.71 acres of aquatic and brackish marsh habitat that provides potential foraging habitat for turtles would be temporarily affected due to levee relocation, bench excavation, and dewatering activities. Western pond turtles are expected to use this habitat only infrequently and in small numbers because breeding populations have been extirpated from most urbanized areas in the project region. Given the abundance of suitable aquatic habitat in the project vicinity, the temporary loss of aquatic habitat because of the proposed project is not expected to result in a substantial adverse effect on the western pond turtle population in the project area and would be a less than significant impact.

Up to 7.75 acres of ruderal grassland and willow riparian woodland that could potentially be used by small numbers of turtles for dispersal and nesting may be temporarily disturbed by project construction activities. In addition, up to 0.29 acres of ruderal grassland would be permanently converted to coastal brackish marsh and small areas of ruderal grassland would be converted to developed habitat. The coastal brackish marsh would have greater habitat value for WPT than the replaced ruderal grassland. The temporary loss of upland dispersal and nesting habitat for pond turtles is not expected to have a substantial adverse effect, as this habitat is expected to be used only infrequently by small numbers of turtles, and would be a less than significant impact.

Dewatering during construction would temporarily restrict in-channel movement by western pond turtles. However, the area affected is relatively small and limitations to turtle movement would be short-lived, lasting for up to four months at portions of the construction area. This impact would be less than significant.

In addition, floodwall construction could create barriers to dispersal of turtles, increasing their vulnerability to predation as they traverse the floodwalls when moving overland between habitats. Upstream from California Circle (i.e., Reaches 3 and 4), western pond turtles are not currently able to disperse overland between Lower Penitencia Creek and other waterbodies due to the barrier posed by the urban landscape along both sides of the channel. The new floodwall in Reach 2 on the south bank levee would not limit pond turtle overland

movement as the adjacent California Circle stormwater pond and pump station are surrounded by chain-link fence, which acts as an existing barrier to the passage of turtles. Thus, newly installed floodwalls in Reach 2 would not adversely affect overland movement of western pond turtles. No floodwalls are proposed within Reach 1 and the proposed project would not affect western pond turtle dispersal between Reach 1 of Lower Penitencia Creek and Coyote Creek. Impacts of, the proposed project on overland movement by western pond turtles would be less than significant.

Mitigation Measures

Mitigation Measure BIO-2: Conduct Preconstruction Surveys for Western Pond Turtles and Relocate if Necessary

~~The District will hire a~~A qualified biologist ~~who~~ will conduct pre-construction surveys for western pond turtles and their nests If an adult or juvenile western pond turtle is found, project activities near the turtle will not commence until the individual has left the area, or is captured and relocated to suitable habitat outside of the activity area by a qualified biologist. If an active western pond turtle nest is detected within the construction area, a 25-foot buffer zone around the nest will be established and maintained during the nesting season (April 1 through August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist.

Significance After Mitigation

Implementation of Mitigation Measure BIO-2 would identify and relocate any western pond turtles present in the project area before the start of construction. Individuals that were relocated to suitable habitat outside of the work site may be subjected to physiological stress and face a greater risk of predation, or may undergo increased competition with turtles already present in the area to which they were relocated. However, the benefits of the mitigation measure would far outweigh the loss of individuals that would occur if turtles were not removed from the project area where construction would occur. The relocation of turtles from active construction areas is a commonly included mitigation measure for Bay Area projects and is a BMP in the Stream Maintenance Program Final Subsequent EIR (SCVWD 2011). This measure would minimize the potential for harm to or loss of individual western pond turtles and their nests and would reduce this impact to less than significant.

Impact BIO-1d: Impacts on burrowing owls (Less than Significant)

The burrowing owl, a California species of special concern, occurs year-round in the Santa Clara Valley (Trulio 2007) in open agricultural or grassland areas with active squirrel burrows. Albion Environmental (2009) previously assessed the impact of the District's proposed burrow management under the SMP on burrowing owls and found that District levees do not provide important burrowing owl nesting or roosting habitat (i.e., used regularly or by a sizeable proportion of the South San Francisco Bay population). Furthermore, no suitable breeding habitat (i.e., burrows) for the burrowing owl was detected within the project area during the reconnaissance survey, and previous surveys of the site have failed to find any burrowing owls at this location (EDAW 2008). Therefore, the burrowing owl is not expected to breed in the project area. Additionally, few ground squirrel burrows, which the owls prefer to use as nests, are present in the project are. Burrowing owls would occur in the project area only as foragers that roost elsewhere, if they occur at all. The

proposed levee relocation in Reach 1 and the levee raising in Reach 4 would not significantly impact burrowing owls.

Burrowing owls seem to occur more widely in the South San Francisco Bay in winter than they do during the nesting season. For example, burrowing owls occur on Coyote Ridge and in Coyote Valley during winter, but they have not been recorded lingering into spring and summer to nest in those areas in recent years. This suggests that the amount of available wintering habitat for burrowing owls is not limiting the species' South San Francisco Bay populations.

The project would affect 6.63 acres of foraging habitat (i.e., ruderal grassland and non-tidal seasonal saline wetland) potentially used by wintering burrowing owls. Impacts include the conversion of small areas of ruderal grassland to developed habitat, the conversion of ~~0.05~~ 0.08 acre of non-tidal seasonal saline wetlands to tidal marsh, and the conversion of ~~0.45~~ 0.29 acre of ruderal grassland to tidal marsh. About 6 acres of foraging habitat would be disturbed during construction but would return to foraging habitat after the project is completed. These impacts are not expected to affect appreciably the regional populations of this species. In addition, implementation of District BMP BI-11 would further reduce impacts on burrowing owls as a result of project activities by removing trash from work areas and thereby reducing the attraction of burrowing owl predators to the area. For these reasons, this impact is considered less than significant.

Impact BIO-1e: Impacts on the Alameda song sparrow and San Francisco common yellowthroat (Less than Significant with Mitigation)

The Alameda song sparrow and San Francisco common yellowthroat (both California species of special concern) are associated with marsh habitats, and both are known to nest in the project area. These species are assessed together because the impacts of the proposed project on these species would be similar.

Heavy ground disturbance, noise, and vibrations caused by proposed floodwall construction, levee modifications, and bridge modification activities in the project area could disturb foraging or roosting individual Alameda song sparrows and San Francisco common yellowthroats and cause them to move away from work areas. Although adult birds are not expected to be killed or injured, as they could easily fly from the work site prior to such effects occurring, eggs or young in nests could be destroyed. In addition, project activities causing a substantial increase in noise, movement of equipment, or human presence near active nests could result in the abandonment of nests, and possibly the loss of eggs or young as a result, which would be a significant impact.

Increased human activity may affect the behavior of birds, causing them to avoid work sites and possibly exposing them to increased competition with other birds in the areas to which they dispersed and increased levels of predation caused by unfamiliarity with the new area. Increases in human concentration and activity associated with construction near suitable habitat also may result in an increase in native and non-native predators that would be attracted to trash left at the work site and a reduction in the quality of breeding or foraging habitat caused by the introduction of non-native vegetation. In addition, increased sedimentation or hazardous material spills from project activities may result in the temporary or permanent degradation of water quality and, hence, habitat quality in marsh habitats downstream.

The project is expected to result in temporary impacts on 0.87 acre of coastal brackish marsh, the highest quality habitat for the species in the project area. However, as described under Impact BIO-1a, this habitat is expected to rapidly reestablish following the completion of construction activities. Furthermore, a portion of the wetland bench in Reach 1 would be excavated down to an elevation that would experience tidal inundation and would be planted with salt-tolerant wetland vegetation to create tidal habitat. This would result in the creation of an additional 0.29 acre of brackish marsh habitat for the Alameda song sparrow and San Francisco common yellowthroat, a long-term benefit to these species.

Implementation of District BMPs BI-5 and BI-6 would reduce impacts on nests of Alameda song sparrows and San Francisco common yellowthroats due to construction-related disturbances. In addition, implementation of District BMP BI-11 would minimize the attraction of nest predators, which could harm nests of Alameda song sparrows and San Francisco common yellowthroats to the project area. Preconstruction nesting bird surveys implemented under District BMP BI-5 would likely identify active nests of all bird species prior to the start of project activities. In addition, deterrence measures may be used to prevent birds from nesting in the project area. However, District BMP BI-5 does not specify how long before the start of project activities the preconstruction survey for nesting birds must occur. If construction occurs during the nesting season and preconstruction nesting bird surveys are performed too far in advance of the onset of construction activities, active nests may be established in the period between the survey and the initiation of construction activities.

Similarly, if there is an extended break in construction activities at a site, active nests may become established in the project work area and subsequently be disturbed when project activities resume. Furthermore, although District BMP BI-5 states that no birds, nests with eggs, or nests with hatchlings would be disturbed, and it requires pre-construction surveys for active bird nests at the construction are and nearby land, it does not specify details of how the surveys would be performed and what areas would be surveyed. The loss of active nests of Alameda song sparrows or San Francisco common yellowthroats would be a significant impact because a relatively large number of breeding birds could be affected. This could result in a substantial effect on local and regional populations, which would be a significant impact.

Mitigation Measures

Mitigation Measure BIO-3: Conduct Preconstruction Surveys for Nesting Birds

~~The District will hire a~~A qualified biologist ~~who~~ will conduct preconstruction surveys for nesting birds. Surveys will be conducted no more than ~~2 weeks~~7 days prior to the initiation of construction activities during the nesting bird season (January 15 through August 31) in any given area. The survey will cover the portions of the project work area where construction activities will occur as well as a 250-foot buffer for raptors and a 50-foot buffer for non-raptors. During each survey, the biologist will inspect all trees and other potential nesting habitats (e.g., shrubs, ruderal grasslands, wetlands, and buildings) in and immediately adjacent to the impact areas for nests. If a lapse in project-related work of ~~2~~1 week~~s~~ or longer occurs, another focused survey will be conducted before project work can be reinitiated.

Mitigation Measure BIO-4: Implement Buffer Zones for Nesting Birds

If an active nest is found sufficiently close to the project work area (i.e., within 250 feet for raptors or 50 feet for non-raptors), a qualified biologist ~~hired by the District~~ will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 50 feet for non-raptors and 250 feet for raptors). No construction activities will be performed within the buffer until the young have fledged or the nest has been determined to be inactive by a qualified biologist.

If the qualified biologist determines that a reduced buffer size is appropriate given conditions in the vicinity of the nest, type of construction activity that would occur near the nest, and the species of the nesting bird, the biologist will monitor bird behavior in relation to work activities. If the birds do not indicate that they are habituated to project activities during the initial 2 days of attempting work within a reduced buffer, the standard buffer will be implemented. Project activities within the reduced buffers will not resume until the District has consulted with CDFW and both the qualified biologist and CDFW confirm that the birds' behavior has normalized, or until the nest is no longer active.

Significance After Mitigation

With the implementation of **Mitigation Measures BIO-3 and BIO-4**, disturbance of the nests of Alameda song sparrows and San Francisco common yellowthroats would be avoided to the extent feasible, and this impact would be reduced to less than significant with mitigation.

Impact BIO-1f: Impacts on non-nesting special-status birds (Less than Significant)

Several special-status bird species occur in the project area as non-breeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers in the project area; these include Bryant's savannah sparrow, tricolored blackbird, white-tailed kite, golden eagle, and American peregrine falcon.

Bryant's savannah sparrow, a California species of special concern, is not expected to breed in the project area due to a lack of suitable breeding habitat; however, during the non-breeding season, individuals may forage in open areas throughout the project area. The tricolored blackbird, a California species of special concern, is not known to breed in tidal marshes in the South Bay and is not expected to occur in the project area as a breeder due to a lack of suitable habitat, but individuals may occur occasionally in the project area during migration. There are a number of occurrence records of the white-tailed kite, a fully protected species, from South Bay wetlands west of the project area, but suitable nesting habitat is not present in the project area or in the adjacent urbanized landscape to the east. Nevertheless, individuals may occasionally forage in the project area. Similarly, the golden eagle and American peregrine falcon, both fully protected species, are not expected to breed in the project area due to a lack of suitable nesting habitat. Individuals of these species may occasionally occur on the site while foraging, but are not expected to occur regularly.

The proposed project would have some potential to affect foraging habitats and/or individuals of these species. Construction activities associated with the proposed project might result in a temporary direct impact through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during construction activities) but would not result in the loss of individuals. Furthermore, the project area does not provide important foraging habitat used regularly or by large numbers of individuals of

any of these species. Implementation of District BMP BI-11 would further reduce impacts on non-nesting special-status birds by minimizing attraction of predators. This impact would be less than significant.

Impact BIO-1g: Impacts on salt marsh harvest mouse (Less than Significant with Mitigation)

Habitat for salt marsh harvest mouse, a federally listed and state-listed endangered species and a state-designated fully protected species, consists of pickleweed-dominated areas of tidal marshes and diked and muted tidal marshes. Ostensibly suitable habitat for the salt marsh harvest mouse is present in the project area in the form of a small patch of pickleweed and alkali bulrush located between North McCarthy Boulevard and I-880 and a small patch of coastal brackish marsh located between I-880 and Coyote Creek. However, this habitat is located at the margins of the species' known occupied habitat around the Bay, and the species is unlikely to occur in the project area because of the limited extent of potentially suitable habitat within the project boundary, the low quality of such habitat (with only sparse and limited pickleweed and alkali bulrush), and the isolation of potential habitat areas from larger expanses of more suitable habitat due to the intervening presence of roads and unsuitable habitat. The species is not expected to occur in any other portion of the project area (i.e., areas upstream of I-880) due to a lack of suitable habitat.

Due to the size and quality of the habitat present, the project site does not provide sufficient habitat to support a sustained salt marsh harvest mouse population. Nevertheless, the potential for individuals to move occasionally through the portion of the project area west of I-880 cannot be excluded. During levee modification in Reach 1 and use of Staging Area A, if salt marsh harvest mice are present, they may be crushed or injured by personnel or equipment. Individuals that vacate the area because of increased levels of noise and disturbance might be exposed to increased competition from conspecifics already occupying the area to which they are displaced and to increased levels of predation because of unfamiliarity with the new area or lack of sufficient cover. Removal of vegetation might expose individual mice to predation. During construction, implementation of District BMPs BI-10 and BI-11 would reduce impacts on this species by avoiding entrapment of mice and minimizing predation.

In addition, levee relocation, staging area use, and dewatering activities would result in the loss of vegetated marsh, which would affect habitat for the harvest mouse. Construction activities would result in impacts on 0.74 acre of wetland habitat (i.e., coastal brackish marsh and non-tidal seasonal saline wetland within Reach 1 where the salt marsh harvest mouse could potentially occur) for the salt marsh harvest mouse. This 0.74 acre of impacted wetland habitat includes the conversion of 0.05 acre of seasonal saline wetland to ruderal grassland and the disturbance of 0.69 acre of wetland habitat within Reach 1 that would still provide potential salt marsh harvest mouse habitat after the project is completed. In addition, 1.26 acres of ruderal grasslands adjacent to potential salt marsh harvest mouse habitat in Reach 1 would be temporarily disturbed but would still provide habitat after the project is complete.

As described under Impact BIO-1a, instream coastal brackish marsh vegetation is expected to reestablish rapidly following the completion of construction activities, resulting in no long-term loss of habitat for the salt marsh harvest mouse. Further, after construction is complete, the newly created bench is expected to provide approximately 0.29 acre of additional tidal

marsh habitat (i.e., conversion of ruderal grassland to tidal marsh) for the species as a result of the project.

Despite implementation of District BMPs BI-10 and BI-11 and the proposed creation of additional habitat through the wetland bench, if a transient mouse evades the exclusion fence and is seriously harmed or injured, or if the wetland bench does not successfully establish suitable salt marsh harvest mouse habitat, the impact would be significant.~~Although the proposed project would create about 0.29 ac of tidal marsh habitat that would be suitable for the salt marsh harvest mouse, the project is in the preliminary design phase and appropriate measures have not yet been developed to ensure the successful establishment of suitable harvest mouse habitat on the created bench. Therefore, temporary habitat loss for the salt marsh harvest mouse is considered a significant impact.~~ Mitigation Measures BIO-5, BIO-6, ~~and~~ BIO-7, and BIO-8 would be implemented to address this significant impact.

Mitigation Measures

Mitigation Measure BIO-5: Develop and Conduct Worker Environmental Awareness Program

Before any construction activities begin, the District will conduct a training session for all construction personnel. At a minimum, the training will include descriptions of the salt marsh harvest mouse, its habitats, the importance of the species, the general measures that are being implemented to conserve this species as they relate to the proposed project, and the boundaries within which project activities may be accomplished.

Mitigation Measure BIO-6: Implement Hand Removal of Vegetation in Reach 1 and Staging Area A

~~The District will remove vegetation at marshes and high-water refugia habitat in Reach 1 (e.g., annual grasses and shrubs immediately adjacent to channels) by hand to the extent feasible. This measure applies to construction work at Reach 1 and Staging Area A.~~

Prior to the start of project activities within Reach 1 and Staging Area A, herbaceous vegetation will be removed from work areas to eliminate cover for salt marsh harvest mice, thereby discouraging them from occurring in work areas. A qualified biologist familiar with salt marsh harvest mouse biology will conduct a preconstruction survey prior to vegetation removal and will monitor the vegetation removal process. Vegetation will be removed using hand-held equipment (e.g., weed-whackers). This will allow any small mammals, including salt marsh harvest mice, to escape the project area under the cover of vegetation, and will encourage movement of such small mammals toward available vegetated habitat outside the project area. All herbaceous vegetation that could potentially conceal a salt marsh harvest mouse within the work area will be removed. All vegetation that is removed will be hauled off site and will not be left on the site, as it could provide potential cover for small mammal species. The area of vegetation removal will extend approximately 2-3 feet beyond (downstream from) the boundary of the work area, to create an open area that discourages salt marsh harvest mice from approaching the exclusion barrier described in the Mitigation Measure BIO-7.

Mitigation Measure BIO-7: Install Exclusion Barrier and Conduct Salt Marsh Harvest Mouse Preconstruction Survey

The District will install a barrier at the downstream-most limits of the work area to exclude salt marsh harvest mice from the work area. The barrier will be installed after vegetation clearing and prior to the start of earth movement. Barriers will be installed, perpendicular to the creek channel under the guidance of a qualified biologist. The barrier will consist of a 3-foot-tall fence of tight cloth, smooth plastic, or sheet-metal (or similar material approved by USFWS) toed into the soil at least 3 inches deep and supported with stakes placed on the inside of the barrier.

A qualified biologist will conduct a preconstruction survey of the area from which vegetation was removed prior to construction access. The biologist will monitor installation of the barrier.

If a salt marsh harvest mouse, or an animal that could be a harvest mouse (e.g., a similar species of mouse), is observed within the exclusion barrier during project activities, all work that could result in the injury or death of the individual will stop immediately and the qualified biologist will be notified immediately. The animal will be allowed to leave the area on its own and will not be handled.

Mitigation Measure BIO-8: Salt Marsh Harvest Mouse Habitat Monitoring Plan

To ensure that habitat created at the wetland bench on the south bank of Reach 1 will be suitable for the salt marsh harvest mouse, the District will hire a restoration ecologist and qualified salt marsh harvest mouse biologist to develop a Salt Marsh Harvest Mouse Habitat Monitoring Plan, which will contain the following components:

- summary of habitat impacts and proposed acres of habitat creation
- location of habitat creation site(s) and description of existing site conditions
- habitat design, including the following:
  - existing and proposed site hydrology
  - grading plan if appropriate, including bank stabilization or other site stabilization features
  - soil amendments and other site preparation elements as appropriate
  - planting plan
  - irrigation and maintenance plan
  - remedial measures/adaptive management, etc.
- monitoring plan (including ~~final and~~ performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). At a minimum, success criteria will include quantifiable measurements of wetland vegetation type (e.g., dominance by native hydrophytes).

The District will implement the Salt Marsh Harvest Mouse Habitat Monitoring Plan. This mitigation measure will ensure the creation of tidal marsh and non-tidal wetland

habitat suitable for the salt marsh harvest mouse, which will compensate for any permanent loss of habitat due to project implementation.

Significance After Mitigation

Implementation of **Mitigation Measures BIO-5, BIO-6, and BIO-7** would reduce impacts associated with loss of salt marsh harvest mouse individuals due to project-related construction activities through worker training, hand removal of vegetation, and exclusion of known individuals, and implementation of **Mitigation Measure BIO-8** would ensure that the project wetland bench results in suitable habitat for the salt marsh harvest mouse. Due to the low quality of salt marsh harvest mouse habitat within the project area, the low potential for (and magnitude of) project impacts to this species, and the predominantly temporary nature of the impacts, the creation of 0.29 acre of additional habitat would adequately compensate for impacts to this species and its habitats. Therefore, with these measures implemented, project-related impacts would be less than significant with mitigation.

Impact BIO-1h: Impacts on special-status bats (Less than Significant)

Only two special-status bats have potential to occur in the project area: the pallid bat and western red bat, both of which are California species of special concern. Pallid bats are not expected to roost in the project area, as this species has been extirpated from urban areas close to the Bay. Pallid bats may occasionally occur in the project area as nonbreeding migrants, transients, or foragers, but they are expected to occur in low numbers, if at all. Western red bats do not breed in the project area, so no maternity roosts would be affected. This species roosts solitarily in foliage. Due to the very limited project impacts on trees, it is unlikely that any red bat roosting sites would be affected; in the event that such an impact does occur, any roosting red bat would be able to flee before the tree is removed. Although individuals may be subjected to increased risk of predation if flushed during the daytime, few, if any, western red bats are expected to be present in areas where they would be disturbed by project activities.

Project activities may result in a temporary impact on foraging individuals through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during project activities). However, due to the abundance of suitable foraging habitat in the project area and the mobility of these bats, as well as the relatively low proportion of potential foraging habitat that would be disturbed due to the project, habitat impacts on bats would not be substantial. In addition, implementation of District BMP BI-11 would minimize the attraction of predators and bats to construction work areas. Impacts would be less than significant.

Impact BIO-1i: Impacts on Congdon's tarplant (Less than Significant with Mitigation)

Ruderal grasslands in the project area provide marginally suitable habitat for Congdon's tarplant, a CRPR 1B.1 species, and two populations of Congdon's tarplant have been documented by the CNDDB in the project vicinity (CNDDB 2016). If Congdon's tarplant is present within the project work area, construction activities, such as grading, bench excavation, and floodwall construction could affect the plants through direct or indirect disturbance of populations and disturbance, modification, or destruction of suitable habitat. Damage to this species may occur because of crushing by equipment; trampling; and compaction of soil, which could result in damage to plant roots. These activities could result

in death, altered growth, or reduced seed set through physically breaking, crushing, wilting, or uprooting plants.

The nearby occurrences of the species in disturbed grassland habitat indicates that there is potential for the species to occur in the ruderal grassland habitat in the project area. The habitat quality of the ruderal grassland is relatively low due to anthropogenic disturbance, although such types of habitats, especially when seasonally mesic, are known to support this species. Loss of individuals of this species from the project area would be significant because this species' populations are limited locally as well as regionally.

Implementation of District BMPs BI-7, BI-8, and WQ-4 would minimize impacts on Congdon's tarplant from survey work, erosion and non-native competition, and staging and stockpiling. Nevertheless, the proposed project may result in residual impacts on this species because complete avoidance of individuals may not be possible. Since publication of the DEIR, a focused survey for Congdon's tarplant was completed throughout the project site on August 7, 2017, during the species' published blooming period. No individuals of Congdon's tarplant were detected during the survey. Typically, focused plant survey results are valid for three years, meaning that once Congdon's tarplant has been determined to be absent from a project site, it is unlikely for the plant to be established within the next three years. It is likely the proposed project would not result in impacts on Congdon's tarplant if construction would occur before August 2020. However, since construction delays can occur, in the event that construction occurs after August 2020, there is a possibility that Congdon's tarplant could establish within the project site ~~As a result~~, and damage to the species from construction would be ~~this impact is~~ considered significant. If construction commences after August 2020, Mitigation Measures BIO-9 and BIO-10 would be implemented to address this significant impact.

Mitigation Measures

Mitigation Measure BIO-9: Conduct Focused Preconstruction Survey for Congdon's Tarplant

~~Prior to construction~~In the event that project construction starts after August 2020, ~~the District will hire~~ a qualified biologist ~~who~~ will conduct a focused survey for Congdon's tarplant in the ruderal grassland habitat within the project area. The survey will be conducted during the species' blooming period (May-November). If a population of Congdon's tarplant is identified in the project area, the District will implement Mitigation Measure BIO-10 (Compensate for Congdon's Tarplant Impacts).

Mitigation Measure BIO-10: Compensate for Congdon's Tarplant Impacts

If a population of Congdon's tarplant is identified in the project work area during the preconstruction survey (per Mitigation Measure BIO-9), a qualified biologist ~~hired by the District~~ will conduct an impact assessment to determine if project impacts would be expected to cause the loss of the occurrence. The entire occurrence, will be mapped and individuals counted.

Mitigation will be achieved either by preserving an existing, similarly sized occurrence of Congdon's tarplant of similar quality under a conservation easement, or through collection of seed and establishment of a new population on suitable

habitat. Congdon's tarplant is a species that tolerates both non-native plant associates and disturbance, and has shown success in transplant activities.

If a new population is to be established, seed from the population to be affected will be collected, cleaned of extraneous plant material, and stratified by storage over the winter in cool temperatures. A qualified plant ecologist will identify a suitable relocation site that is mesic and underlain by alkaline soils, preferably as similar as possible to the soils where the seed was collected. The seed will be applied to the new habitat. A Congdon's Tarplant Management and Monitoring Plan will be prepared and approved by the District. The plan will provide monitoring and include the following information:

- Clear statement of population and management goals for the newly established population and surrounding habitat;
- Population success criteria for interim monitoring years;
- Final success criteria

Significance After Mitigation

Implementation of **Mitigation Measures BIO-9 and BIO-10** would identify and compensate for the loss of any occurrences of Congdon's tarplant present in the project area and would thereby reduce the significant impact on the species to less than significant.

Impact BIO-1j: Introduction of invasive species (Less than Significant with Mitigation)

Invasive plants often have a competitive advantage because they are no longer controlled by their natural predators or other natural control mechanisms, allowing them to spread quickly out of control. In California, approximately 3 percent of plant species growing in the wild are considered invasive, but these species inhabit a much greater proportion of the landscape (Cal-IPC 2007). The scientific community has come to view invasive species as posing serious threats to biological diversity, second only to the threats resulting from habitat loss and fragmentation (Bossard et al. 2000). Invasive species present complex management issues; even when a species is no longer being actively introduced, it continues to spread and invade new areas. Invasive species can have an adverse effect on native species, including special-status plants and animals, and habitats in several ways, including by altering nutrient cycles, fire frequency and/or intensity, and hydrologic cycles; by creating changes in sediment deposition and erosion; by dominating habitats and displacing native species; by hybridizing with native species; and by promoting non-native animal species (Bossard et al. 2000).

The project area contains several invasive plant species, including highly invasive species such as common fennel, English ivy, Himalayan blackberry, and broadleaved pepperweed. Project construction activities, such as grading and soil disturbance, may create conditions suitable for additional spreading of invasive plant species, and weed propagules may be spread on ground-disturbing equipment to the project area or from the project area to other sites. Furthermore, bare upland soils left after construction of temporary access roads and relocation of the levee may encourage growth of weedy species, and mulching or erosion control mixes may include and thus introduce invasive, non-native species.

In addition to the introduction of invasive plant species, without proper procedures, mitten crabs (*Eriocheir sinensis*) and other aquatic invasive invertebrates, such as the New Zealand

mud snail (*Potamopyrgus antipodarum*), Quagga mussel (*Dreissena bugensis*), or zebra mussel (*Dreissena polymorpha*), could inadvertently be introduced into or spread within the project area. The spread of these and other non-native invasive species into areas formerly unoccupied could result in a significant impact on special-status species, native habitats, and communities.

Implementation of District BMPs BI-1, BI-8, HM-7, and WQ-9 would reduce the potential for infestation of natural areas by invasive species by protecting local ecotypes and avoiding the spread of non-native species. However, District BMPs may not be sufficient to avoid new invasions or the spread of invasive species. For example, BMP HM-7 restricts the cleaning of equipment to appropriate locations, but does not require equipment to be cleaned prior to being used in the project area or before being used on a different project site after use in the project area. Because of the potential for degradation of a wide variety of natural communities and effects on native populations and special-status species that could occur because of such invasions, this impact would be significant. Mitigation Measures BIO-11 and BIO-12 would be implemented to address this significant impact.

Mitigation Measures

Mitigation Measure BIO-11: Clean Construction Equipment

The District will require that equipment used during project construction be cleaned of any visible sediment or vegetation clumps before being used in the project area, or before being used in a different watershed after use in the project area, to avoid spreading pathogens or exotic/invasive species.

Mitigation Measure BIO-12: Dispose of Invasive Plants

The District will require that any invasive plants found within the project area d be removed and disposed of in a sanitary landfill, incinerated off site, or disposed of in a high-temperature composting facility that can compost using methods known to kill weed seeds.

Significance After Mitigation

Implementation of **Mitigation Measures BIO-11 and BIO-12** would minimize the potential for introduction or spread of non-native species and would thereby reduce this impact to less than significant with mitigation.

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Less than Significant)

Willow riparian woodland was mapped within the project area above the OHWM. The majority of willow riparian woodland occurs on a berm that stretches from California Circle to Milmont Drive between the main channel and the secondary channel (Reach 3). District maintenance activities conducted in October 2015 resulted in removal of most herbaceous vegetation from the berm but had no impacts on the riparian trees in the area, resulting in a completely barren understory with scattered, mature willows. Additional areas of willow riparian woodland in the project area include some disjunct patches mapped along the outer edges of the main stream channel where willow and Fremont cottonwood trees are present.

The proposed project would not result in removal or pruning of woody riparian vegetation, including trees, from the willow riparian woodland habitat in the project area. ~~d~~During the use of Staging Area B~~,~~ ~~E~~equipment and materials would be stored on flat portions of the berm where no willows are present.

Sediment removal activities conducted in late 2015 largely involved removal of herbaceous plants on the berm that comprises Staging Area B. Most of these plants consisted primarily of invasive species. Use of Staging Area B during project construction would result in temporary impacts on any herbaceous riparian vegetation that has regrown prior to the start of construction activities. Impacts would occur on up to approximately 1.93 acres of willow riparian woodland due to trampling of vegetation. However, herbaceous vegetation that is disturbed by proposed project activities is expected to begin to regrow within one growing season. Compared to riparian vegetation dominated by trees and shrubs, herbaceous riparian vegetation provides relatively low functions and values for wildlife. The recent disturbance of the herbaceous vegetation on the berm further reduces its quality as habitat for wildlife, and herbaceous vegetation disturbed by staging activities is expected to regenerate quickly. Implementation of District BMPs WQ-1, WQ-4, WQ-5, WQ-9, and BIO-8 would minimize the project's effects on riparian vegetation by limiting disturbance, preventing erosion and sedimentation, and minimizing the introduction or spread of invasive weeds within the understory. As a result, impacts of project activities on riparian vegetation would not have substantial ecological effects and thus would be less than significant.

Impact BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), waters of the U.S., and waters of the state through direct removal, filling, hydrological interruption, or other means (Less than Significant with Mitigation)

Construction activities associated with the proposed project would result in both temporary and permanent disturbance of wetland and aquatic communities representing jurisdictional wetlands and other waters of the U.S./state.

Proposed in-channel activities, including levee modification, sediment removal, and creation of an excavated bench in Reach 1, as well as the use of the off-channel area located between North McCarthy Boulevard and I-880 as Staging Area A, would result in the direct modification of wetland and aquatic communities in the project area, as well as indirect impacts on downstream wetlands and aquatic communities (also called "other waters"). Wetland vegetation may be lost due to mechanical or physical clearing (including at access and staging areas and at sediment removal locations), and damage to vegetation may occur due to crushing by equipment; trampling by personnel; and compaction of soil, which could result in damage to plant roots. Removal of wetland vegetation may result in the temporary reduction of clonal propagules for colonization of downstream areas. In addition, materials may fall into the channel (in Reach 4) during construction of the new headwalls at the San Andreas Drive bridge. Subsequent installation of erosion control materials, hydroseeding, and planting may also result in the deposit of materials into the channels.

Levee modifications in Reaches 1 and 4~~,~~; bench excavation in Reach 1~~,~~; installation of sheetpile floodwalls in Reaches 1, 2, 3, and 4~~,~~; sediment removal in Reaches 2, 3, and 4; and construction of the new headwalls for the San Andreas Drive bridge in Reach 4 would require temporary dewatering of the affected channel. These activities may also necessitate the

operation of heavy equipment within the streambed (after dewatering). Movement of heavy equipment may compact the substrate and damage vegetation, and the lack of water may result in changes to the extent of wetland communities present in the work site. Furthermore, because barren slopes are more susceptible to erosion from rainfall events, the loss of non-instream vegetation along stream banks following project activities may result in an increase in erosion and sedimentation. This may lead to the filling in of pools and damage to wetland vegetation. The proposed project's potential to cause soil erosion and loss of topsoil is evaluated in Impact GEO-3 in Section 3.6, *Geology, Soils, and Seismicity*.

Floodwall construction may also result in impacts on vegetation communities in the Lower Penitencia Creek channel and downstream aquatic habitats. The excavation and replacement of soil along the outboard sides of levees for floodwall installation and the loosening of compacted soils may result in an increase in erosion and sedimentation due to a loss of vegetation.

As described above, construction activities could result in hydrologic interruption (e.g., dewatering or diversion), vegetation removal, degradation of water quality (e.g., increased sedimentation and turbidity), and other temporary direct impacts on wetlands and other waters. In addition, direct impacts would occur due to the conversion of wetlands and other waters to upland habitat. The project would impact wetlands and other waters. **Table 3.4-5** summarizes the project's estimated temporary and permanent impacts on wetlands, waters of the U.S., and waters of the state. The project would permanently convert 0.05 acre of non-tidal seasonal saline wetland and 0.01 acre of coastal brackish marsh to ruderal grassland due to the relocation of the levee in Reach 1, and would convert 0.08 acre of non-tidal saline wetland to coastal brackish marsh, a permanent change in wetland type but not the overall amount of wetlands on the site. As such, the project's net permanent impacts on wetlands of the U.S. and State would be 0.06 acre.

In addition, about ~~9.7 ac~~8.84 acre of tidal aquatic and 0.87 acre of coastal brackish marsh habitat would be temporarily disturbed during construction (primarily due to dewatering), as well as 0.03 acre of non-tidal seasonal saline wetland, resulting in a short-term loss of functions and values. The project's estimated temporary impacts on wetlands of the U.S. and state would be 0.90 acre. As shown in Table 3.4-5, the project would result in 8.84 acres of temporary impacts on waters of the U.S./waters of the state. However, these temporarily disturbed areas would remain wetlands and other waters habitat after the project is completed so that there would be no long-term loss of jurisdictional area, or functions and values.

Table 3.4-5. Project Impacts on Wetlands and Other Waters of the U.S. and State

Project Reach	Impacts on Wetlands and Other Waters of the U.S. and State (acres)			
	Temporary Impacts to Wetlands	Permanent Impacts to Wetlands	Temporary Impacts to Other Waters of U.S. and State	Permanent Impacts to Other Waters of U.S. and State
Reach 1	0.61	0.14	0.72	0.00
Reach 2	0.03	0.00	0.68	0.00
Reach 3	0.03	0.00	6.57	0.00
Reach 4	0.23	0.00	0.87	0.00
TOTAL	**0.90**	**0.14**	**8.84**	**0.00**

***Note**: * The California Water Code Section 13050(e) defines "waters of the state" as any surface water or groundwater within boundaries of the state.*

~~However, a~~After construction is complete, the newly created bench is expected to create approximately 0.~~0.3~~29 acre of tidal marsh habitat. The new tidal and non-tidal wetlands habitat would be below the OHWM and would be considered water of the U.S. and State.

During project construction, implementation of District BMPs BI-3, BI-8, BI-10, BI-11, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize impacts on wetlands functions during project construction by minimizing the potential for water quality degradation. Implementation of District BMPs HM-7, and HM-10 would prevent vehicle cleaning from occurring in the creek channel and minimize the potential for impacts to water due to release of pollutants into the creek water. BMPs WQ-1 through WQ-9 will be implemented to minimize the amount of in-channel construction activity, use appropriate equipment in the creek bed, ensure proper maintenance and operation of pumps, stage and stockpile materials where they will not contribute pollutants to the creek stabilize vehicles entrances to prevent eroded soil from washing into the creek, isolate concrete from creek water until it is fully cured, isolate work areas from tidal flows, and reseed disturbed areas to prevent soil erosion, maintain clean conditions at the construction area, and prevent discharge of oily, greasy, or turbid water to the creek.. These measures will minimize the release or pollutants to creek waters; thereby protecting water quality of the aquatic habitat. implementation of District BMPs BI-2 and BI-3 would minimize changes in water quality by avoiding routine use of vehicles and equipment in Lower Penitencia Creek between January 1 and June 15, when anadromous fish are most likely to be present; reduce erosion; control sediment; and prevent spills. Measure BI-8 requires use of local ecotypes in revegetation to provide erosion protection and promote habitat restoration and enhancement. Substantial water quality impacts would be avoided and minimized through implementation of these BMPs by minimizing disturbance, controlling erosion and sedimentation, and preventing the input of hazardous chemicals, such as equipment fuel, from entering waterways. Any remaining water quality effects and habitat values in unvegetated aquatic habitats subject to temporary disturbance are expected to quickly return to preconstruction conditions following the completion of project activities. Even in vegetated wetlands, recolonization may occur relatively quickly. For example, according to the *Instream Wetland Vegetation Regrowth Study* (Rankin and Hillman 2000), almost all vegetated wetland areas would restore themselves within 1-2 years following disturbance. Furthermore, implementation of District BMPs would minimize changes in water quality by reducing erosion, controlling sediment, and preventing spills.

Nevertheless, the proposed project would result in temporary loss of habitat functions and values, particularly those provided by vegetated wetlands, such as sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, and aquatic and terrestrial wildlife species habitat. Thus, the project would result in temporary loss of ecologically valuable wetlands~~ and other waters~~.

Impacts to other waters are considered less than significant because there will be no permanent loss of this habitat; the habitat will re-establish similar functions and values to existing immediately after construction; BMPs will prevent deleterious water quality impacts.

The 0.29 acre of habitat to be created by the wetland bench would offset the proposed project's permanent (0.06 acre) and temporary (0.90 acre) removal of wetland habitat as well as the conversion of 0.08 acre due to conversion of non-tidal seasonal saline wetland to coastal brackish marsh. Among the 0.29-acre wetland habitat to be established, 0.12 acre would offset the net permanent removal of 0.06 acre of wetland habitat at a 2:1 ratio (created wetland: permanently removed wetland), which would be appropriate for addressing permanent impacts. In addition, the created wetland would provide higher quality habitat than the permanently removed wetlands. Regarding the project's temporary impact on wetlands, temporarily impacted wetland habitat is expected to return to pre-construction conditions within one to two years; nevertheless, the remaining 0.17 acre of the overall 0.29-acre wetland bench would offset the 0.98-acre temporary impact at a roughly 2:1 ratio (created/restored wetland: temporarily impacted wetland). However, ~~permanent and temporary impacts on wetlands would be considered significant unless mitigated. Although the District proposes to create marsh habitat on the new bench in Reach 1, the project is in the preliminary design phase and measures have not yet been developed to ensure~~ if the wetland bench does not successfully establish~~ment of~~ a vegetated wetland ~~on the created bench~~ as expected~~. Therefore, this~~ the impact on wetlands and other waters of the U.S. and state is considered significant. Mitigation Measure BIO-13 would be implemented to address this impact.

Mitigation Measures

Mitigation Measure BIO-13: Wetlands ~~and Jurisdictional Waters~~ Mitigation and Monitoring Plan ~~and Contingency Actions~~

As described in Section 2.6.1, the proposed project includes the creation of a wetland bench on the south bank of Reach 1. The bench would be planted with native species to vegetated wetland habitat.

To ensure that vegetated wetlands successfully establish on the bench, the District will develop a Wetlands Mitigation and Monitoring Plan, which will contain the following components:

- Summary of habitat impacts and acreage of wetland creation
- Location of wetland creation site(s) and description of existing site conditions
- Mitigation design, including the following:
  - Existing and proposed site hydrology

  - Grading plan if appropriate, including bank stabilization or other site stabilization features
  - Soil amendments and other site preparation elements as appropriate
  - Planting plan to establish the target coastal brackish marsh habitat. Species composition will be determined by hydrology and soils but is anticipated to be similar to adjacent wetlands. Dominant species may include: alkali bulrush, hardstem bulrush, California bulrush, and broadfruit bur reed. Temporarily impacted non-tidal seasonal saline wetlands will be replanted. Dominant species may include: creeping wild-rye, alkali heath, California gray rush, and pickleweed.
  - maintenance plan
  - Remedial measures/adaptive management, etc.
- Monitoring plan (including ~~final and~~ performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.).

The District will implement the Wetlands Mitigation and ~~Jurisdictional Waters~~ Monitoring Plan.

Significance After Mitigation

Implementation of **Mitigation Measure BIO-13** would ensure that the created bench supports vegetated wetlands following the completion of the project. Due to the low quality of the wetlands that would be impacted, the predominately temporary nature of the impacts, and the relative speed at which temporarily impacted wetlands are expected to regenerate, the creation of 0.29 acre of additional wetland habitat on the bench in Reach 1 would adequately compensate for impacts to this habitat. Therefore, project-related impacts would be less than significant with mitigation.

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

For many species, the landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors such as stream courses are segments of suitable habitat that provide connectivity between larger areas of suitable habitat, allowing species to disperse through otherwise unsuitable areas. On a broader level, corridors also function as avenues along which wide-ranging animals can travel, plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters, and threatened species can be replenished from other areas.

Lower Penitencia Creek is expected to function as a wildlife movement corridor, connecting primarily urban-associated habitats with San Francisco Bay–associated habitats to the north. To fully analyze the impacts of the proposed project on wildlife movement, it is important to examine the impacts on both movement along the corridor (i.e., parallel to the Lower Penitencia Creek channel) and movement across the creek channel.

The quality of habitat provided in channel easements and wetland habitats along Lower Penitencia Creek is generally relatively low. Habitats within the existing corridor have typically been subjected to moderate to high levels of disturbance due to the hardening of streambanks, routine maintenance activities, and other factors associated with the urban surroundings. As a result, where vegetation is present, it is mostly dominated by non-native species. In addition, within Reaches 3 and 4, the channel is surrounded on both sides by heavy urban development. Similarly, within Reach 2, the channel is surrounded by I-880 to the west, Dixon Landing Road to the north, California Circle to the east, and a pump station to the south. Thus, in the areas upstream of I-880, the Lower Penitencia Creek channel likely does not function as a high-quality movement corridor for most species, particularly special-status species. Nevertheless, the ruderal habitats present may represent the most feasible means of dispersal through the surrounding urban matrix for common urban-dwelling species in the project area, such as raccoons and California ground squirrels.

New floodwalls are proposed in Reaches 2, 3, and 4 (i.e., upstream of I-880). Installation of new floodwalls has the potential to impede wildlife movement across the channel. However, as described above, Reaches 2, 3, and 4 are bordered on both sides by urban development. Thus, the frequency of wildlife movement across the channel in these reaches is expected to be low as habitat values on both sides of the channel are similarly low. Furthermore, in this area wildlife use is already limited to common, urban-adapted species, which would continue to be able to access the channel by moving upstream or downstream to locations without floodwalls. Many urban-adapted species (i.e., mice, squirrels, raccoons, and western fence lizards) would also be able to climb the floodwalls to access the channel.

For animals that can swim the channel and thus cross perpendicular to the channel in its current condition, floodwalls could obstruct wildlife dispersing perpendicular to the channels, which would need to travel around the floodwalls. However, some of these animals (such as raccoons) can likely scale the new floodwalls. In addition, many terrestrial species, such as western fence lizards, gray foxes (*Urocyon cinereoargenteus*), and black-tailed jackrabbits (*Lepus californicus*), are unlikely to swim the channel even in its existing condition. Rather, these species are expected to cross the channel at existing crossings, such as the Milmont Drive or California Circle bridges. Not only would these crossings remain in place, they are located where there would be gaps in the proposed floodwalls, so that animals moving over these bridges would be able to travel from one side of the channel to the other as they currently do. In addition, in the area downstream of I-880, no floodwalls are proposed, thus allowing terrestrial animals that currently cross the channel to be able to continue crossing in this location. Therefore, impacts on wildlife movement are considered less than significant.

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant)

The City of Milpitas general plan outlines goals and objectives in preserving and protecting biological resources, including trees that are protected under the City of Milpitas tree ordinance within the District's right-of-way (ROW). The proposed project would maintain the existing open space character of the Lower Penitencia Creek channel and restore tidal wetlands habitat near the confluence with Coyote Creek, thereby furthering the goals of Policy 4.b-G-1c. In keeping with city Policy 4.d-P-5, the project would retain the existing form of Lower Penitencia Creek channel, avoid excessive grading and disturbance of vegetation and soils, and maintain natural drainage patterns. The project would also conform to Policy

4.d-P-4 by preserving to the extent possible the existing riparian corridors and wetlands of the project area. The project would conform with local policies to protect biological resources, which would be a less than significant impact.

About 36 trees within the project area are of sufficient diameter to be protected by the City ordinance. However, no trees in the project area have been designated as heritage trees by the City of Milpitas (D. Gordillo, pers. comm.). Trees present include native species such as the red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), Fremont cottonwood (*Populus fremontii*), and ash (*Fraxinus* sp.), as well as nonnatives such as the blackwood acacia (*Acacia melanoxylon*), London plane (*Platanus hybrida*), and eucalyptus (*Eucalyptus* spp.). Trees are located on the inboard and outboard slopes of existing levees, on a berm that stretches from California Circle to Milmont Drive between the main channel and the secondary channel (Reach 3), and in Staging Area A. In total, ~~about 22~~ an estimated 33 live trees with dbh of 6 inches or more would be removed during project construction. Many of the City-protected trees would be protected in place. The largest concentration of trees is located on the Reach 3 central berm, and those trees would be preserved. Avoiding all trees on the existing levee slopes would be infeasible due to the excavation and earthwork required for levee relocation in Reach 1 and levee raising in Reach 4. In addition, construction activities could damage roots or drip lines of trees adjacent to the construction area. Implementation of District BMP WQ-4 would minimize impacts on trees by siting staging and stockpiling areas in disturbed areas away from vegetation and trees. The District would comply with the City Tree Protection Ordinance, including obtaining a permit from the City to remove protected trees, and planting replacement trees as required by the City permit. Because the District would comply with applicable city tree protection and the project would conform to city policies to protect biological resources, requirements, impacts related to conflicts with local policies or ordinances protecting biological resources would be less than significant.

Impact BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (No Impact)

The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Although the Santa Clara Valley Habitat Plan (VHP) pertains to much of Santa Clara County, the project site is not located within the boundaries of the VHP. There would be no impact.

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3.5 Cultural Resources

3.5.1 Overview

This section describes impacts of the proposed project related to cultural and paleontological resources. Cultural resources include prehistoric archaeological sites; historic-era archaeological sites; tribal cultural resources (TCRs); and historic buildings, structures, landscapes, districts, and linear features. Prehistoric archaeological sites are places where Native Americans lived or carried out activities during the prehistoric period, which is generally prior to the late 1700s in the San Francisco Bay region. Historic-era archaeological sites reflect the activities of people after initial exploration and settlement in the region by Europeans since the late 1700s; however, Native American sites can also reflect the historic era. Prehistoric and historic-era archaeological sites may contain artifacts, cultural features, subsistence remains, and human burials.

Paleontological resources are the fossil remains of prehistoric flora and fauna, or traces of evidence of the existence of prehistoric flora and fauna. This chapter addresses the occurrence of paleontological resources within the project area and the impact that construction activities and operation of the proposed project would have on scientifically important fossil remains, as identified in the State CEQA Guidelines. The analysis presented in this section conforms to the Society of Vertebrate Paleontology analysis criteria (Society of Vertebrate Paleontology 2010).

This section describes the regulatory setting associated with cultural and paleontological resources, the affected environment for these resources, project impacts on cultural and paleontological resources, and relevant BMPs that would reduce these impacts.

The following key data sources support this section:

- Records search from the Northwest Information Center of the California Historical Resources Information System at Sonoma State University; and
- Files search from the Native American Heritage Commission (NAHC).

3.5.2 Regulatory Setting

Federal Laws, Regulations, and Policies

USACE permits under Section 404 of the Clean Water Act would be required for construction of the proposed project. As a result, the project constitutes a federal undertaking as defined by Title 54 USC Section 300101 of the National Historic Preservation Act (NHPA), which mandates compliance with 54 USC Section 306108 (commonly known as Section 106 of the NHPA) and its implementing regulations (36 CFR Section 800, as amended in 2001). To comply with Section 106, the project proponent must "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in "the National Register of Historic Places (NRHP). Resources included in or eligible for inclusion in the NRHP are referred to as historic properties.

The implementing regulations of the NHPA require that cultural resources that would be affected by an undertaking (such as the proposed project) be evaluated for NRHP eligibility if they cannot be avoided. To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. Resources must also be at least 50 years old, except in rare cases. To meet eligibility criteria of the NRHP, a resource must:

(A) Be associated with events that have made a significant contribution to the broad patterns of our history; or

(B) Be associated with the lives of persons significant in our past; or

(C) Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) Have yielded, or be likely to yield, information important in prehistory or history.

In addition, to be considered significant and historic, a resource must also exhibit the quality of significance in American history, architecture, archaeology, engineering, or culture and must possess integrity of location, design, setting, materials, workmanship, feeling, and association (36 CFR Section 60.4). For archaeological sites evaluated under Criterion D, integrity requires that the site remain sufficiently intact to convey the expected information to address specific important research questions.

Other "criteria considerations" need to be applied to religious properties, properties that are less than 50 years old, a resource no longer situated in its original location, a birthplace or grave of a historical figure, a cemetery, a reconstructed building, and commemorative properties. These types of properties are typically not eligible for NRHP inclusion unless the criteria for evaluation and criteria considerations are met.

Traditional cultural properties (TCPs) are locations of cultural value that are historic properties. A place of cultural value is eligible as a TCP "because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1990, rev. 1998). A TCP must be a tangible property, meaning that it must be a place with a referenced location, and it must have been continually a part of the community's cultural practices and beliefs for the past 50 years or more.

State Laws, Regulations, and Policies

CEQA and State CEQA Guidelines

Section 15064.5 of the State CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historical resource or to its immediate surroundings, such that the significance of the historical resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in

the significance of a historical resource before they approve such projects. Historical resources are those that are:

- listed in, or determined to be eligible for listing in, the CRHR (PRC Section 5024.1[k]);
- included in a local register of historic resources (PRC Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of PRC Section 5024.1(g); or
- determined by a lead agency to be historically significant.

State CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and PRC Section 5097.95 for addressing the existence of, or probable likelihood of, Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

State CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects on historical resources through the application of mitigation measures, which must be legally binding and fully enforceable.

Section 21083.2 of CEQA requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined in CEQA as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is demonstrable public interest in that information;
- Has a special or particular quality, such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Although not specifically inclusive of paleontological resources, these criteria may also help to define a unique paleontological resource or site.

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided in CEQA Section 21083.2.

Assembly Bill (AB) 52, which was approved in September 2014 and went into effect on July 1, 2015, requires that state lead agencies consult with any California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe and if the agency intends to release a negative declaration, mitigated negative declaration, or environmental impact report for a project. The bill, chaptered as PRC Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. This latter language was added to the State CEQA Guidelines Appendix G

environmental checklist as of July 1, 2016, and was approved by the California Office of Administrative Law in September 2016.

As defined in PRC Section 21074(a), TCRs are:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. Included or determined to be eligible for inclusion in the California Register of Historical Resources (CRHR); or

b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined in Section 21074(b) and (c) as follows:

(b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe under newly chaptered Section 21080.3.2 or Section 21084.3. The latter statute identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

The lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with the State CEQA Guidelines and other applicable statutes. Management of paleontological and historical resources is also addressed in PRC Section 5097.5. This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute applies to any construction-related or other project impacts that would occur on state-owned or state-managed lands.

California Register of Historical Resources

PRC Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed as or determined to be eligible for listing in the NRHP, including properties evaluated under Section 106 of the NHPA. The criteria for listing are similar to those of the NRHP and include resources that:

(1) Are associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) Are associated with the lives of persons important in our past;

(3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

(4) Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

3.5.3 Environmental Setting

Prehistory

The prehistory of the project area reflects information known about the indigenous population from the time the region was first populated with humans until the arrival of the first Europeans who visited and recorded their journeys through the written record. The prehistoric record is derived from more than a century of archaeological research; however, while much has been gleaned from these studies, large gaps in the data record remain. The following prehistoric culture sequence, derived from Milliken et al. (2010:114-118), briefly outlines the prehistory of the San Francisco Bay region.

The *Paleoindian Period* (11,500–8000 B.C.) was characterized by big-game hunters occupying broad geographic areas. Although it is widely believed that the San Francisco Bay was likely inhabited by at least 10,000 B.C., evidence of this occupation has not yet been discovered. Geological forces, including erosion, siltation, and sea level rise, have all likely contributed to the lack of evidence of ancient sites in the region.

The *Early Holocene Period* (or *Lower Archaic Period*; 8000–3500 B.C.) is considered a time when populations continued to be very mobile, as they practiced a foraging subsistence pattern around the region. Artifacts that characterize this period include the milling slab and handstone[1] to process seeds, as well as large wide-stemmed and leaf-shaped projectile points.

The *Early Period (*or *Middle Archaic Period*; 3500–500 B.C.) is marked by the appearance of cut shell beads in the archaeological record, as well as the presence of the mortar and pestle for processing acorns. House floors with postholes indicate substantial living structures, which suggests a move toward establishing a more sedentary lifestyle.

The *Middle Period*, which includes the *Lower Middle Period* (or *Initial Upper Archaic Period*; 500 B.C. to A.D. 430), and *Upper Middle Period* (or *Late Upper Archaic Period*; A.D. 430–1050), appears to be a time when geographic mobility may have continued, although groups began

[1] Handstones, also referred to as manos, are hand-held stone tools used to grind foodstuffs, primarily seeds. These tools were often ground into a loaf shape to fit comfortably in the hand, although unshaped stones could also be used as handstones.

to establish longer term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the *Upper Middle Period*, mobility was being replaced by the development of numerous small villages. Around A.D. 430 a "dramatic cultural disruption" occurred, as evidenced by the sudden collapse of the *Olivella* saucer bead trade network.

The *Initial Late Period* (or *Lower Emergent Period*; A.D. 1050–1550) reflects a social complexity that had developed toward lifeways of large central villages with resident political leaders and specialized activity sites. Artifacts associated with this period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

The *Terminal Late Period (*or *Upper Emergent Period;* A.D. 1550–circa 1750) generally represents the indigenous cultures that were encountered by the Spanish explorers when they first arrived in San Francisco Bay. This social complexity continued to develop from the previous period, as trade relations appear to have shifted and regional sub-cultures emerged.

Ethnography

The population indigenous to the project area spoke a language referred to as Costanoan, a derivative from a Spanish term for "coast people." Costanoan, which consisted of six known languages and various dialects within those languages, was spoken over a broad territory that included all of the San Francisco Peninsula, along the east and south of San Francisco Bay, and south to Monterey Bay, Salinas Valley, and the area around Hollister. Those residing in the Santa Clara Valley and the project area spoke the Tamyen (or Tamien) dialect of San Francisco Bay Costonoan (Milliken et al. 2009:33-35).

The Costanoan peoples, also referred to as the Ohlone, Mutsun, or Rumsen, depending on geography, were not a united cultural or political entity (Milliken et al. 2009:2-4). Rather, there were strong differences not only in language, but also in culture, between the San Francisco and Monterey Bay occupants. Political affinity was based on the tribelet, which was comprised of one or more villages within a specific geographic territory (Levy 1978:487).

The tribelet territory was 10–12 miles in diameter and contained a population of 200–400 people living among four or five villages (Milliken et al. 2010:99). Those living in the project area resided in large villages along permanent streams in locations that allowed access to the diverse resources found in the tidal marshlands, the valley floor, and the hills (Milliken et al. 2010:106; Moratto 2004:225).

The Tamyen were among the first of the San Francisco Bay Costanoans to be affected by the arrival of the Spanish. Mission Santa Clara was established in 1777, just 7 months after the founding of Mission Dolores in San Francisco, which was followed by the pueblo at San Jose (El Pueblo San Jose de Guadalupe) shortly thereafter (Kyle et al. 2002:423-424). The mission population of Tamyen grew slowly during the first few years and decades, and was comprised mostly of infants, children, and the very old. The first large wave of adults to be baptized occurred in 1794. According to Milliken et al. (2009:141):

> The huge growth of the Mission Santa Clara adult population in 1794 and 1795 could only have been the result of a social movement. There is no evidence that Spanish soldiers marched the people into the mission, nor that drought drove them in.

Despite the apparent lack of forced baptism, local Tamyen worked at the mission and the San Jose pueblo. Exposure to new diseases and new foods, in addition to restrictions on traditional seasonal movement to gather resources and the diminishment of natural resources by the colonists, all contributed to a steep decline in the native population during the initial decades of colonization and through to the secularization of the missions in the 1820s.

Beginning in the early 1900s, the various Ohlone/Costanoan tribes began to organize and reclaim their ancestral identity by petitioning the U.S. Bureau of Indian Affairs (BIA) for tribal recognition. To date, none of these tribes have been successful at establishing federal recognition. As they continue their efforts with the BIA, individuals and tribal organizations are working to strengthen their culture, both within their communities and by sharing their culture with others. To accomplish this, today's Ohlone/Costanoan tribes have developed numerous programs to revive and enhance traditional language, songs, dances, and basketry, among other aspects of culture (Milliken et al. 2009: 231-236). Although the Mission Santa Clara population had one of the highest numbers of native speakers (i.e., Tamyen), they seem to have disappeared into the general population. According to Milliken et al. (2009:201), "No Mission Santa Clara descendants are known to us to be active in present-day Ohlone/ Costanoan cultural or political activities."

History

The historic era began in the region of Santa Clara County when Spanish explorers arrived in the late 1760s and 1770s. Members of the Portola expedition were the first to arrive in November 1769, reaching San Francisco Bay before returning to Monterey. Pedro Fages followed in 1770 and made a return trip in 1772. The latter visit was chronicled by Father Crespi as the group traveled north along the east side of the Bay and eventually into the Sacramento Valley. Upon their return, they again passed through the Santa Clara Valley, camping one night near present-day Milpitas. A subsequent expedition through the Santa Clara Valley in 1775-1776, led by Juan Bautista de Anza, further helped to establish El Camino Real ("the Royal Road"). This route, which was originally delineated by Fages, was later used by the Spanish to settle the region with pueblos and missions (Kyle et al. 2002:421-422).

Santa Clara County was named after Mission Santa Clara de Assis. The mission was initially founded in 1777 on the banks of the Guadalupe River at a village called *So-co-is-u-ka* by the local Ohlone Indians who were living in the valley. Later that same year, the Pueblo of San Jose de Guadalupe was established along the Guadalupe River, approximately 2.25 miles from the mission, to grow food for the clerics and their neophytes (or converts). The town, now known as San Jose, was the first civilian settlement in Alta California (Kyle et al. 2002:422-424).

The rich lands of the Santa Clara Valley were divided among 50 recipients of land grants by first the Spanish, and then the Mexican, governments. Jose Higuera was the recipient of one of the two earliest land grants, and the last to be made in the valley by a Spanish governor. Granted in 1821, Rancho Los Tularcitos was located just south of the current project area. The rancho extended south along Penitencia Creek from the confluence with Calera Creek

and east into the mountains to contain the headwaters of Calera Creek and the Arroyo de los Coches (Kyle et al. 2002:429).

American explorers, traders, and settlers began filtering into California and the Santa Clara Valley during the Mexican Period (1821-1848); some of them became Mexican citizens and received vast grants of land. It was not until the beginning of the American period, after the end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848, that non-Hispanic settlers began migrating *en masse*. This surge in migration was bolstered by the discovery of gold in the Sierra Nevada foothills and the advent of the Gold Rush in 1849.

The Santa Clara Valley became a prominent agricultural area, aided by the completion of the Western Pacific Railroad in 1867, which helped to transport goods and people between San Jose and Oakland, and beyond. The cultivation of row crops such as spinach, peas, asparagus, beans, and strawberries supported the area throughout the late 1800s and into the mid-1900s (Milpitas History 2015). The region became more urban after World War II, and even more so after the Korean War. A review of historic maps and aerial photographs (described below) indicates that the area immediately surrounding the project site did not fully develop until the late 1980s, when the Santa Clara Valley truly began its transformation into the "Silicon Valley" we know today.

Cultural Resources Studies

Area of Potential Effects

The area of potential effects (APE) encompasses all of Lower Penitencia Creek, from the outside edges of the existing levees between the confluences with Berryessa Creek and Coyote Creek, including bridges at California Circle, Milmont Drive, and San Andreas Drive. The APE also includes a vacant parcel between North McCarthy Boulevard and the south-bound on-ramp to I-880 for use as a staging area. A paved parking lot north of 380 Fairview Way adjacent to and west of Reach 4 has also been proposed as a staging area. Overall, the APE includes approximately 24 acres, most of which are located within the Lower Penitencia Creek channel. The APE corresponds with project boundary delineated in Figure 2-3.

Literature and Record Search

Cultural resources include prehistoric archaeological sites; historic-era archaeological sites; TCRs/TCPs; historic-era buildings, structures; and prehistoric or historic-era landscapes, districts, and linear features.

A record search was conducted in December 2015 by the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University in Rohnert Park (NWIC File No. 15-0766). The purpose of the record search was to identify the presence of any previously recorded cultural resources within the project's APE and to determine if any portions of the project site had previously been surveyed for cultural resources. The records search encompassed the APE as well as a 0.5-mile study radius around the project area.

The record search indicated that 19 previous cultural resource investigations have been completed entirely or partially within the project area (see **Table 3.5-1**). The earliest of these reports, conducted by Jackson et al. in 1973, included all of lower Penitencia Creek, along with

other drainages within the District. The area immediately adjacent to the project area was subsequently surveyed over the ensuing four decades as the area developed. The very northern and southern ends of the project area have been studied several times. The record search also found that another 21 studies had been conducted within the 0.5-mile study radius, and 39 "other" studies had been conducted that included the project area.

Table 3.5-1. Cultural Studies Previously Conducted Entirely or Partially in the Project Area

NWIC Report No.	Author	Date	Title
4772	Thomas L. Jackson, Miley P. Holman, and Stephen A. Dietz	1973	An Archaeological Reconnaissance of the Santa Clara County Flood Control and Water District East Zone Flood Control Project
6072	Donna M. Garaventa, David Bateman, John M. Findlay, R. M. Harmon, W. McCormack, R. L. Anastasio, and J. C. Bard	1983	Archaeological Survey Report, Coyote Creek Flood Control Project Located Between San Francisco Bay to Montague Expressway, City of San Jose, Santa Clara County
6410	Donna M. Garaventa, James C. Bard, Robert M. Harmon, Amy A. Gowan, and R. L. Anastasio	1984	Archaeological Survey Report, Coyote Creek Flood Control Project Located Between San Francisco Bay to Montague Expressway, City of San Jose, Santa Clara County, California
6822	James C. Bard, Donna M. Garaventa, Robert M. Harmon, Rebecca Loveland Anastasio, Annie Cody, Jeff Parsons, and Melody E. Tannam	1984	An Archaeological Survey of the McCarthy Ranch Located Between Coyote Creek, Highway 17, Dixon Landing Road, and Highway 237, Milpitas, California
7087	Miley Paul Holman	1984	Durham Road, Fremont Boulevard, Mission Boulevard and Dixon Landing Interchanges, Archaeological Reconnaissance
8368	Stephen A. Dietz	1980	Milpitas Golf Course Site, Dixon Landing Road at Highway 17
8977	Robert L. Gross	1986	Archaeological Survey Report, 04-SCL/ALA-880 P.M. 6.7/10.5-0.0/2.3 04570-112820
9133	Stephen A. Dietz	1980	An archaeological reconnaissance of additional portions of the Milpitas Golf Course EIR properties in Milpitas, Santa Clara County, California

NWIC Report No.	Author	Date	Title
17993	Brian Hatoff, Barb Voss, Sharon Waechter, Stephen Wee, and Vance Bente	1995	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project
18289	Basin Research Associates, Inc.	1995	Cultural Resources Assessment, Alviso Master Plan Area, City of San Jose, Santa Clara County, California
23382	Basin Research Associates, Inc.	2000	Cultural Resources Assessment, Historic Properties Affected or Potentially Affected by the South Bay Water Recycling Program Phase 2 Facilities, Modifications to Existing Segments SJ-1, SJ-2, SC-2, SC-5, M-1 and New Segments SJ-3, SJ-4, SJ-5, SJ-6, SJ-7, M-2, M-5, Cities of San Jose and Milpitas, Santa Clara County
24981	Stuart Guedon	2000	Cultural Resources Assessment, Coyote Creek Trail Project, Cities of Milpitas and San Jose, Santa Clara County
25031	Basin Research Associates, Inc	2000	Cultural Resources Assessment, Bay Trail Master Plan Project, City of San Jose, Santa Clara County, California
25043	David Chavez	2001	Historic Property Survey Report, Route 262/Warren Avenue/I-880 Interchange Reconstruction and I-880 Widening Project, 04-SCL-880-KP 13.2 (PM 8.2)/KP 16.9 (PM 10.5), 04-ALA-880-KP R0.0 (PM R0.0)/KP 4.7 (PM 2.9), 04-ALA-262-KP R0.0 (PM R0.0)/KP R0.7 (PM R0.5), EA 233220
26216	Archaeological Resource Management	2002	Cultural Resource Evaluation of the Berryessa Creek Levee Project in the City of Milpitas, County of Santa Clara
34215	Colin I. Busby	2000	Cultural Resources Assessment, Bay Trail Master Plan Project, Cities of Milpitas and San Jose, Santa Clara County, California
37743	Heidi Koenig	2010	Lower Berryessa Creek Project, Milpitas, Santa Clara County, California, Cultural Resources Survey Report
39863	Jennifer Thomas	2011	Cultural Resources Inventory of a Hydrostatic Pressure Test Segment on L-131 between Mileposts 50.57 and 54.91, Alameda and Santa Clara Counties, California

NWIC Report No.	Author	Date	Title
46399	Laura Leach-Palm and Chandra Miller	2015	Historic Property Survey Report for the MTC Interstate 880 Express Lane Phase I Project, Alameda and Santa Clara Counties, California; State Route 84 04-ALA-84 PM R3.0-R6.1, State Route 92 04-ALA-92 PM R2.5-R6.5, Interstate 880, 04-SCL-880 PM 7.5-10.5, 04-ALA-880 PM R0.0-26.4, EA 04-3G920

Despite the large number of cultural resources studies conducted within and immediately adjacent to the project APE, no cultural resources have been previously recorded within the APE. Three resources had been recorded within the 0.5-mile study radius. Two of these resources were railroad lines (Western Pacific and Southern Pacific); the third was an isolated handstone, or mano, found approximately 0.3 mile southeast of the APE.

The Office of Historic Preservation Historic Properties Directory for Milpitas, the California Inventory of Historic Resources, historical maps, and rancho plat maps were also reviewed for the NWIC record search. No cultural resources were identified within the project area from these sources.

Additional research included a search of the Caltrans Bridge Survey (Caltrans 2015) to determine whether any of the bridges within the project APE were eligible for listing in the NRHP. Five bridges cross Lower Penitencia Creek within the APE (**Table 3.5-2**). All of these bridges were evaluated by the Caltrans Bridge Survey as Category 5, not eligible for the NRHP.

Table 3.5-2. Bridges within the APE

Bridge No.	Location/Crossing	Year Built/ Modified	Historical Significance
37C0333	California Circle	1983	Cat. 5 Not eligible for NRHP
37C0379	Milmont Drive	1983	Cat. 5 Not eligible for NRHP
37CO433	San Andreas Drive	1978	Cat. 5 Not eligible for NRHP
37 0582	U.S. 880 PM 10.38	2002	Cat. 5 Not eligible for NRHP
37 0582K	U.S. 880 PM 10.38	2002	Cat. 5 Not eligible for NRHP

Sources: Caltrans 2015; SCVWD 2013.

Aerial photographs from 1948 through 2012 (NETR Online 2015) and U.S. Geological Survey (USGS) topographic maps from 1890 through 1980 (USGS 2015) were also examined. A comparison of aerial photographs from 1948 and 1956 indicated that the Lower Penitencia Creek channel had been modified to its current configuration at the north end of the project area and that the channel had been widened during this time. The 1956 photograph also showed the presence of I-880 and its bridge crossings of Penitencia Creek. The construction

of the San Andreas Drive bridge (no. 37C0333) is noted in the 1987 aerial photograph, and the Milmont Drive bridge appears in the 1993 image.

The USGS topographic maps corroborate the information provided by the aerial photographs, although the dates of the maps are slightly different. For example, I-880 is depicted on the 1953 USGS topographic map. More importantly, early USGS maps show the APE located at the edge of the tidal marsh, an ecotone (transition area) with resources important to indigenous population of the San Francisco Bay region.

Both the aerial photographs and the USGS topographic maps showed that the area immediately surrounding the project site remained undeveloped until the late 1980s. More specifically, a document prepared by the District to define the flow issues of Lower Penitencia Creek noted that the Dixon Landing Business Park was constructed on the west side of the creek in 1983 and the residential tracts east of the channel were developed in 1988. Levees along both banks of the creek were also constructed between California Circle and Berryessa Creek as part of these two developments, along with significant channel improvements, and the Milmont Drive bridge was built in 1989 (SCVWD 2013:5).

The Santa Clara County Historical Society and the Milpitas Historical Society were contacted by email on December 10 and December 30, 2015, respectively. The societies were asked if they had any historical information specific to the project area that would assist in preparation of this EIR. No information has been provided by either organization to date.

Native American Consultation

The NAHC was contacted by email on November 19, 2015, to request a search of the sacred lands files for the APE and a list of individuals who might have additional knowledge about tribal resources in the project area. The NAHC responded on December 14, 2015, stating that sacred land files failed to identify any Native American cultural resources in the project area and providing a list of knowledgeable Native Americans in the region. The individuals identified were contacted by letters mailed December 17, 2015 (**Table 3.5-3**). The letters were intended to inform the individuals and organizations about the project; to inquire whether they knew of any unrecorded Native American cultural resources or other areas of concern within or adjacent to the project area; and to solicit comments, questions, or concerns with regard to the proposed project. A project location map was included with each letter. Follow-up telephone calls were made on February 2, 2016, to ensure that the letter had been received by all those contacted.

Table 3.5-3. Native American Consultation

Organization/Tribe	Letter Date	Telephone Follow-up Date	Comments
Muwekma Ohlone Indian Tribe of the San Francisco Bay Area	December 17, 2015	February 2, 2016	Chairperson considers the area sensitive for buried cultural resources. She requested that work stop if cultural resources are discovered and the District consult with the tribe on the treatment of the resources.
Ohlone Indian Tribe	December 17, 2015	February 2, 2016	Left message on answering machine

Organization/Tribe	Letter Date	Telephone Follow-up Date	Comments
Trina Marine Ruano Family	December 17, 2015	February 2, 2016	Left message on answering machine
No affiliation	December 17, 2015	February 2, 2016	Left message on answering machine
Amah Mutsun Tribal Band	December 17, 2015	February 2, 2016 via email	Tribal contact responded by email on February 3, 2016. He suggested contacting the Muwekma Tribal Band for information.
Amah Mutsun Tribal Band	December 17, 2015	February 2, 2016	Left message on answering machine. Chairperson returned the call on the same day and said that the project location is outside of his tribal territory.
Amah Mutsun Tribal Band	December 17, 2015	February 2, 2016	Left message on answering machine
No affiliation	December 17, 2015	February 2, 2016	Left message on answering machine
Indian Canyon Mutsun Band of Costanoan	December 17, 2015	February 2, 2016	Chairperson noted that any location near a creek is sensitive for cultural resources; therefore, she recommended having Native American and archaeological monitors present during any earth-moving activities.
No affiliation	December 17, 2015	February 2, 2016	Left message on answering machine
Amah Mutsun Tribal Band	December 17, 2015	February 2, 2016	Left message on answering machine

The chairpersons of the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area Indian Canyon Mutsun Band of Costanoan were reached by telephone. They were unaware of any specific resources in the project APE, but are aware of resources in the vicinity, especially near waterways, and consider the area sensitive for Native American resources. They requested that work stop in the vicinity of any cultural resources discovered during construction and that the District consult with the tribe about the treatment of the resources. They also recommended that Native American and archaeological monitors be present during any ground disturbance and expressed concern about the ultimate disposition of any cultural materials that might be discovered, and where human remains would be reinterred, should they be discovered. They noted that, if found, burials should not be removed or analyzed without the consent of the tribe.

Archaeological Survey

Although the project APE has been completely surveyed in the past, the entire length of Penitencia Creek within the project area has not been studied for more than 40 years. As a result, archaeologists who meet the U.S. Secretary of the Interior's professional standards in archaeology conducted a field survey of the APE on January 8, 2016. A historic architectural study of buildings immediately surrounding the project area was not conducted because all were constructed in the late 1960s and are less than 50 years old. All of the built environment

resources east of Penitencia Creek are residences (tract homes, condominiums, or apartments); an office park is located on the west bank near Reach 4. Similarly, the bridges that cross Penitencia Creek were not evaluated due to their relatively recent ages and because most had previously been evaluated.

Archaeological Resources

No archaeological resources were identified during the course of the archaeological field study undertaken for this project by professionals who meet the U.S. Secretary of the Interior's standards in archaeology.

Built Environment Resources

Built environment resources within the project APE are limited to the bridges discussed above and the channelized sections of Penitencia Creek. As previously noted, the bridges are not eligible for listing in the CRHR or the NRHP by virtue of their relatively recent ages (i.e., less than 50 years old).

Tribal Cultural Resources and Traditional Cultural Properties

The NOP for this EIR was issued prior to July 1, 2015. As a result, the lead agency was not required to consult with local tribal administrators under PRC 21080.3.1, and thus, TCRs were not identified through such consultation. Outreach to individuals who have knowledge about the project area also failed to identify any TCRs or TCPs in the APE.

Paleontological Resources

Paleontological resources include fossil remains, as well as fossil localities and rock or soil formations that have produced fossil material. Fossils are the remains or traces of prehistoric animals and plants. Fossils are important scientific and educational resources because of their use in (1) documenting the presence and evolutionary history of particular groups of now-extinct organisms; (2) reconstructing the environments in which these organisms lived; and (3) determining the relative ages of the strata in which they occur, as well as the relative ages of the geologic events that resulted in the deposition of the sediments that formed these strata and their subsequent deformation.

The methods applied to the evaluation of project impacts on paleontological resources involved two elements: first, to evaluate the potential for unique paleontological resources to exist within the project area, and then to evaluate the impacts that construction of the proposed project could have on those resources.

A search of known paleontological sites in California (University of California Museum of Paleontology 2016) did not identify any known sites within the project site or general area. Research also indicated that the soils underlying the project site consist of Holocene-era floodplain sediments classified as Urban Campbell Complex and Campbell silt loam (Natural Resources Conservation Service 2015a, 2015b). Such soils are not generally conducive to the preservation of paleontological remains due to their relatively recent age.

3.5.4 Impact Analysis

Methodology

All aspects of the cultural resources study were conducted in accordance with the U.S. Secretary of the Interior's Standards and Guidelines for Identification of Cultural Resources (48 CFR Parts 44720–44723). Resource documentation also followed the guidance outlined in Instructions for Recording Historical Resources. Methods employed for the proposed project consisted of pre-field research, Native American consultation, reconnaissance-level field surveys, and report preparation. In conjunction with prehistoric and historic overviews, previous investigations and historic maps provided background information for assessing cultural sensitivity and identifying the types of sites likely to be located within the project site.

The impact analysis focuses on the proposed project's construction-related impacts on cultural resources. Operation and maintenance activities would be similar to current practices covered under the District's SMP with the exception of as-needed repair and maintenance of the new floodwalls and headwalls. Because most of those impacts are addressed in the District's SMP Subsequent EIR (SCVWD 2012) and because minor repairs of the floodwalls and headwalls are not expected to involve ground-disturbance, proposed project would result in no operational impacts on cultural resources and such effects are not discussed further.

Criteria for Determining Significance

The proposed project would result in a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- Disturb any human remains, including those interred outsides of dedicated cemeteries.
- Cause a substantial adverse change in the significance of a tribal cultural resource, as defined in the Public Resources Code Section 21074.

The environmental checklist contained in Appendix G of the State CEQA Guidelines and the standard guidelines for assessment and mitigation of adverse impacts on paleontological resources set forth by the Society of Vertebrate Paleontology (2010) were used to establish three categories of sensitivity: high, low, and undetermined. Areas that consist of rock that is not of sedimentary origin and that have not been known to produce fossils are considered areas of low sensitivity. Additionally, when it can be demonstrated that the conditions of the unconsolidated sediments are such that fossils could not form in these sediments, and that any fossils found in the sediments could not be considered in situ, they would have minimal scientific value and the area would be considered to have low sensitivity. When both of these low-sensitivity conditions were present, it was considered that no significant paleontological resource would be present and, consequently, no impact would occur.

Impact Summary

Table 3.5-4 summarizes cultural resources impacts of the proposed project.

Table 3.5-4. Summary of Impacts Cultural Resources

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5	NI	None	NI
CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5	LS	None	LS
CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	NI	None	NI
CR-4: Disturb any human remains, including those interred outside of formal cemeteries	LS	None	LS
CR-5: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074	~~NI~~LS	None	~~NI~~LS

NI = No Impact; LS = Less than Significant

Environmental Impacts

Impact CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 (No Impact)

All project-related activities that would disturb the ground surface or remove structures (e.g., bridges) have the potential to affect historical resources, should they be present within the APE. However, no historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, were identified within the project site. As a result, the proposed project would not cause a substantial adverse change to a historical resource and there would be no impact.

Historical resources that are archaeological in nature may be accidentally discovered during project construction; archaeological resources are discussed further in Impact CR-2 below.

Impact CR-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resource Pursuant to Section 15064.5 (Less than Significant)

All ground-disturbing activities associated with the proposed project that might extend below the existing ground surface, and particularly excavations outside of the creek channel (e.g., installation of floodwall footings) have the potential to encounter buried archaeological materials. No archaeological resources were identified within the project site as a result of background research or the field survey. Although an archaeological survey was conducted of the project site, additional archaeological remains may be buried with no surface manifestation. District BMP CU-1 requires that construction activities halt immediately within ~~30~~100 feet of a find and that both the Santa Clara County Coroner and a qualified archaeologist be contacted to evaluate the discovery site and determine whether construction may resume. In addition, the District would comply with the processes outlined

in Health and Safety Code Section 7050.5, which requires the Coroner to contact the NAHC within 24 hours of determining whether the remains of a Native American and that the NAHC identify a Most Likely Descendent (MLD). Pursuant to the provisions of Public Resources Code 5097.98, the MLD designated has at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. The District would work with the MLD to ensure that the remains are removed to a protected location and treated with dignity. Implementation of BMP CU-1 and compliance with Health and Safety Code Section 7050.5 and Public Resources Code 5097.98 would ensure that construction-related impacts on archaeological resources are less than significant. ~~Applicable District BMPs, as provided in Chapter 2, include the following:~~

Impact CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (No Impact)

Research indicates that the geological matrix of the project site has a low sensitivity for the presence of paleontological resources. As a result, the proposed project would not be anticipated to directly or indirectly destroy a unique paleontological resource or site or unique geological feature. No impacts on paleontological resources or unique geologic features would result from activities and elements of the proposed project, and this issue is not discussed further.

Impact CR-4: Disturb any human remains, including those interred outside of formal cemeteries (Less than Significant)

The project site is located in an area that is sensitive for the presence of Native American village sites, which often contain burials. As a result, disturbance of native ground during project construction has the potential to uncover human remains, although such remains were not identified during the field inventory. District BMP CU-1 requires that construction activities halt immediately within ~~30~~100 feet of any buried human remains and that both the Santa Clara County Coroner and a qualified archaeologist be contacted. As described in Impact CR-2, the District would comply with the processes outlined in Health and Safety Code Section 7050.5, which requires the Coroner to contact the NAHC within 24 hours of determining whether the remains of a Native American and that the NAHC identify a MLD. Per Public Resources Code 5097.98, the MLD designated has at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. The District would work with the MLD to ensure that the remains are removed to a protected location and treated with dignity. Implementation of BMP CU-1 and compliance with Health and Safety Code Section 7050.5 and Public Resources Code 5097.98 would ensure that disturbance to human remains is less than significant.

Impact CR-5: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 (~~No Impact~~Less than Significant)

As described in the environmental setting, the NOP for this EIR was issued prior to July 1, 2015, and as a result, the District is not required to formally consult with local tribes under PRC 21080.3.1. Regardless, this topic is addressed since questions relating to TCRs was recently added to the State CEQA Guidelines Appendix G environmental checklist in July 2016. This evaluation is based on the literature and record search and District's Native American consultation process described in the setting section. No TCRs, as defined in PRC

Section 21074, were identified within the project site. In the event of an accidental discovery of a TCR that is also a historical or unique archaeological artifact, BMP CU-1 (see Chapter 2, *Project Description*) would be implemented to ensure that construction activities halt and that a qualified archaeologist is contacted. If a tribal cultural resource cannot be avoided, an Action Plan will include notification of the appropriate Native American tribe, and consultation with the tribe regarding acceptable recovery options. ~~As a result~~ With implementation of BMP CU-1, the proposed project would not cause a substantial adverse change to a TCR and the~~re would~~ impact would be ~~no impact~~less than significant.

3.6 Geology, Soils, and Seismicity

3.6.1 Overview

This section identifies geologic, soils, and seismic conditions in the project area. The section describes the regulatory setting, affected environment, and anticipated impacts of the proposed project based on published geologic reports and maps, a site-specific technical report, and professional expertise. The discussion of impacts considers the consequences of the proposed project with regard to geology, soils, and seismicity. This section also evaluates whether the project would expose people or structures to substantial geologic hazards. Applicable BMPs are identified, and mitigation measures are prescribed to reduce significant impacts of the proposed project.

3.6.2 Regulatory Setting

Federal Laws, Regulations, and Policies

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk reduction program to better understand, predict, and mitigate risks associated with seismic events. Four federal agencies are responsible for coordinating activities under NEHRP: U.S. Geological Survey (USGS); National Science Foundation (NSF); FEMA; and National Institute of Standards and Technology. Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction.

State Laws, Regulations, and Policies

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Section 2621 *et seq*.) was passed in 1972 to reduce the risk to life and property from surface faulting in California. The Alquist-Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are “sufficiently active” and “well defined.” The applicability and relevance of the Alquist-Priolo Act on the project area is described below in Section 3.6.3.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (SHMA) (PRC Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist-Priolo Act addresses surface fault rupture, the SHMA addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act. The topics

of ground shaking, liquefaction, landslides, and other seismic hazards in relation the project area is described below in Section 3.6.3.

California Building Standards Code

Title 24 of the CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. The CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

3.6.3 Environmental Setting

Regional Geology

The project area is located in the southeastern portion of the San Francisco Bay Area in the Coast Ranges, a naturally defined geomorphic province encompassing the central and northern California coast (CDOC 2002). The distinguishing geologic feature of this province is the northwest-trending mountain ranges and valleys subparallel to the San Andreas Fault. Two local mountain ranges bound San Francisco Bay and the project area: the Santa Cruz Mountains to the west and southwest, and the Diablo Range to the east. These ranges are composed of thick Cenozoic and Mesozoic sedimentary strata (CDOC 2002). At the southern end of San Francisco Bay, the Santa Clara Valley extends approximately 20 miles southeast. The valley formed as tectonic forces between the San Andreas Fault Zone (west) and Hayward Fault Zone (east) created a structural depression between the two mountain ranges.

Local Geology

The proposed project is located along the northern boundary of the Santa Clara Valley, along the alluvial bay margin that flanks the southern San Francisco Bay. The project site is less than a mile east of the tidal baylands and salt ponds that border the Bay, and about 3-4 miles from the open water portion of San Francisco Bay. The nearest prominent fault is the southern section of the Hayward Fault, which is about 1.2 miles to the east of the project site and runs in a southeast-to-northwest alignment along the base of the East Bay Hills. Geologic materials underlying the project area consist of late Quaternary (1,288,000 to 3,600,000 years ago) to Holocene (less than 11,000 years ago) alluvium and intertidal deposits (CDOC 1991). The predominant geologic unit underlying Lower Penitencia Creek is flood-basin deposits (alluvium) consisting of organic-rich clay to very fine silty clay. As the creek approaches the confluence with Coyote Creek and the outfall to the San Francisco Bay, underlying geology is more typical of tidal marshes and swamps, consisting mainly of peat and peaty mud with some fine clay, silts, and sands. Older alluvium underlies the areas to the north and the eastern margins of the project area.

Soils

Due to urban development and marshland infill, the soils underlying the project area have likely been removed, replaced, or amended for development. In general, the relatively flat, urbanized bay margin setting is underlain by alluvial soils of poorly sorted gravel, sand, silt, and clay, increasing in thickness from zero at the base of the Diablo Range foothills to 1,000 feet or more at the western side of Milpitas (City of Milpitas 2002). According to NRCS soil

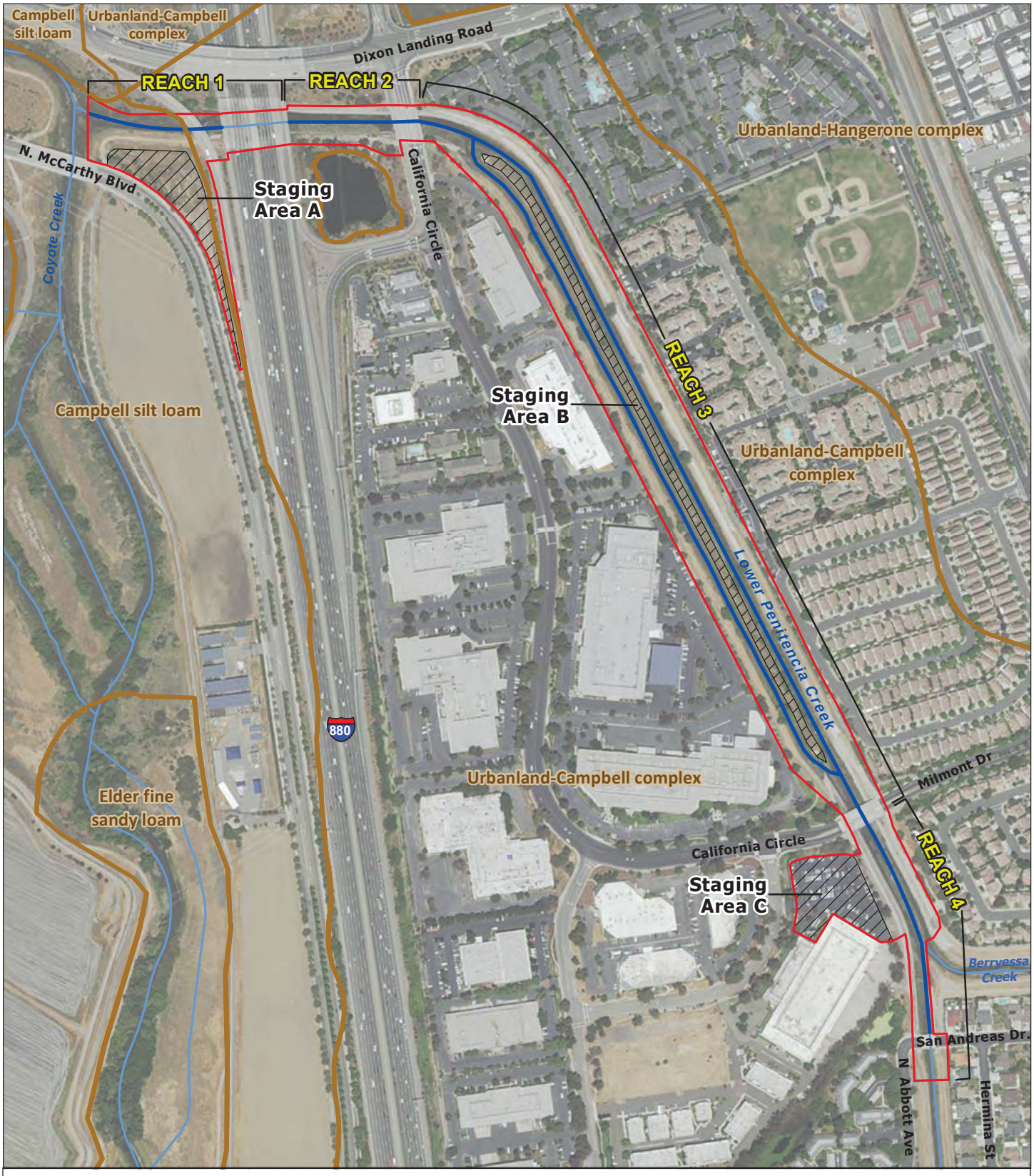
mapping, two designated soil associations are present in the project area: Campbell silt loam (0 to 2 percent slopes) and Urbanland-Campbell complex (0 to 2 percent slopes) (see **Figure 3.6-1**) (NRCS 2015). Campbell silt loam is alluvial fan material of eroded metamorphic and sedimentary rock washed down from the Diablo Range. The general soil profile for this soil unit consists of silt loam near the top 24 inches below ground surface (bgs), transitioning to silty clay loam, then to silty clay beyond 51 inches bgs. Campbell silt loam is classified as moderately well drained (NRCS 2015). Urbanland-Campbell complex is physically the same as Campbell silt loam, but with urban development covering 70 percent of the surface area.

The geotechnical conditions of the existing levees along Lower Penitencia Creek were evaluated previously as part of the creek's FEMA levee recertification process. Soils encountered during this investigation consisted of levee fill over clayey alluvium, underlain by sands and gravels. Levee fill material generally consisted of very stiff lean clay and fat clay, with variable amounts of fine to medium sand approximately 3-10 feet thick, depending on the levee location. Directly beneath the levee fill, native foundation soils generally consisted of a clayey alluvial layer ranging from approximately 10 to 25 feet. This layer consisted of generally very stiff to hard lean clay and fat clay with scattered thin (several inches to 1 foot thick) zones of clayey sand. Sand and silty sand varying in thickness from 10 to 18 feet were encountered underlying the clay layer (AMEC Geomatrix, Inc. 2009).

Seismicity

Alquist-Priolo Fault Zones and Ground Failure

Fault areas considered to be of greatest risk are identified as Alquist-Priolo fault zones. No Alquist-Priolo–designated fault zones are present in or near the proposed project area (CDOC 1982). Past evidence of Holocene-aged (last 11,700 years) and older fault displacement can be seen throughout the region. Potentially active and historic faults near the project area are listed in **Table 3.6-1**.



N

0 200 400 800
Feet

Soil Unit Boundary
Project Boundary
Staging Area

Prepared by:
Horizon WATER and ENVIRONMENT

Figure 3.6-1
Underlying Soils in the Project Area

Lower Penitencia Creek Improvements Project

Table 3.6-1. Regional Faults near the Project Area

Fault	Approximate Distance from Project Area	Maximum Credible Earthquake (Magnitude)	Last Known Major Displacement	Potential Shaking Scenario (MMI)
Hayward Fault Zone, Southern Hayward Section	1.2 miles northeast	6.9	1868	XIII, Very Strong
Silver Creek	1.2 miles west	N/A	More than 1,200,000 years	N/A
Crosley (an extension of the Hayward Fault Zone)	1.4 miles east	N/A	Within 11,700 years	N/A
Calaveras Fault Zone	5.5 miles east	6.9	Within 11,700 years	XIII, Very Strong
Monte Vista	12 miles west	6.8	Within 11,700 years	N/A
San Andreas	17 miles west	7.9	1989	XII; Strong
Greenville	20 miles east	7.0	Within 11,700 years	XIII, Very Strong
San Gregorio	27 miles west	7.5	Within 11,700 years	XI-XIII, Strong to Very Strong

Sources: ABAG 2015; CDOC 1991, 2010; USGS 1996, 2003.

Ground Shaking

Seismically induced ground shaking can cause substantial damage to roadways, bridges, and other infrastructure. The Modified Mercalli Intensity (MMI) scale (**Table 3.6-2**) is a range of perceived ground-shaking intensity based on observed effects and is the current standard used throughout the U.S. Less intense earthquakes are typically rated on the basis of individual accounts, whereas higher intensity events are rated based on observed structural damage. Many factors influence shaking severity, such as distance from the epicenter, the duration of the seismic event, and underlying soils and geologic units.

Table 3.6-2. Modified Mercalli Intensity Scale

Intensity	Shaking	Description/Damage
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.

Intensity	Shaking	Description/Damage
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate damage in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Sources: USGS 1989, 2003.

As with any location in the San Francisco Bay area, the potential exists for substantial ground shaking in the project area following seismic events from several known faults. Ground shaking is predicted to be most severe following a repeat of the 1906 event of the Northern San Andreas Fault Zone (MMI VIII) or ruptures of the Hayward Fault Zone (MMI VIII), or the Central/Southern Calaveras Fault (MMI VIII) (ABAG 2015). Shaking scenarios associated with earthquakes from regional faults is shown in Table 3.6-1 above.

Subsidence and Liquefaction

Subsidence is a term describing the compression of soils following groundwater withdrawal or oxidation of buried organic material. Areas consisting of fine-grained sediments are more susceptible to ground subsidence. Although mining and extraction activities might also lead to subsidence, excessive groundwater pumping is the predominant cause for this phenomenon.

Soil liquefaction is a phenomenon that occurs when saturated sandy or silty soils lose strength during cyclic loading, or repetitive vibrational stress, such as that caused by earthquakes. During the loss of strength, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements, behaving like a liquid. The factors known to influence liquefaction potential are soil density, soil type and depth, soil grain size, groundwater level, soil moisture and the degree of saturation, and the intensity and duration of ground shaking. The greatest potential for liquefaction occurs in areas where the water table is less than 20 feet bgs and where soils consist of relatively uniform, low-density sands. Clayey soils are generally not subject to liquefaction due to more limited porosity and permeability compared to sandy soils. The probability of liquefaction correlates directly with the intensity and duration of ground shaking (i.e., the stronger and/or longer the earthquake, the greater the chance of liquefaction) and the porosity and moisture content of the soil.

Historic groundwater levels underlying the project area are shallow and are typically encountered 4-20 feet bgs, varying by the time of year and recent precipitation patterns (CDOC 2001; State Water Resources Control Board [SWRCB] 2015). According to a recent geotechnical investigations report conducted for the proposed project, groundwater levels underlying the project site range from 3.8 to 11 feet bgs (Kleinfelder 2016). In addition, deeper groundwater levels in the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin, have been trending upward since the 1960s following a coordinated effort to manage and enhance groundwater supplies within the basin (California Department of Water Resources [DWR] 2004; SCWVD 2012). For a more in-depth discussion of regional and local groundwater conditions, refer to Section 3.9, *Hydrology and Water Quality*.

The younger alluvial material underlying the proposed project area is generally susceptible to the effects of liquefaction. The geotechnical investigation conducted by AMEC Geomatrix in 2009 and Kleinfelder in 2016 identified saturated granular materials beneath the Lower Penitencia Creek levees, which are potentially susceptible to liquefaction from strong ground shaking. Additionally, the shallow water table increases the potential for liquefaction. According to data compiled and interpreted by the Association of Bay Area Governments (ABAG), the project area has a moderate to high susceptibility to liquefaction, with the I-880 alignment very high (ABAG 2015).

Landslide, Slope Failure, and Lateral Spreading

Landslides or slope failure can occur in steeply sloped areas during seismic events. On a smaller scale, horizontal displacement of gently sloping ground (5 percent or less slope) can occur along riverbanks or exposed embankments, a phenomenon known as "lateral spreading." Saturated, loosely consolidated soils and precipitation events increase the likelihood that an earthquake will trigger landslides, slope failure, or lateral spreading.

The proposed project is not located within or near an area where previous landslides have occurred or local topographic, geological, geotechnical, and subsurface water conditions are present that would increase the potential for ground displacements (CDOC 2004). Earthquake-induced lateral spreading may occur along channel banks composed of sandy soils or soil units lacking cohesion or adequate compaction.

3.6.4 Impact Analysis

Methodology

The methodology used to evaluate the environmental impacts of the proposed project on geology, soils, and seismicity involved a review and assessment of published maps, professional publications, and reports pertaining to the project vicinity. Published information was derived from resources provided by ABAG, CDOC (which encompasses the California Geological Survey and State Mining & Geology Board), DWR, NRCS, the District, SWRCB, and USGS. In addition, the impact evaluation was based on review of the geotechnical investigation report prepared for the Lower Penitencia Creek Levee Recertification (AMEC Geomatrix, Inc. 2009; Kleinfelder 2016).

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would have a significant effect related to geology, soils, and seismicity if it would:

- Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42);
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, as defined in Table 19-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water.

Impact Summary

Table 3.6-3 summarizes geology, soils, and seismicity impacts of the proposed project.

Table 3.6-3. Summary of Impacts Geology, Soils, and Seismicity

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of significance After Mitigation
GEO-1: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); or strong seismic ground shaking	LS	None	LS
GEO-2: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction; or landslides	S	Mitigation Measure GEO-1	LM
GEO-3: Result in substantial soil erosion or the loss of topsoil	LS	None	LS
GEO-4: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S	Mitigation Measure GEO-1	LM

GEO-5: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	LS	None	LS
GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	NI	None	NI

NI = No Impact; LS = Less than Significant; LM = Less than Significant with Mitigation; S = Significant

Environmental Impacts

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); or strong seismic ground shaking (Less than Significant)

Construction and Operational Impacts

Ground rupture refers to the displacement of the earth's surface along a fault during an earthquake and can cause severe damage to floodwalls and conveyance structures, as well as injuries to workers during construction activities. As described in Section 3.6.3, "Environmental Setting," the proposed project is not located within an Alquist–Priolo zone. The nearest potentially active faults (i.e., faults with observed or inferred seismic activity within the last 11,700 years) to the project area are the Southern Hayward Fault Zone, approximately 1.2 miles northeast; the Crosley Fault, approximately 1.4 miles east of the project area; and the Calaveras Fault Zone, approximately 5.5 miles east. A high potential exists for a significant seismic event to occur along the Southern Hayward or Calaveras Fault Zone; however, the possibility of ground rupture in the project area is considered low because of the distance between the project area and the above-referenced faults; therefore, this impact would be less than significant.

As discussed in Section 3.6.3, "Environmental Setting Ground Shaking," the probability of strong seismic ground shaking in the project area is high. Past seismic events associated with the Hayward, Calaveras, and San Andreas Fault Zones resulted in substantial ground shaking in the southern San Francisco Bay Area. Note that seismic ground shaking is an existing hazard for existing structures, roads, levees, and other related facilities as currently constructed. The proposed project structures (levees, floodwalls, and bridge headwalls) would be designed to withstand expected ground shaking during a major seismic event. The project geotechnical report estimated peak ground acceleration at the project site during major earthquake and modeled the potential for ground motion and post-earthquake slope stability. Based on those analyses, the geotechnical report made recommendations with regard to site preparation, types of materials, structural design, and appropriate factors of safety to withstand the expected ground movement during a major earthquake. The project design plans and specifications incorporate the geotechnical recommendations which will greatly reduce the potential for substantial damage due to strong seismic ground shaking. Therefore, this impact would be less than significant.

Impact GEO-2: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction; or landslides (Less than Significant with Mitigation)

Construction and Operational Impacts

The project area is relatively flat and, therefore, is not susceptible to earthquake-induced landslides. During construction activities, there is some potential for open excavation areas to fail, especially if soils are saturated. Excavations would be sloped and/or shored to prevent slope failure during construction. Also, given the project area's generally flat topography, the proposed project would not increase the risk of landslides or slope failure. The potential for landslides to cause substantial adverse effects would be low.

Seismic events and differential settling could result in significant damage to and/or failure of levees or other flood control structures, either during construction or over the expected life of the flood control structures associated with the proposed project. The proposed project is located in an area with historical occurrences of liquefaction and in an area where local geological, geotechnical, and/or groundwater conditions show a potential for future ground displacement (ABAG 2015; CDOC 2004). As described in Section 3.6.3, "Environmental Setting Subsidence and Liquefaction," the project area may be susceptible to liquefaction as a result of soil conditions and the high groundwater table.

A project-specific Geotechnical Design Report analyzed site conditions based on subsurface geotechnical investigations performed at the project area. That report identified subsurface layers of clay and alluvium occurring throughout the project area which could be susceptible to liquefaction (Kleinfelder 2017).Based on historical incidents of ground failure near the project area (ABAG 2015; CDOC 2004) and the findings of the project's Geotechnical Design Report, there is substantial potential for seismically induced liquefaction to occur at the project site. Therefore, this impact is considered significant. Mitigation Measure GEO-1 would be implemented to address this impact.

Mitigation Measures

Mitigation Measure GEO-1: Incorporate 2017 Geotechnical Design Report Recommendations into the Final Design and Construction of the Proposed Project.

~~The District or its design contractor will incorporate recommendations from the final Geotechnical Design Report.~~ Based on the draft Geotechnical Design Report (Kleinfelder 2017), the District will incorporate the following recommendations (or substantially similar recommendations) in the design plans and specifications:

- The sheet pile floodwalls will be designed to resist active lateral pressures based on an equivalent fluid weight of 45 pounds per cubic foot (pcf) above the groundwater table and 25 pcf for submerged conditions. If full drainage is not provided in the floodwalls, the sheet pile design would include hydrostatic pressure.

- The sheet pile floodwalls will be able to tolerate the total and differential seismic settlements, as estimated by reach in the final Geotechnical Design Report.

- Levee fill materials will not contain organic material and meet the gradation and plasticity specifications as defined in the final Geotechnical Design Report.

- Prior to general site grading, existing vegetation, organic topsoil, and any debris will be stripped and disposed of outside the construction limits. Stripping depths w be on the order of 3 to 6 inches (or as approved onsite by the geotechnical engineer). Topsoil or any other organic laden materials will not be incorporated into any levee embankment. Where applicable, the gravelly material of the levee maintenance road w be removed prior to placing levee embankment fill.

- All areas to receive engineered fill will be scarified to a depth of 8 inches, uniformly moisture conditioned to a range between one and four percent above optimum moisture content, and compacted to at least 90 percent of the maximum dry density as determined by ASTM Test Method D1557 (Modified Proctor).

- Existing abandoned utility lines, wells and/or foundations (including backfill material) encountered during project activities will be removed and disposed of offsite.

- New levee embankment fill slopes will be constructed at a slope no steeper than 2:1 (H:V). New embankment fill placed on top of the existing levee may require a key into the existing levee slope, or benched into existing levee material after scarification and recompaction of existing fill occurs.

Significance After Mitigation

To meet or exceed safety standards, the proposed project would be designed and constructed in accordance with **Mitigation Measure GEO-1**. The mitigation measure requires implementation of design and/or construction measures to ensure that new levees and structures minimize the potential risk of structural failure resulting from seismically induced liquefaction or ground failure. Implementation of Mitigation Measure GEO-1 would reduce potential hazards from on-site ground failure, liquefaction, or landslide during construction and operation to a level that is less than significant.

Impact GEO-3: Result in substantial soil erosion or the loss of topsoil (Less than Significant)

Construction Impacts

The proposed project would involve substantial earthwork activities that include ground disturbance (excavation of soils, stockpiling soils, and transport). Soils would be required for reconstructing the levee in Reach 1. Excavation work would be necessary to create the wetland bench and for construction of the floodwalls and headwalls. The initial phases of construction, particularly site grading and soil stockpiling, as well as in-channel dewatering and sediment removal, could result in loose soil being exposed to erosive forces such as rainfall and high winds. Because in-channel construction work would occur during the dry season, the likelihood of intense rain or wind events occurring in the project area during such activities is minimal. Nonetheless, some construction activities (e.g., delivery, storage

assembly, and testing of construction equipment and materials at staging areas outside the creek channel, top of bank vegetation clearing) would occur outside of the dry season. If soil stockpiles are left unmanaged, the stockpiled soils could be exposed to erosion and could affect adjacent waterways. As discussed in Section 3.9, *Hydrology and Water Quality*, implementation of the following District BMPs would reduce surface erosion and mitigate any loss of topsoil during construction-related activities: AQ-1, BI-3, HM-7, WQ-1, WQ-2, WQ-4, WQ-5, WQ-7, WQ-9, WQ-10, and WQ-16. These measures are designed to prevent and control erosion and sediment transport and to prevent inadvertent release of pollutants. Specifically, BMP WQ-1 and WQ-2 would reduce exposure and loosening of soil during use of construction equipment. BMP WQ-1 ensures, that where possible, construction work occurs from the top of bank where a gravel surface maintenance road can support construction equipment without causing erosion. BMP WQ-2 would be used to evaluate which in-channel locations can support use of construction vehicles (and what types) in order to minimize erosion or other damage within the channels. Implementation of BMP WQ-4 would direct how sediments are handled, transported, and stored so as to reduce erosion potential, and BMP WQ-5 would use erosion control measures to prevent runoff and erosion at soil stockpile locations. BMP WQ-16 would also ensure that erosion control fabrics and erosion control measures are implemented to address both stormwater pollution and minimize erosion at the project work areas. Furthermore, as part of the proposed project, the District would obtain coverage under the National Pollutant Discharge Elimination System Construction General Permit from the State Water Resources Control Board. This permit requires implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control stormwater runoff from the project area, which would further minimize soil erosion and transport. Implementation of the above-mentioned BMPs and SWPPP would ensure that soil erosion and transport effects would be less than significant during the construction phase.

Operational Impacts

Once construction is complete, maintenance activities would continue similar to those that currently take place in the project area, with the addition of periodic floodwall and headwall inspections and maintenance. None of the maintenance activities associated with the project improvements would be expected to significantly affect geological resources or result in substantial loss of topsoil. Operational impacts would be less than significant.

Impact GEO-4: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse (Less than Significant with Mitigation)

Construction Impacts

Slope failure typically occurs in areas that have a history of prior failure and in weak geologic units exposed on relatively steep slopes. If these conditions are present, slope failure could damage project facilities or other nearby facilities and properties. Additionally, poorly sorted alluvium and loose sand and saturated soils increase the potential for liquefaction or soil instability. Within the project area, shallow groundwater depths (3.8 to 11 feet bgs) increase the probability of saturated soils (Kleinfelder 2016). Although the Campbell silt loam is generally not prone to differential settling, underlying soils and levee material within the project site have been augmented with fill of mixed composition with alluvium layers below. Given the shallow groundwater table within the project area, some soils may be subject to

liquefaction, which could pose a significant impact on the structural stability and strength of the proposed replacement levee in Reach 1.

Given the project area's relatively flat topography, the proposed improvements are not prone to landslides or slope failure. Smaller scale slumps or lateral spreading may occur on more gradually sloped topographic features, such as channel banks, if underlain by liquefiable or inadequately compacted soils. As described above, some soils underlying the project area may be liquefiable; therefore, the effects of lateral spreading are significant.

Although channel dewatering would be necessary for in-channel work and for construction of the replacement levee in Reach 1, dewatering activities would occur during the summer months when groundwater levels are typically lower. As such, project construction would have minimal effects on local groundwater levels and the potential for subsidence occurring in the project area would be low.

During construction, ground-disturbing and excavation activities could alter soil stability. Excavation and trenching for the new floodwalls and wetland bench, and placement of new soils to increase levee elevations would temporarily create potentially unstable slopes. In summary, during the project construction phase, adverse effects regarding liquefaction, lateral spreading and slope instability, would be significant.

Operational Impacts

As described above, none of the proposed project's new maintenance activities (e.g., inspection, repair and maintenance of the floodwalls and headwalls) would involve substantial ground disturbance or result in slope instability issues. Therefore, operation and maintenance of the proposed project would not result in slope instability. In addition, the proposed operation and maintenance activities would not involve groundwater extraction and the potential for local subsidence would be minor. Operational impacts would be less than significant.

Mitigation Measures

> **Mitigation Measure GEO-1: Incorporate 2017 Geotechnical Design Report Recommendations into the Final Design and Construction of the Proposed Project** (see full text of measure in Impact GEO-2 analysis above)

Significance After Mitigation

Any areas at risk of liquefaction and slope instability would be identified and the risk would be abated by implementing design criteria and recommendations provided in the Geotechnical Report, as required by Mitigation Measure GEO-1. The geotechnical report provides detailed recommendations for site preparation, removal of deleterious materials, the degree of compaction and stability for slopes, design loads for floodwalls, physical characteristics of fill material, and methods for placement of fills. Implementation of Mitigation Measure GEO-1 would reduce potential liquefaction and slope instability risks to a level that is less than significant.

Impact GEO-5: Be located on expansive soil, as defined in Table 19-1-B of the Uniform Building Code (1994), creating substantial risks to life or property (Less than Significant)

Construction and Operational Impacts

Expansive soils are soil units whose physical characteristics may result in swelling and shrinking during wetting and drying cycles. This differential ground movement can fracture foundations and footings, resulting in infrastructure damage and potential risks to life or property. Campbell silt loam and Urbanland-Campbell can contain a high percentage of clays and exhibit moderate to moderately high expansion potential. In addition, a site-specific geotechnical investigation identified soils with expansive potential as occurring on site (Kleinfelder 2016). Proposed floodwalls would be composed of sheetpiles extending below the relatively shallow expansive soils and would not be susceptible to damage caused by soil expansion. Levee fill material and other fill placed as part of the project would be low-plasticity material not subject to potentially harmful shrink-swell behavior. In addition, expansive soils would be removed and the ground surface compacted prior to placement of fills, substantially reducing the potential for expansive soils to damage project improvements. This impact is less than significant.

Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water (No Impact)

Construction and Operational Impacts

The project would not involve removal, relocation, or construction of sewer, septic, or wastewater disposal systems. The project would have no impact.

3.7 Greenhouse Gas Emissions and Energy Use

3.7.1 Overview

This section describes the regulatory and environmental setting related to greenhouse gases (GHGs) and energy resources. This section then evaluates impacts related to the proposed project's forecasted GHG emissions and project-related effects on energy resources. The impact evaluation begins by describing the methodology used to evaluate significance and the GHG significance criteria, and then presents the impact evaluation. Applicable District BMPs are identified, and mitigation measures are proposed for impacts that are determined to be significant. For discussion regarding existing electricity and natural gas services provided in the project area, refer to Section 3.14, *Utilities and Service Systems.*

3.7.2 Regulatory Setting

Federal Laws, Regulations, and Policies

On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 28, 2012, USEPA and NHTSA enacted further reductions and issued a joint final rulemaking to establish 2017–2025 GHG emissions and Corporate Average Fuel Economy (CAFE) standards for motor vehicles.

To address larger motor vehicles not covered in the regulations for cars and light trucks, on September 15, 2011, USEPA and NHTSA issued a final rule for Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles (76 Federal Register 57106). This final rule is tailored to each of three regulatory categories of heavy-duty vehicles (combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles), as well as medium-duty vehicles. In June 2015, USEPA and NHTSA proposed standards to reduce GHG emissions and improve fuel efficiency of medium- and heavy-duty vehicles for model year 2018 and beyond (USEPA 2015).

State Laws, Regulations, and Policies

GHG Reduction Goals

In recent years, California has enacted a number of policies and plans to address GHG emissions and climate change. In 2006, the California State Legislature enacted AB 32, the Global Warming Solutions Act, which set the overall goals for reducing California's GHG emissions to 1990 levels by 2020. Executive Order (EO) S-3-05 established a goal of 80 percent below 1990 levels by 2050. EO B-30-15 established an interim target to cut California's GHG emissions to 40 percent below 1990 levels by 2030, and the 2030 target has been codified in Senate Bill (SB) 32, which was signed into law on September 8, 2016. Along with SB 32, AB 197 was also signed into law on September 8, 2016, and requires the state to focus its pollution-reduction efforts on disadvantaged communities and to increase legislative oversight of climate programs.

CARB approved the *First Update to the AB 32 Scoping Plan* on May 22, 2014 (CARB 2014). This update defines climate change priorities for the next 5 years and also sets the

groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The update also highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals and evaluates how to align the state's longer term GHG reduction strategies with other state policy priorities for water, waste, natural resources, clean energy, transportation, and land use. At the time of Draft EIR preparation, CARB was working on updating the Scoping Plan to reflect the 2030 target.

GHG Reduction Regulations

CARB has completed rulemaking to implement several GHG emission reduction regulations and continues to investigate the feasibility of implementing additional regulations. These include the low carbon fuel standard, which reduces GHG emissions associated with fuel usage, and the renewable portfolio standard, which requires electricity suppliers to increase the amount of electricity generated from renewable sources to 33 percent by 2020.

In January 2012, CARB approved the Advanced Clean Cars Program, a vehicle emission control program for model years 2017–2025. To further California's support of the national program to regulate emissions, CARB submitted a proposal that would allow automobile manufacturer compliance with USEPA's requirements to show compliance with California's requirements for the same model years. The final rulemaking package was filed on December 6, 2012, and the final rulemaking became effective on December 31, 2012.

California Integrated Energy Policy

SB 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an *Integrated Energy Policy Report* for the governor and legislature every 2 years (CEC 2016a). The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research (CEC 2016a). The 2015 *Draft Integrated Energy Policy Report* includes policy recommendations such as addressing the vulnerability of California's energy infrastructure to extreme events related to climate change, including sea-level rise and coastal flooding (CEC 2016b).

Regional and Local Laws, Regulations, and Policies

BAAQMD Regulations and Plans

In an effort to address GHG emissions from the Bay Area, the BAAQMD has established a 10-point climate action work program and prepared Bay Area GHG production- and consumption-based emissions inventories (BAAQMD 2016a). The climate action work program describes specific actions that the BAAQMD will implement to comply with statewide GHG emission reduction targets (BAAQMD 2014). Some of the 10 identified actions include the following:

- setting a GHG reduction goal (80 percent below 1990 levels by 2050),
- updating GHG emission inventory and forecasting,
- monitoring GHG emissions,
- developing a regional climate action strategy,
- supporting and enhancing local action,

- initiating rule development,
- exploring the Bay Area's energy future, and
- expanding enforcement.

BAAQMD Clean Air Plan and Regional Climate Protection Strategy (RCPS)

The BAAQMD is in the process of preparing a 2017 *Clean Air Plan* and *Regional Climate Protection Strategy* (RCPS) that will serve as an update to the 2010 Bay Area *Clean Air Plan*; provide a roadmap for the BAAQMD's future efforts to reduce air pollution; and identify rules, control measures, and strategies to reduce GHG emissions throughout the Bay Area. As part of this update, 83 draft control measures have been identified and categorized within nine economic sectors, including stationary sources, transportation, waste, water, and energy. Potential measures applicable to the proposed project include (but are not limited to) the reduction of solid waste, reduction of water use, construction material recycling, and use of clean available construction equipment in local projects. The BAAQMD anticipates releasing a final 2016 *Clean Air Plan* and RCPS at the end of 2016 (BAAQMD 2016b, 2016c).

City of Milpitas Climate Action Plan

The City of Milpitas adopted a *Climate Action Plan* in 2013. The plan's objective is to streamline environmental review of future development projects consistent with CEQA and BAAQMD air quality guidelines. The plan includes specific reduction measures, strategies for implementation, and a monitoring program to meet a 15-percent reduction from 2005 emissions of GHG by 2020 (one of three options outlined by the BAAQMD). Goals are established in the areas of energy, water, transportation, solid waste, and off-road equipment. Goal 12 and Measure 12.2 pertain directly to the proposed project:

> **Goal 12:** Support the expansion and use of clean technology off-road equipment.
>
> **Measure 12.2:** The City will encourage new development to comply with applicable BAAQMD best management practices that reduce GHGs, including use of alternative-fueled vehicles and equipment, use of local recycled materials, and recycling of construction or demolition materials. The City's goal is that 40 percent of construction equipment should comply with applicable best management practices.

3.7.3 Environmental Setting

Global GHG Emissions

Climate change results from the accumulation of GHGs in the atmosphere, which are produced primarily by the burning of fossil fuels for energy. Because GHGs (carbon dioxide [CO_2], methane [CH_4], and nitrous oxide [N_2O]) persist and mix in the atmosphere, emissions anywhere in the world can affect the climate everywhere in the world. GHG emissions are typically reported in terms of carbon dioxide equivalents (CO_2e), by converting all GHGs to an equivalent basis that takes into account their global warming potential (GWP) compared to CO_2. **Table 3.7-1** shows the six GHGs and their respective GWPs.

Table 3.7-1. Greenhouse Gas Overview and Global Warming Potential

Greenhouse Gas	Global Warming Potential over 100 years (in IPCC 2013/SAR)[a]	Description
Carbon Dioxide (CO_2)	1/1	Released into the atmosphere through burning of fossil fuels (coal, natural gas, and oil), solid waste, trees, and wood products, and also because of certain chemical reactions; removed from the atmosphere when absorbed by plants and water bodies; remains in the atmosphere for 50,000 to more than 100,000 years.
Methane (CH_4)	28/21	Emitted during the production and transport of coal, natural gas, and oil; emissions also result from livestock and agricultural practices and from the decay of organic waste, notably in municipal solid waste landfills; remains in the atmosphere for about 10 years.
Nitrous Oxide (N_2O)	265/310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste; remains in the atmosphere for about 100 years.
Hydrofluoro-carbons (HFCs)	4-12,400/ 650–11,700	Typically used in refrigeration and air conditioning equipment, as well as in solvents; emissions are generated primarily from use in air conditioning systems in buildings and vehicles; remains in the atmosphere from 10 to 270 years.
Perfluoro-carbons (PFCs)	6,630-11,100/ 6,500–9,200	Emitted as byproducts of industrial and manufacturing sources; remains in the atmosphere from 800 to 50,000 years.
Sulfur Hexa-fluoride (SF_6)	23,500/23,900	Used in electrical transmission and distribution; remains in the atmosphere approximately 3,200 years.

Notes:

[a] As scientific understanding of the global warming potential (GWP) of various GHGs improves over time, GWP values are updated in the International Panel on Climate Change (IPCC) scientific assessment reports. For regulatory consistency, however, the United Nations Framework Convention on Climate Change reporting guidelines (and international treaties) for national inventories continue the use of GWP values published in the IPCC's 1996 Second Assessment Report (SAR). The table shows GWP values for 100 years from IPCC 2013 and SAR.

Sources: USEPA 2016; IPCC 2013

These six gases are the major GHGs that were recognized by the Kyoto Accords. Other GHGs were not recognized by the Kyoto Accords, chiefly because of the smaller role that they play in global climate change or the uncertainties surrounding their effects. One GHG not recognized by the Kyoto Accords is atmospheric water vapor (H_2O) because no obvious correlation exists between H_2O and specific human activities. H_2O appears to act in a feedback manner; higher temperatures lead to higher H_2O concentrations, which in turn cause more global warming (International Panel on Climate Change [IPCC] 2003). Nitrogen trifluoride was not recognized in the initial Kyoto Accords but was subsequently included by the United Nations Framework Convention on Climate Change and is recognized in California as a GHG.

The most important GHG in human-induced global warming is CO_2. Although many gases have much higher GWPs than the naturally occurring GHGs, CO_2 is emitted in such vastly higher quantities that it accounts for almost 81 percent of the GWP of all GHGs emitted in the United States (USEPA 2016). Fossil fuel combustion, especially the generation of electricity

and powering of motor vehicles, has led to substantial increases in CO_2 emissions over time and, thus, substantial increases in atmospheric CO_2 concentrations. In 2005, atmospheric CO_2 concentrations were about 379 ppm, more than 35 percent higher than the pre-industrial concentrations of about 280 ppm (IPCC 2007). In addition to the sheer increase in the volume of its emissions, CO_2 is a major factor in human-induced global warming because of its long lifespan in the atmosphere (50,000-100,000 years).

GHG Emissions in California

In 2014, total California GHG emissions were 441.54 million metric tons of carbon dioxide equivalents (MT CO_2e) (CARB 2016a). This represents a 2.7 million metric ton decrease in total GHG emissions from 2013 and an overall decrease of approximately 9.4 percent since peak levels in 2004. Overall trends in the inventory demonstrate that the carbon intensity of California's economy is declining (the amount of carbon per million dollars of gross domestic product) representing a 28 percent decline since 2001 (CARB 2016b).

In 2014, the transportation sector of the California economy was the largest source of GHG emissions, accounting for approximately 36 percent of the total emissions (CARB 2016a). On-road vehicles accounted for most of the emissions in the transportation sector. The industrial sector accounted for approximately 21 percent of the total emissions, and emissions from electricity generation were about 20 percent of the total. The rest of the emissions are made up of various sources (CARB 2016a).

GHG Emissions in the Project Area

BAAQMD prepared two GHG emission inventories: Bay Area GHG production- and consumption-based emissions inventories. Together, the two types of GHG emissions inventory provide a complete account of the Bay Area's impact on climate change by accounting for GHG emissions produced within the Bay Area (production-based inventory) and GHG emissions related to goods and service that are consumed within the Bay Area, regardless of where they are produced (consumption-based inventory). The most recent GHG production-based emission inventory indicated that most of the 2011 GHG emissions from the Bay Area were from fossil fuel combustion in the transportation sector (39.7 percent of total GHG emissions). The industrial and commercial sector was the second largest contributor (35.7 percent). Approximately 86.6 million metric tons of carbon dioxide equivalent (MMT CO_2e) were emitted by the Bay Area using the production-based approach. The consumption-based approach estimated that approximately 33 percent of GHG emissions are related to transportation and that the total estimated emissions from Bay Area consumers are 115 MMT CO_2e (BAAQMD 2015).

3.7.4 Impact Analysis

Methodology

Construction emissions were estimated using CalEEMod version 2013.2.2. CalEEMod is an emissions model that estimates air pollutant and GHG emissions for land use development projects. It contains reasonable default assumptions that can be replaced if site-specific information is available. CalEEMod incorporates both CARB's EMFAC emissions model for vehicles and a current off-road in-use engine emissions model for construction equipment. Specific construction phasing information, including assumed equipment quantities, types,

and construction activity duration, were input into CalEEMod for each of the proposed project's reaches based on similar projects. The estimates of construction worker and hauling trips are conservative and are based on early project estimates, which consisted of construction activities that would have resulted in a greater number of vehicle trips. Section 3.3, *Air Quality*, and Appendix C describe the specific assumptions for each construction phase. GHG emissions from all project phases were summed to determine annual total GHG emissions for comparison to applicable significance thresholds.

The proposed project's operational emissions were not quantified because the proposed project would include similar maintenance activities to those that are currently being performed under the District's SMP (SCVWD 2011) and would not result in a substantial increase from current levels of activities; the types of maintenance activity may change slightly, however, such as a decrease in sediment removal but an increase in graffiti removal. Thus, the potential for the proposed project to generate GHG emissions during operation and maintenance activities was evaluated qualitatively.

The proposed project was evaluated for consistency with AB 32, the most recent AB 32 Scoping Plan, SB 32, goals established by executive orders, and the City of Milpitas' adopted Climate Action Plan (2013).

Additionally, this evaluation considers the extent to which the proposed project would affect energy resources during construction and operation of the proposed project. Effects on energy resources are evaluated based on the energy demand of the proposed project.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact related to GHG emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Appendix F of the State CEQA Guidelines does not contain specific criteria for determining significance related to energy resources but does require that EIRs include discussion of energy impacts. In accordance with PRC Section 21100(b)(3), effects on energy resources would be considered significant if the project would result in wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines also describes the types of energy impacts that may be addressed in an EIR including: the project's energy requirements and its energy use efficiencies by amount and fuel type, the effects of a project on local and regional energy supplies, the effects of a project on peak and base period demands for electricity, the degree to which the project complies with existing energy standards, the effects of the project on energy resources, and a project's projected transportation energy use requirements and its overall use of efficient transportation alternatives. Based on guidance provided in Appendix F of the State CEQA Guidelines and for the purposes of this analysis, the proposed project would result in a significant impact on energy resources if it would:

- Cause wasteful, inefficient, and unnecessary consumption of energy during construction, operation, and/or maintenance; or
- Cause a substantial increase in energy demand and increase the need for additional energy resources.

BAAQMD Significance Thresholds

The BAAQMD proposed significance thresholds for operation-related emissions of GHGs as either compliance with a qualified GHG reduction strategy or use of a "bright line" threshold of 1,100 MT CO_2e (BAAQMD 2010). A bright line threshold for projects is the level below which projects are not anticipated to result in a significant impact on global climate change or impede the goals of AB 32. The BAAQMD did not propose GHG thresholds for construction emissions. ~~At the time of Draft EIR preparation, the BAAQMD was not recommending use of the 2010 CEQA thresholds due to ongoing litigation on unrelated thresholds.~~ In May 2017, the BAAQMD initiated an effort to update its CEQA Guidelines including release of a May 2017 version of the guidelines. The May 2017 Guidelines Update includes revisions made to the 2010 Guidelines to incorporate the California Supreme Court's opinion in California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369. The BAAQMD is currently working to update outdated references, links, analytical methodologies or other technical information in the May 2017 Guidelines Update. The operation-related thresholds in the May 2017 Guidelines Update remain the same as those shown in the 2010 Guidelines. In view of the Supreme Court's opinion, local agencies may continue to rely on the BAAQMD thresholds after determining that those thresholds reflect an appropriate measure of a project's impacts. ~~However, t~~The District considers the 2010 BAAQMD thresholds to be appropriate for use in this analysis because they are based on substantial evidence developed by the BAAQMD.

For the purposes of this analysis, the District considers the past BAAQMD operational significance thresholds as well as other bright line thresholds established by several air districts in California to determine impact significance of the proposed project's construction and operational emissions. The Sacramento Metropolitan Air Quality Management District (SMAQMD) and the San Luis Obispo County Air Pollution Control District have adopted thresholds of 1,100 MT CO_2e and 1,150 MT CO_2e, respectively (SMAQMD 2015, San Luis Obispo County Air Pollution Control District 2012). The SMAQMD threshold, which applies to both construction and operational emissions, was developed with the goal of complying with AB 32, and was based upon a review of the California Air Pollution Control Officers Association's (CAPCOA's) guidance for threshold development and other agency's significance thresholds. In establishing the bright-line threshold, these air districts evaluated representative projects in their air basins. The emissions from representative projects along with implementation of CAPCOA's guidance on threshold development would ensure compliance with AB 32 by setting a threshold at a level such that approximately 90 percent of proposed projects would be reviewed to assess the need for additional GHG reduction mitigation measures. The threshold of annual emissions of 1,100 MT CO_2e was determined to require the review of at least 90 percent of proposed land development projects, which complies with CAPCOA's guidance (90-percent project review) and AB 32's GHG reduction goals (BAAQMD 2009). Thus, the Santa Clara Valley Water District has determined that a significance threshold of 1,100 MT CO_2e for annual GHG emissions is supported by substantial evidence and appropriate for use in this analysis.

Impact Summary

Table 3.7-2 summarizes GHG impacts of the proposed project.

Table 3.7-2. Summary of Impacts Greenhouse Gas Emissions

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	LS	None	LS
GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	NI	None	NI
GHG-3: Cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and increase the need for energy resources	LS	None	LS

NI = No Impact; LS = Less than Significant

Environmental Impacts

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (Less than Significant)

Construction Impacts

The proposed project would generate GHG emissions during construction of the various project elements. Construction-related GHG emissions would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. These emissions were estimated for construction activities in each reach using CalEEMod version 2013.2.2 and using modified construction equipment type and quantity assumptions from similar channel improvement projects (Appendix C). The proposed project's total construction-related GHG emissions (if all reach construction activities occurred within the same year) are estimated at 901 MT CO_2e. In fact, project construction would be spread over two years and annual construction GHG emissions would be less than 901 MT CO_2e.

The District, as lead agency, has determined that the SMAQMD- and BAAQMD-established bright line annual threshold of 1,100 MT CO_2e for GHG emissions is an appropriate significance threshold against which to evaluate the proposed project's construction-related emissions. The "bright line" threshold is the proposed threshold for projects and represents the threshold under which they are not anticipated to result in a significant impact with regard to global climate change. The proposed project's anticipated combined annual emissions of 901 MT CO_2e would be less than the SMAQMD's and BAAQMD's annual threshold of 1,100 MT CO_2e. Implementation of District BMP AQ-1 would further reduce GHG emissions generated by minimizing idling construction equipment, requiring proper maintenance and tuning of vehicles and equipment, and requiring proper inflation of tires. These measures

would reduce overall emissions from vehicles and equipment, including emissions of GHGs. This impact would be less than significant.

Operational Impacts

GHG emissions from maintenance-related activities following project construction were not quantified because the proposed maintenance activities would be similar to current practice under the District's SMP (SCVWD 2011). Minor new maintenance activities would involve periodic visual inspections along the floodwalls and San Andreas Drive bridge. As necessary, the floodwalls and headwalls would be repaired. Such activities are relatively minor, and the number of vehicle trips and resulting GHG emissions would be a small fraction of the estimated construction emissions of 901 MT CO_2e. Operational GHG emissions would be less than the operational threshold of 1,100 MT CO_2e for annual GHG emissions and would be less than significant.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (No Impact)

Consistency with Local Plans and City of Milpitas Climate Action Plan

The proposed project would be consistent with the measures outlined in local general plans and climate action plans. Potentially applicable climate action plans include those from the City of Milpitas. In particular, these plans encourage limits to vehicle idling, recycling of construction or demolition materials, and reductions in off-road and on-road equipment fleet emissions through use of newer, more efficient, and/or alternatively fueled equipment. The proposed project would be consistent with these goals by limiting idling times to the extent feasible. As described in Section 3.14, *Utilities and Service Systems,* construction debris would be recycled to the extent feasible. In addition, the proposed project would be consistent with the water conservation recommendations of state and local plans and policies by limiting water use to the minimum necessary and using recycled water for dust control.

Consistency with AB 32

The State of California has implemented AB 32 to reduce GHG emissions. The proposed project does not conflict with the most recent list of CARB's early action strategies. The proposed project would minimize construction waste and implement other energy-reducing measures with consideration of other AB 32 target sectors such as natural resources, transportation, and land use.

As stated in Impact GHG-1, operational and maintenance activities associated with the proposed project would be similar to those that currently take place under the SMP with the exception of occasional maintenance and repair activities for the new floodwalls and headwalls at the San Andreas Drive bridge. These activities would be conducted on an infrequent basis and would not have the potential to substantially increase GHG emissions. Thus, the proposed project's operational activities would not conflict with the goals of AB 32.

Consistency with EO-S-3-05

As described in the "Consistency with AB 32" discussion above, the proposed project would include measures to reduce construction energy use and construction waste. These measures would reduce GHG emissions from the proposed project's construction. The proposed

project's construction activities would be complete in 2019 and would have no impact on emissions in 2030 or 2050.

In addition, the proposed project's operational and maintenance activities would not be substantially different than activities occurring under the SMP. Emissions from the project's operational and maintenance activities will decrease in the future due to the existing regulations for vehicles and the low carbon fuel standard. Thus, the proposed project's operational and maintenance activities emissions would decrease in the future. Therefore, construction and operation of the proposed project would not conflict with the goals of EO-S-3-05.

Consistency with SB 32

The proposed project's measures to reduce construction energy use and construction waste would reduce GHG emissions from the proposed project's construction. The project's construction activities would be complete in 2019 and would have no impact on emissions in 2030 or 2050. As described above, the project's operational and maintenance activities would be similar to that of other existing and ongoing activities. Emissions from operational and maintenance activities would decrease in the future due to the existing regulations for vehicles and the low carbon fuel standard. Thus, the project's operational and maintenance activities emissions would decrease in the future. Thus, the proposed project would not conflict with the goals of SB 32. Based on the above consistency discussions, emissions generated by the proposed project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing emissions of GHGs. No impact would occur.

Impact GHG-3: Cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and increase the need for energy resources (Less than Significant)

Construction and Operational Impacts

The proposed project's construction activities would require the consumption of energy (fossil fuels) for construction equipment, worker vehicles, and truck trips. However, the consumption of energy for the project's equipment and vehicles would be minimized by the reuse on site of excavated soils, minimization of vehicle idling, and short construction period duration. **Table 3.7-3** shows the estimated fuel use from construction equipment, worker vehicles, and truck trips. The calculations used to develop these estimates are presented in Appendix C. This table also shows estimated fuel use during project operations.

Table 3.7-3. Project Fossil Fuel Use

Source Type	Diesel Fuel Use (gallons)	Gasoline Fuel Use (gallons)
Off-road Construction Equipment[1]	946,001	
Construction Worker Vehicles[2]		27,067
Hauling Vehicles[3]	28,268	
Operational Worker Vehicles[4]		<100

[1] Fuel use for off-road construction equipment was estimated using a fuel use factor from CARB's off-road in-use engine emissions model of 0.347 pound of diesel per horsepower-hour and diesel fuel density of 7.37 pounds per gallon.

[2] Fuel use for construction worker vehicles was estimated using fuel use estimates from EMFAC with an estimated rate of 21.7 gallons per mile.

[3] Fuel use for hauling vehicles was estimated using fuel use estimates from EMFAC with an estimated rate of 5.5 gallons per mile.

[4] During project operational and maintenance activities, workers would use less than 100 gallons, assuming less than 1 round trip per week.

The energy consumption during construction is necessary to improve flood protection for residences and businesses in Milpitas; maintain the structural and functional integrity of Lower Penitencia Creek; and prepare for climate change effects such as changes in frequency and intensity of rain events, sea level rise, and changes in storm surges. Similar to current practice, maintenance activities for the proposed project would include trash and debris removal, vegetation management, fence repair, and maintenance road grading, all of which are covered under the District's SMP. New activities for this section of Lower Penitencia Creek may involve periodic visual inspections and as-needed repair of the new floodwalls and San Andreas Drive bridge headwalls, which would involve a minimal increase in fossil-fuel energy use for transportation of vehicles and would be offset by a decrease in sediment removal maintenance activities. These construction and operational activities would not cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and the need for additional energy resources. Although no District BMPs are necessary to reduce this impact to a less-than-significant level, implementation of District BMP AQ-1 would reduce the project's effect by requiring minimization of idling times and requiring that all equipment be maintained and tuned properly. Similarly, though not required to reduce the impact significance, Mitigation Measure AQ-1 would also reduce the potential fossil fuel use by requiring the implementation of NOx-reducing measures, such as using less-polluting equipment (e.g., Tier 3 engines), low-emission diesel products, or alternative fuels. The proposed project's effects on energy resources would be less than significant.

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3.8 Hazards and Hazardous Materials

3.8.1 Overview

This section describes the regulatory setting and affected environment associated with hazardous materials and wastes, significance criteria and the methodology used to evaluate significance of project impacts related to hazardous materials and wastes. The section identifies applicable District BMPs and, for significant impacts, mitigation measures to reduce those impacts. Hazards related to the proximity to airports, wildland fires, and emergency response are also addressed.

3.8.2 Regulatory Setting

Because regulations relating to hazardous materials have been developed over time, hazardous materials are regulated by numerous agencies whose jurisdictions and responsibilities sometimes overlap. Federal agencies that regulate hazardous materials include the United States Environmental Protection Agency (USEPA) and the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). At the state level, agencies such as the California Department of Industrial Relations, the California Occupational Safety and Health Administration (Cal/OSHA), and the California Emergency Management Agency (Cal EMA) govern the use of hazardous materials. State and local agencies often have parallel or more stringent rules than federal agencies.

Generation, transportation, and disposal of hazardous wastes can also be regulated by different agencies. The lead federal agency is USEPA. The California Department of Toxic Substances Control (DTSC) has primary state regulatory responsibility but may delegate enforcement authority to local jurisdictions that enter into agreements with the state agency.

Federal Laws, Regulations, and Policies

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC Section 6901 *et seq*.), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law regulating solid waste and hazardous waste in the United States. The law provides for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing the RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. In California, DTSC received authority to implement the RCRA program in August 1992.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC Section 9601 *et seq*.) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new

hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

Energy Policy Act of 2005

Title XV, Subtitle B of the Energy Policy Act of 2005 (the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original legislation that created the Underground Storage Tank (UST) Program. As defined by law, a UST is "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." In cooperation with USEPA, the SWRCB oversees the UST Program. The intent of the program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The four primary program elements are leak prevention (implemented by Certified Unified Program Agencies [CUPAs]), cleanup of leaking tanks, enforcement of UST requirements, and tank integrity testing. CUPAs are described in more detail below.

Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure Rule (40 CFR Part 112) applies to facilities with a single above-ground storage tank with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement these plans.

Occupational Safety and Health Act

Under the Occupational Safety and Health Act of 1970 (Public Law 91-596), as amended, OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances, as well as other workplace hazards. OSHA also establishes criteria by which each state can implement its own health and safety program.

State Laws, Regulations, and Policies

Safe Drinking Water and Toxic Enforcement Act of 1986 Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state's drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public about exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor's Office of Environmental Health Hazard Assessment (OEHHA) publishes, at least annually, a list of such chemicals. OEHHA, an agency under the California Environmental Protection Agency (CalEPA), is the lead agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General's Office; however, district and city

attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

The Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, and it works with other state agencies and delegates its authority to local jurisdictions that enter into agreements with the state. Local agencies, including Santa Clara County's Hazardous Materials Compliance Division, administer these laws and regulations. DTSC, CalEPA, and other state agencies set the standards for their programs while local governments implement the standards. These local implementing agencies, the CUPAs, regulate/oversee the following for each county:

- Hazardous materials business plans;
- California accidental release prevention plans or federal risk management plans (RMPs);
- The operation of USTs and above-ground storage tanks;
- Universal waste and hazardous waste generators and handlers;
- Onsite hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 reporting; and
- Emergency response.

California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans. Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers also must make material safety data sheets available to employees and document employee information and training programs.

California Accidental Release Prevention

The purpose of the California Accidental Release Prevention program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy Community Right-to-Know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substances are required to develop an RMP. This RMP must provide a detailed analysis of risk factors and associated mitigation measures that can be implemented to reduce accident potential. CUPAs implement the California Accidental Release Prevention

program through review of RMPs, facility inspections, and public access to information that is not confidential or trade secret.

CAL FIRE Wildland Fire Management

The Office of the State Fire Marshal and the California Department of Forestry and Fire Protection (CAL FIRE) administer state policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earth-moving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (PRC Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire-suppression equipment (PRC Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet of any flammable materials (PRC Section 4431).

3.8.3 Environmental Setting

Existing Hazards and Hazardous Materials

This section first describes past and current land uses and then describes hazardous materials that are known to exist or may exist within the project area.

Past and Current Land Uses

Prior to the 1950s, much of the land surrounding Lower Penitencia Creek was undeveloped. Since then, the area surrounding Lower Penitencia Creek has been developed with industrial and commercial properties, with most of the development occurring in the 1970s (Locus Technologies 2014). Currently, land uses surrounding the project area include residential, commercial, and industrial uses. Reaches 1 and 2 are surrounded by I-880, Dixon Landing Road and California Circle. Reach 3 is bordered by multi-family and single-family residential uses to the east and industrial uses to the west. Reach 4 is also surrounded by single-family residential homes to the east and industrial/office park development to the west.

In 2014, a Phase I Environmental Site Assessment (Phase I ESA) was prepared for the property on which Staging Area A would be located (Assessor's Parcel Number 022-30-041) (Locus Technologies 2014). According to this report, the parcel was formerly used for agricultural purposes that may have involved herbicide and pesticide usage. In addition, Caltrans may have used the site to store construction fill materials (including possibly asbestos) during construction of the I-880/Dixon Landing Road interchange project. The Locus Technologies report cites a Pre-Phase I/Phase I Hazardous Substance Liability Assessment (HSLA) that was conducted by Kennedy/Jenks in 1995 for the areas north and

south of Dixon Landing Road, near the confluence of Lower Penitencia Creek and Coyote Creek (just north of Staging Area A). The Kennedy/Jenks report was conducted based on readily available information and sampling, and concluded that chemicals were detected in the soil that were potentially associated with heavy vehicle traffic on Dixon Landing Road or fill materials used to construct the road. Petroleum hydrocarbons, total xylenes, and metals were also reported in shallow groundwater samples.

Potential Local Hazards

Several hazardous materials incidents have occurred within the vicinity of Lower Penitencia Creek as reported in the SWRCB GeoTracker database and the DTSC Envirostor database. The sites listed in **Table 3.8-1** are reported as involving releases; however, they are listed as "Case Closed" and further information is not warranted.

Table 3.8-1. Hazardous Materials Incidents in the Project Area

Site Name/Address	Approximate Distance from Project Area	Regulatory List	Site Summary	Potential to Affect Project Area
Kingsford Company 1601 W. Dixon Landing Road, Milpitas, CA 95035	Approximately 120 feet west of Reach 1	LUST	Case Closed as of 2/26/1993	Low
California Circle Pump Station 1735 California Circle, Milpitas, CA 95035	665 feet west of Reach 3	LUST	Case Closed as of 11/25/1996	Low
Dourdell Trucking Dixon Landing Road & Interstate 880, Milpitas, CA 95035	450 feet east of Reach 3	Cleanup Program Site Groundwater Contamination	Case Closed as of 11/8/1996	Low
Newby Island Landfill (or Newby Island Resource Recovery Park) 1601 Dixon Landing Road, Milpitas, CA 95035	320 feet northwest of Reach 1	Active Landfill Site, RCRA Site	No information in DTSC database after 1987 and no cleanup action reports in Geotracker database; groundwater quarterly reporting online	Low

Note: LUST = leaking underground storage tank

Sources: *SWRCB 2015 (GeoTracker database), DTSC 2015 (Envirostor database).*

Wildfire Hazards

The project area includes Lower Penitencia Creek in an urban setting. CAL FIRE does not identify any high fire hazard areas in the project area (CAL FIRE 2007, 2008). However, CAL FIRE and the California Fire Alliance identify Milpitas as a "fire-threatened community" at the wildland–urban interface (California Fire Alliance 2001).

Airports

The San Jose International Airport is approximately 5.2 miles from the project area and Moffett Federal Airfield is approximately 7.5 miles from the project area. There are no private airstrips in the project vicinity.

Schools

Within one-quarter mile of the project area, an in-home day care facility, Kiran Childcare and Learning Center, is located at 255 Balboa Drive. The closest school to the project area is Curtner Elementary School (275 Redwood Avenue), which is approximately 0.3 mile south of Reach 4.

Emergency Response

The Santa Clara County Operational Area Emergency Operations Plan (2008) outlines emergency organization, assigns tasks, specific policies and general procedures, and provides for coordination of response in the event of an emergency. The plan does not identify specific emergency response or evacuation routes. In addition, the Milpitas Fire Department of Office of Emergency Services is responsible for coordinating the City's preparedness efforts to mitigate against, plan for, respond to and recover from natural disasters. This City department also coordinates closely with Santa Clara County Office of Emergency Services and the District (City of Milpitas 2017).

3.8.4 Impact Analysis

Methodology

The impact analysis focuses on evaluating impacts related to hazards and hazardous materials in the project area. This assessment was conducted based on information obtained from the Geotracker and EnviroStor databases, characteristics of the proposed project's construction activities, and applicable regulations and guidelines.

For the purpose of this assessment, hazardous materials are defined as any materials that, because of quantity, concentration, or physical or chemical characteristics, would pose a substantial present or potential hazard to human health and safety or to the environment, if released. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or would be harmful if released into the workplace or the environment (California Health and Safety Code Section 25501).

Although often treated separately from hazardous materials, petroleum products, including fuels and lubricants are considered in this analysis because they pose a potential hazard to

human health and safety if released into the environment. Potential hazards related to disruption of utility lines such as natural gas lines are addressed in Section 3.14, *Utilities and Service Systems.*

Criteria for Determining Significance

The proposed project would result in a significant effect related to hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through a the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within 0.25 mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 (i.e., "Cortese list"), and as a result, create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact Summary

Table 3.8-2 summarizes hazards and hazardous materials impacts associated with the proposed project.

Table 3.8-2. Summary of Impacts Hazards and Hazardous Materials

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S	Mitigation Measure HAZ-1	LM
HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LS	None	LS

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school	LS	None	LS
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	NI	None	NI
HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, such that the project could result in a safety hazard for people residing or working in the project area	NI	None	NI
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	NI	None	NI
HAZ-7: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	LS	None	LS

NI = No Impact; LS = Less than Significant; LM = Less than Significant with Mitigation; S = Significant

Environmental Impacts

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (Less than Significant with Mitigation)

Construction Impacts

As described in Section 3.8.3, "Environmental Setting," and in Chapter 2, *Project Description,* the proposed project involves installing floodwalls, constructing a wetland bench, relocating and raising a levee, constructing headwalls at a bridge crossing, removing accumulated sediment from Reaches 2 and 4, and revegetation.

Based on the HSLA report prepared by Locus Technologies (2014), the potential exists for encountering contaminated soil during excavation of the levees along Lower Penitencia Creek. There is also the potential to encounter contaminated groundwater during dewatering work. As described in Section 3.8.3, soil and groundwater underlying Staging Area A may have been affected by historical use of herbicides, pesticides, fill placed during construction of the I-880/Dixon Landing interchange, and heavy traffic on adjacent roadways. Similarly,

soils underlying other portions of the project area may be affected by some or all of these past uses.

If hazardous materials were present in excavated soil or groundwater, a release to the environment could occur and construction workers and the public could be exposed to hazardous materials in soil and groundwater during construction. ~~Implementation of~~The District would implement District BMP HM-9, which requires all field personnel to follow appropriate procedures regarding containment and storage of chemicals, and references applicable legal requirements relating to discharge of hazardous materials/wastes. This BMP would minimize the potential for release of hazardous materials during construction. ~~hazard of encountering hazardous materials during excavation and sediment removal work; it requires that all field personnel follow appropriate procedures if hazardous materials are encountered. Implementation of BMP WQ-7 would require that coffer dams are installed for dewatering work before in-channel construction activities begin.~~ However, ~~these BMPs do not provide details on the appropriate response~~ in the event that ~~suspected~~ contaminated soils or groundwater are encountered during excavation and sediment removal activities, a release to the environment could still occur and construction workers or the public may still be exposed to hazards and the impact would be considered significant. ~~For these reasons, the potential for mishandling discovered hazardous materials during excavation and sediment removal activities is considered significant.~~ Mitigation ~~m~~Measure HAZ-1 would be implemented to ~~address this impact~~provide more details on appropriate responses to address this impact.

Operational Impacts

Once project construction is complete, maintenance activities described in Chapter 2, *Project Description,* would be similar to those that currently take place under the District's SMP. Maintenance activities would involve vegetation management, trash and debris removal, maintenance road grading, fence repair, graffiti removal, wildlife management, sediment removal and other activities covered in the SMP. Occasional repair and maintenance of the floodwalls and headwalls would also be conducted. Implementation of District BMPs HM-9 would ensure proper handling of hazardous materials used to repair the floodwalls and headwalls. Therefore, operational impacts would be less than significant.

Mitigation Measures

Mitigation Measure HAZ-1: Develop and Implement Soil and Groundwater Management Plan.

Prior to initiating ground-disturbing construction activities, the District will develop a Soil and Groundwater Management Plan, prepared by state registered hazardous waste investigation and remediation professionals. The plan will include a health and safety plan; emergency notification protocols; and handling and sampling procedures for site workers in accordance with OSHA and Santa Clara County Hazardous Materials Compliance Division requirements. The plan will describe protocols for offsite disposal of contaminated soils and disposal and/or treatment of contaminated groundwater. In addition, the plan will include coordination and notification protocols and requirements for any inadvertent releases of hazardous materials within the vicinity of any schools. Once complete and approved by the Santa Clara County Hazardous Materials Compliance Division, the plan will be incorporated in the construction specifications for the proposed project.

Significance After Mitigation

With implementation of **Mitigation Measure HAZ-1,** the District would be required to prepare and implement a soil and groundwater management plan. The plan would include a health and safety plan and protocols for appropriate disposal of contaminated soil or groundwater if encountered. Implementation of Mitigation Measure HAZ-1 would reduce this impact to a less-than-significant level.

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant)

Construction Impacts

Construction of the proposed project would require the use of heavy equipment, including excavators, backhoes, bulldozers, graders, generators, and other equipment. Hazardous materials used by this equipment, such as oils, grease, or fuels, could accidentally spill during project construction. Construction equipment and vehicles would be stored at designated staging areas throughout for the duration of construction activities. However, accidental spills or improper use, storage, transport, or disposal of these hazardous materials could result in a public hazard. The release of hazardous materials, particularly during storm events, could also result in adverse effects on underlying soil and groundwater quality, or could result in adverse health effects to construction workers, the public, and environment.

As discussed in Section 3.8.2, "Regulatory Setting," the handling, storage, and disposal of hazardous materials is subject to numerous regulations. In addition, as described in Section 3.9, *Hydrology and Water Quality,* the proposed project would obtain a NPDES Construction General Permit, which requires preparation and implementation of a stormwater pollution prevention plan (SWPPP). Implementation of SWPPP measures and District BMPs HM-7, HM-8, HM-9, and HM-10 would further reduce this impact. These BMPs provide guidance on vehicle and equipment care and hazardous materials management. In combination, adherence to local, state, and federal hazardous materials regulations and implementation of District BMPs would minimize the potential for impacts related to accidental release of hazardous materials associated with transport, use, or disposal of hazardous materials. This impact would be less than significant.

Operational Impacts

As described in Impact HAZ-1 above, once construction is complete, maintenance activities would be similar to those that currently take place. New maintenance activities would involve occasional maintenance and repair of the floodwalls and headwalls, which may require use of hazardous materials. Similar to the construction phase, implementation of District BMPs HM-7, HM-8, HM-9, and HM-10 would minimize impacts pertinent to accidental release of hazardous materials. The operational impact would be less than significant.

Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school (Less than Significant)

Construction Impacts

The Kirin Childcare and Learning Center, located at 255 Balboa Drive, is within 0.25 mile of the project area. This is a year-round facility that would be in session Monday through Friday while the construction is ongoing. No other schools are located within 0.25 mile of the project location. The Kirin Childcare and Learning Center is located approximately 400 feet east of Reaches 3 and 4 and the Milmont Drive bridge. Construction activities would occur during 2018-2019 and 2019-2020.

Construction activities would be temporary and would involve the use of construction trucks and equipment associated with installing floodwalls, constructing a wetland bench, relocating and raising levees, improving channel crossings, and revegetation. Hazardous materials used during construction would be limited to fuel associated with the equipment and would generally not involve substantial hazardous emissions of toxics that would be considered an acute health hazard. As described in Impact AQ-4 (in Section 3.3, *Air Quality*), health risks associated with construction air pollutant emissions would be less than significant. As described in Impact HAZ-2, the handling, storage, and disposal of hazardous materials would be subject to local, state, and federal regulations pertaining to hazardous materials. Construction activities would also be subject to District BMPs HM-7, HM-8, HM-9, and HM-10. While small quantities of hazardous materials could be released into the environment during project construction, these BMPs would ensure that the potential for exposing individuals at nearby schools to hazardous materials used during construction would be less than significant.

Operational Impacts

As described above, maintenance activities would be similar to those that currently take place with the exception of occasional maintenance and repair of the floodwalls and headwalls at the San Andreas Drive bridge. These maintenance activities could involve use of small quantities of hazardous materials. Similar to the construction phase, implementation of District BMPs HM-7. HM-8, HM-9, and HM-10 would ensure that the potential for exposing individuals at nearby schools to hazardous materials used during project operation would be less than significant.

Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (No Impact)

Construction and Operational Impacts

There are no hazardous waste sites listed pursuant to California Government Code Section 65962.5 identified during searches of the EnviroStor database within the City of Milpitas, California; therefore, the proposed project is not located on a Cortese list site. Since the project site is not included on the Cortese list of hazardous materials sites compiled by DTSC in accordance with Government Code Section 65962.5, this criterion is not applicable and there would be no impact.

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, such that the project could result in a safety hazard for people residing or working in the project area (No Impact)

Construction and Operational Impacts

As described in Section 3.8.3 above, the project area is located more than 2 miles from an airport and would not involve construction of aboveground structures that could interfere with air traffic; therefore, impacts related to safety hazards in the vicinity of an airport are not applicable and there would be no impact.

Impact HAZ-6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan (No Impact)

Construction and Operational Impacts

As described in Section 3.8.3, above, the Santa Clara County Operational Area Operations Plan does not include an adopted emergency response plan or emergency evacuation plan that specifies a specific emergency response or evacuation route within the project area. Therefore, this topic is not applicable to the proposed project and there would be no impact. Please refer to Section 3.13, *Transportation and Traffic,* for discussion regarding access for emergency vehicles.

Impact HAZ-7: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (Less than Significant)

Construction Impacts

CAL FIRE does not identify any high or very high hazards in the project area (CAL FIRE 2007, 2008). However, CAL FIRE and the California Fire Alliance identify Milpitas as a "fire-threatened community" (California Fire Alliance 2001).

The use of construction equipment and possible fuel storage could pose a potential wildfire risk. This risk is especially high when vegetation is being cleared and workers and machines are operating among vegetative fuels that can be flammable. Any piling of cleared vegetation could also become a fire fuel, which is considered a fire risk. Potential sources of ignition would include combustion engines, gasoline power tools and other equipment that produce a spark.

Implementation of BMP HM-12 would ensure that construction equipment is equipped with spark arrestors and that work crews have appropriate fire suppression equipment available when construction takes place during the high fire danger period. In addition, compliance with regulations within the Public Resources Codes (PRC), as described in Section 3.8.2 above, would also minimize the risk of wildfire hazards during project construction. Therefore, with implementation of BMP HM-12 and by complying with existing fire safety regulations, this impact would be less than significant.

Operational Impacts

With the exception of occasional repair and maintenance of the new floodwalls and headwalls, proposed maintenance activities are currently ongoing within the project area. Similar to the construction phase, use of equipment during maintenance activities could pose a potential wildfire risk especially in the vicinity of vegetative fuels. Implementation of BMP HM-12 would minimize potential fire risks and ensure that operational impacts associated with wildland fire hazards are less than significant.

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3.9 Hydrology and Water Quality

This section describes the proposed project's regulatory setting and affected environment with respect to hydrology and water quality. This section also describes the significance criteria and methodology used to evaluate impacts, and impacts of the proposed project as they relate to hydrology and water quality. Applicable District BMPs are identified and mitigation measures are proposed to reduce significant impacts. Primary data sources used to prepare this section are as follows:

- FEMA flood insurance rate maps;
- San Francisco Bay RWQCB's Water Quality Control Plan for the San Francisco Basin (Basin Plan) (San Francisco Bay RWQCB 2015a);
- DWR's Groundwater Bulletin 118, Santa Clara Valley Groundwater Basin (DWR 2004); and
- USGS Stream Stats interactive geographic information system (GIS) database (USGS 2015b).

3.9.1 Regulatory Setting

Federal Laws, Regulations, and Policies

Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key references pertaining to water quality regulations for the proposed project are CWA Sections 303(d), 401, and 402.

Section 303(d)

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those that do not meet established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for adopting control plans to improve water quality. USEPA then approves the state's recommended list of impaired waters or adds and/or removes waterbodies. Although Lower Penitencia Creek is not designated as impaired, water from the project area eventually flows into two impaired water bodies: Coyote Creek and South San Francisco Bay. The SWRCB currently lists diazinon and trash from storm runoff and illegal dumping as impairments to water quality for Coyote Creek (SWRCB 2012). Downstream of Coyote Creek, pesticides, metals, metalloids, organic compounds, and invasive species impair the water quality of South San Francisco Bay.

Section 401

CWA Section 401 requires an evaluation of water quality when a proposed activity could result in a discharge to waters of the U.S. In California, the SWRCB and its nine RWQCBs issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a basin plan), as discussed below under the heading "Porter-Cologne Water Quality Control Act." Activities

that might result in discharge to waters of the U.S. must obtain a Section 401 water quality certification to ensure that any such discharge would comply with the applicable provisions of the CWA. Section 401 water quality certifications for discharges in the project area are issued by the San Francisco Bay RWQCB.

Section 402

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES program, which is administered by USEPA. In California, the USEPA has delegated its authority to the SWRCB; in turn, the SWRCB delegates implementation responsibility to the nine RWQCBs, as discussed below with regard to the Porter–Cologne Water Quality Control Act.

The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. The SWRCB's Construction General Permit and Municipal Stormwater Permitting Program are described further in "State Laws, Regulations, and Policies" below.

State Laws, Regulations, and Policies

Porter–Cologne Water Quality Act

The 1969 Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act) dovetails with the CWA (see discussion above). It established the SWRCB and divided the state into nine regions, each overseen by its own RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 303(d), 401, and 402. In general, the SWRCB manages water rights and regulates statewide water quality, whereas the RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires that the RWQCBs develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, Basin Plans must be updated every 3 years.

The project site traverses several hydrologic units (180500030204, 180500040701, and 180500041001) and is under the San Francisco Bay RWQCB's jurisdiction. The Water Quality Control Plan for the San Francisco Bay Basin (Region 2) (Basin Plan) establishes the following beneficial uses for Lower Penitencia Creek (RWQCB 2015a):

WARM: supports warm freshwater ecosystems;

WILD: supports wildlife habitats;

REC-1: provides recreational activities involving body contact; and

REC-2: provides recreational activities involving proximity to water but not necessarily body contact.

State Authority under CWA Section 402

General Permit for Construction Activities

Most construction projects that disturb 1 acre or more of land are required to obtain coverage under the SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The general permit requires that the applicant file a public notice of intent to discharge stormwater and prepare and implement a SWPPP. The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations; and present a list of BMPs that would be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor and report on all construction-related activities to ensure that BMPs are implemented correctly and are effective in controlling the discharge of construction-related pollutants.

Municipal Stormwater Permitting Program

The SWRCB regulates stormwater discharges from municipal separate storm sewer systems (MS4s) through its Municipal Stormwater Permitting Program (San Francisco Bay RWQCB 2015b). Permits are issued under two phases, depending on the size of the urbanized area or municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000) and large (population of 250,000 or more) municipalities, and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990.

Several municipalities in the project area, including the Cities of Milpitas and San Jose, as well as the District and the County of Santa Clara, joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (Santa Clara Permittees) under Order R2-2015-0049, NPDES Permit No. CAS612008 (San Francisco Bay RWQCB 2015b). The permit allows discharge of stormwater runoff from storm drains and watercourses and was renewed in November 2015 (San Francisco Bay RWQCB 2015b). The MS4 permit requires permittees including the District to implement appropriate BMPs at road repair and/or maintenance sites to minimize debris and waste materials from entering surface waterways during road installation, repaving, or routine repair and maintenance activities of streets and roads. Specifically, the MS4 permit requires proper management of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater to avoid discharge to storm drains from these types of work sites. The MS4 permit also requires sweeping and/or vacuuming to remove debris, concrete, or sediment residue from work areas after construction is completed.

The MS4 permit includes provision C.3, which addresses stormwater runoff pollutant discharges and is intended to prevent increases in runoff flows from new development and redevelopment projects. This provision contains goals and requirements including appropriate source control, site design, and stormwater treatment measures for new development and redevelopment projects. According to Provision C.3, redevelopment projects include projects that create and/or replace 10,000 square feet or more of impervious

surface throughout a project site including commercial, industrial, residential, mixed use, and public projects.

3.9.2 Environmental Setting

Watershed

The Lower Penitencia Creek Watershed covers an area of 28.5 square miles east and south of the project area and is a sub-watershed within the much larger Coyote Creek Watershed (347 square miles) (USGS 2015b). Much of the upper Lower Penitencia Creek Watershed is undeveloped lands consisting mostly of hillslopes in the western portion of the Diablo Range. Closer to the project area, the lower watershed becomes more urbanized where runoff from impervious areas moves quickly through the storm drain system to the Lower Penitencia Creek channel. Two major tributaries flow into Lower Penitencia Creek: Penitencia East Channel, and Lower Berryessa Creek, which is just north of San Andreas Drive. Berryessa Creek is the larger of the two tributaries and conveys flows originating from the Diablo Range. The Berryessa Creek sub-watershed accounts for nearly 75 percent of the total area of the Lower Penitencia Watershed (USGS 2015b).

Topography and Climate

The Lower Penitencia Creek Watershed extends from the western slopes of the Diablo Range (maximum elevation of 2,593 feet above mean sea level [amsl]) westward to its confluence with Coyote Creek (at sea level) (USGS 2015b). The proposed project encompasses the downstream portion of Lower Penitencia Creek, extending from its confluence with Lower Berryessa Creek to its confluence with Coyote Creek (see Figure 2-3). Lower Penitencia Creek flows through the baylands margin of the northern Santa Clara Valley and the residential and commercial areas of Milpitas. Elevations within the project area range from sea level to roughly 20 feet amsl) at San Andreas Drive (USGS 2015b). In the project vicinity, the topography of lands on either side of the creek is relatively flat, with many areas below the adjacent top-of-levee elevation.

Similar to other areas of the Santa Clara Valley, the City of Milpitas experiences a Mediterranean climate, with warm, dry summers and cool, wet winters. Average temperatures reach highs near 80°F in the summer months and lows near 42°F during the winter months (Western Regional Climate Center [WRCC] 2015a and 2015b). Most precipitation generally occurs from October to April, with the months of May to September remaining fairly dry. Precipitation amounts vary depending on the location within the watershed, with an average annual total of about 20 inches in the higher elevations of the upper watershed and totals of approximately 12.4 inches over the valley floor, including the project area (WRCC 2015).

Surface Water Hydrology and Quality

Lower Penitencia Creek flows underground through the City of Milpitas until daylighting at Montague Expressway, where it then flows northward in a single-stage, engineered trapezoidal channel. The creek flows approximately 4.1 miles before emptying into the lower portion of Coyote Creek just west of the I-880 crossing. Coyote Creek continues westward approximately 0.2 mile before draining into Coyote Slough and South San Francisco Bay (San Francisco Bay RWQCB 2015; USGS 2015b). Lower Penitencia Creek maintains perennial

flows, with residential irrigation and urban runoff likely contributing most of the flow within the upstream portions during the dry season. Moving downstream, the lower portions of the creek experience a tidal regime. Lower Penitencia Creek is tidally influenced from Coyote Creek upstream to Marilyn Drive (approximately 9,000 feet upstream from Coyote Creek) the entirety of the project area is tidally influenced.

Water quality within the project area is greatly influenced by a semi-diurnal tidal cycle. As such, suspended fine particles of silts and clays substantially increase the turbidity of the water. The high volume of suspended sediment and low energy environment result in sediment deposition within Lower Penitencia Creek and the project area. To minimize the flood hazard, this portion of the creek undergoes periodic sediment removal when accumulated sediment reduces the channel conveyance capacity. Routine sediment removal activities are covered under the District's SMP Manual (SCVWD 2014), which outlines procedural steps and safeguards to maintain water quality during maintenance activities.

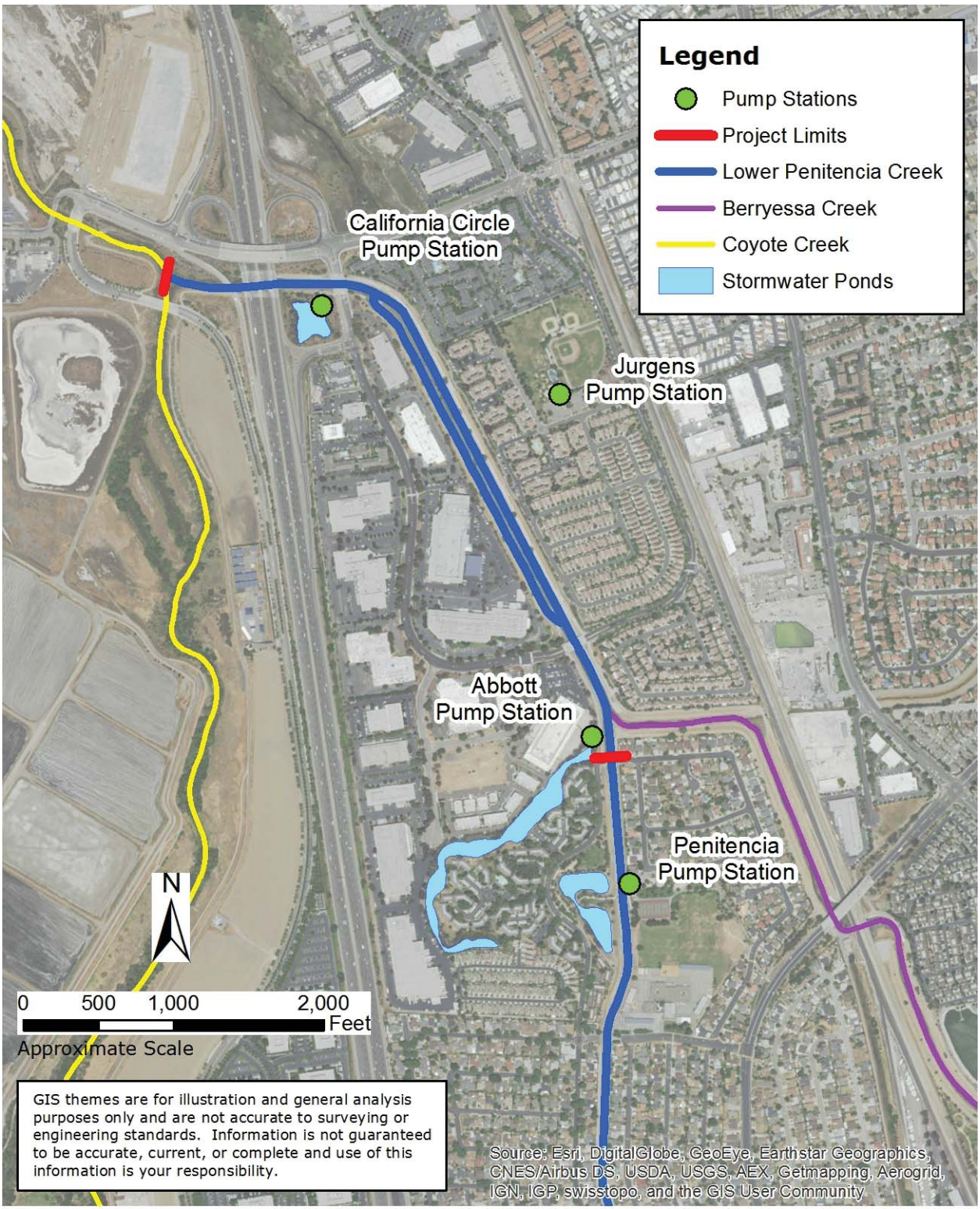
As discussed in Section 3.9.2, "Regulatory Setting," Lower Penitencia Creek is not listed on the CWA 303(d) List of Impaired Water Bodies (SWRCB 2012). However, pollutants can be carried downstream and affect receiving waterbodies. Lower Penitencia Creek flows into the lower portions of Coyote Creek, which is listed for diazinon and trash from stormwater runoff and illegal dumping. Non-point-source pollution and trash from adjacent residential and commercial development may enter waterways during storm events.

Stormwater

The City of Milpitas maintains a dedicated storm drain system that comprises a network of surface street gutters, open drainage channels, and underground pipes. Stormwater is directed generally toward the northwest, where it discharges into South San Francisco Bay. Several pumping facilities are needed to move stormwater near San Francisco Bay. The District manages most of the City of Milpitas' major drainage channels, including Arroyo de los Coches, Berryessa Creek, Calera Creek, Coyote Creek, Piedmont Creek, Tularcitos Creek, and Lower Penitencia Creek (City of Milpitas 2013). All of the City of Milpitas stormwater runoff eventually drains to Coyote Creek. The City of Milpitas also utilizes detention basins (for temporary storage) and retention basins (storage for an indefinite period) to help reduce peak flows and mitigate the potential for flooding of downstream channels.

In the project area, Lower Penitencia Creek receives stormwater flows at three locations: on the left (south) bank in Reach 2 near California Circle; on the right (east) bank in Reach 3 near Terra Mesa Way; and on the left (west) bank near San Andreas Drive in Reach 4. **Figure 3.9-1** shows the locations of pump stations in the project vicinity.

West of the channel, stormwater is collected in two lagoons and pumped into Lower Penitencia Creek. The smaller of the two lagoons is situated between North Abbott Avenue and Fairview Way, with the pump outfall to the channel approximately 200 feet north of the San Andreas Drive bridge (Reach 4). The larger lagoon (2.5 acres) is located at the intersection of Dixon Landing Road and I-880 and collects runoff from I-880 and a 260-acre industrial park. The excess water is pumped into Lower Penitencia Creek near the top of the left (south) levee via three 28-inch-diameter pipes at the downstream side of California Circle (in Reach 2) (City of Milpitas 2013). During flooding events where the creek overtops the left (west) bank, I-880 effectively dams the floodwaters (City of Milpitas 2013).



Source: SCVWD 2016

Figure 3.9-1.
Pump Stations in the Project Vicinity

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Lower Penitencia Creek Improvements Project

East of the project area, stormwater within the northeastern portion of Milpitas (approximately 0.75 square mile) is directed and drained to Dixon Landing Park and Jurgens Pump Station (City of Milpitas 2013). From there, stormwater from Dixon Landing Park is pumped through a force main to an outfall on the right (east) bank of Lower Penitencia Creek near the end of Terra Mesa Way (in Reach 3). The Jurgens Pump Station basin is entirely enclosed, with no hydrologic connection to a natural creek or drainage channel.

Groundwater Quantity and Quality

The project site overlies the Santa Clara Subbasin, which is within the Santa Clara Valley Groundwater Basin (DWR Groundwater Basin Number 2-9.02), near the boundary of the Niles Cone Subbasin (DWR Groundwater Basin Number 2-9.01). The Santa Clara Valley Groundwater Basin, Santa Clara Subbasin, stretches from the northern border of Santa Clara County south to the Town of Morgan Hill, and from the Diablo Range west to the Santa Clara Mountains, for a total surface area of 240 square miles (DWR 2004). Unconsolidated to semi-consolidated Pliocene- to Holocene-age gravel, sand, silt, and clay from converging alluvial fans is the predominant water-bearing unit (DWR 2004). The local geology and soils underlying the project site are described in Section 3.6, *Geology, Soils, and Seismicity*. The Santa Clara Subbasin is largely unconfined except in the northern portion, where a semipermeable clay layer creates a confined zone (SCVWD 2012). The project site lies near the transition from a confined to an unconfined aquifer.

Because groundwater provides nearly half of the water supply for Santa Clara County and the District is responsible for groundwater management of the Santa Clara and Llagas Subbasins, the District maintains an extensive groundwater monitoring program to track aquifer quantity and quality. The District's *Groundwater Management Plan* (2012) outlines basin management objectives, strategies, and programs. Through widespread management of withdrawals, recharge, and deliveries from the State Water Project and Central Valley Project, groundwater levels within the Santa Clara Subbasin have increased since the early 1960s to reach sustainable levels despite a growing service area and population size. In addition, analysis of water samples taken in 2014 from more than 200 domestic water supply wells and more than 250 wells owned by local suppliers confirmed water quality within the Santa Clara Subbasin to be high (SCVWD 2015). Nitrates from fertilizer, leaking septic systems, and livestock waste affected groundwater quality in some samples, especially in rural or agricultural areas. Erosion of naturally occurring metals, such as nickel, aluminum, and chromium-6, were also detected within some samples, but all concentrations were lower than Maximum Contaminant Levels (MCLs) established for drinking water standards (SCVWD 2015).

Within the project area, groundwater levels are expected to be near the surface. According to the SWRCB, groundwater levels may range between 4 and 20 feet bgs (SWRCB 2016) and generally flow west-northwest toward San Francisco Bay. Groundwater levels may fluctuate in response to the tides, variations in rainfall, and the time of year. A review of the SWRCB Geotracker database indicated several past occurrences of groundwater contamination within 1,000 feet the project area, but all of these had minimal potential to affect water quality within the project area (SWRCB 2016). For additional discussion regarding groundwater contamination in the project vicinity, refer to Section 3.8, *Hazards and Hazardous Materials.*

Floodplains

FEMA produces flood insurance rate maps that identify special flood hazard areas. The maps further classify these areas into zones that broadly characterize the potential risk of an area being inundated by a 100- or 500-year flood in any given year. The expressions "100-year flood" and "500-year flood" are shorthand for a flood that has either a 1-in-100 probability (a 1 percent annual chance) or a 1-in-500 probability (a 0.2 percent annual chance) of occurring in any given year. According to the applicable FEMA flood insurance rate maps (06001C0608G and 06085C0058J) and shown in **Figure 3.9-2**, nearly all of the proposed project area is located within the 100-year floodplain (FEMA 2009). The entire system west and downstream of the proposed project is within the Lower Penitencia Creek 100-year floodplain.

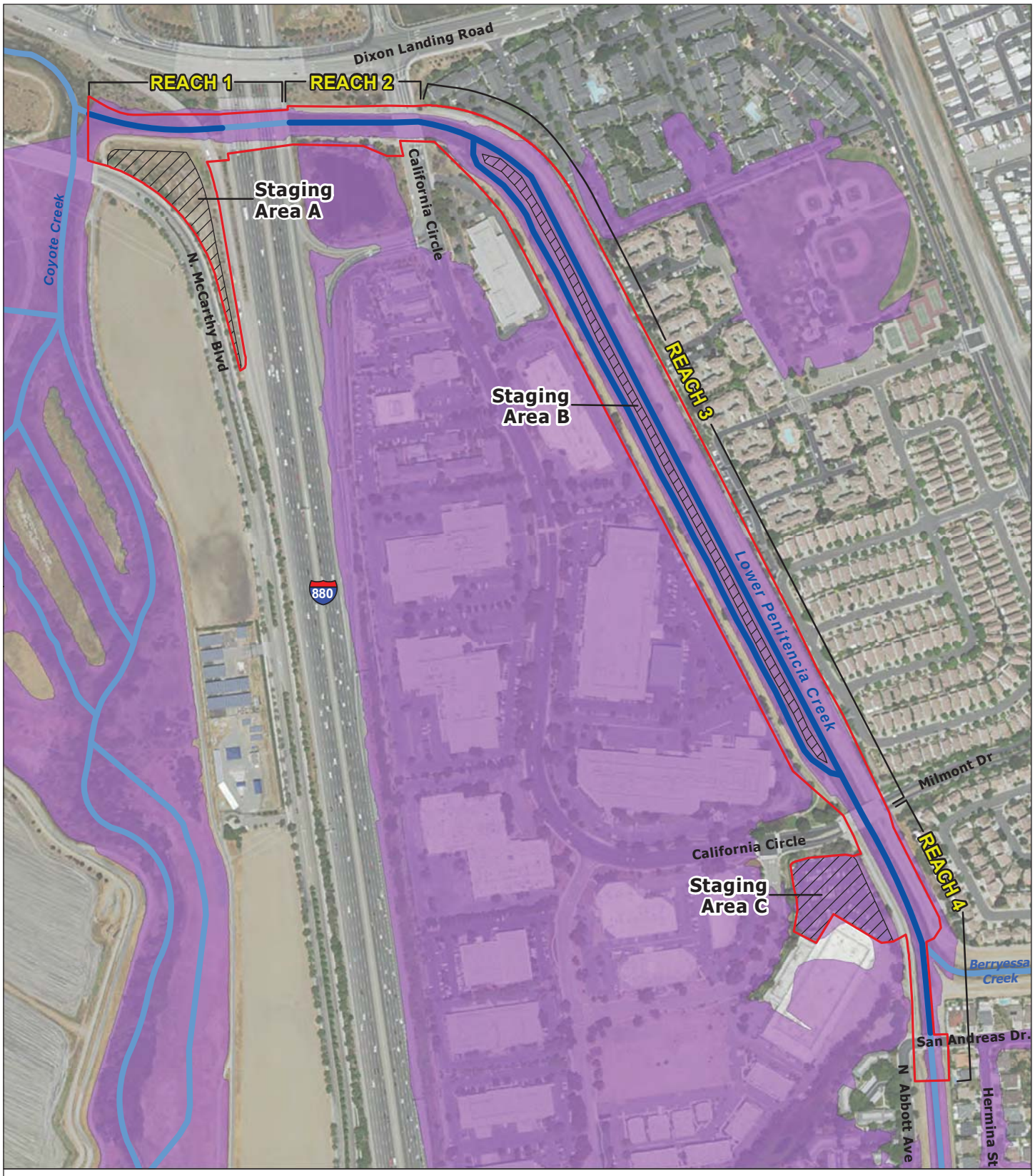
Earthen and concrete levees line much of the downstream portions of Lower Penitencia Creek. The east levee between California Circle and Berryessa Creek (Reaches 3 and 4) is FEMA certified. Within the project area, the existing levees were designed to accommodate flows of up to 4,830 cfs (100-year design discharge). Failure of these levees might result in flooding of a portion of the Milpitas community. As discussed in Chapter 2, *Project Description,* USACE's Upper Berryessa Creek Flood Risk Management Project and the District's Lower Berryessa Creek Flood Protection Project would increase the 1-percent flow in Lower Penitencia Creek to 6,900 cfs. Following completion of these two projects, the capacity of Lower Penitencia Creek would be inadequate to convey the 100-year design discharge. During 100-year flood events, waters would overtop the levees and flood the adjacent neighborhoods.

Anderson and Coyote Reservoirs are located on Coyote Creek about 33 miles and 40 miles upstream from the Lower Penitencia Creek confluence, respectively.. ABAG hazard mapping (1995) predicts that isolated failure of one of two separate dams might temporarily inundate the project area along Lower Penitencia Creek.

Tsunamis, Seiches, and Sea-Level Rise

A tsunami is a series of long waves commonly caused by earthquakes or large landslides beneath the ocean. A tsunami can travel extremely quickly and can be substantially greater in height than normal waves, thereby causing flooding of inland areas. Several historic tsunamis have been recorded in San Francisco Bay, often originating from large earthquakes near Washington, Alaska, Japan, or other Pacific Rim areas. Since local bathymetry greatly influences the size of a tsunami, the effects on the Bay Area would not be uniform. For shoreline areas south of the Dumbarton Bridge/State Route 84, most tsunami impacts would be relatively minor, with flooding occurring only in some low-lying estuaries bordering South San Francisco Bay (NOAA 2010). The project area is located approximately 5.2 miles east of South San Francisco Bay and approximately 2 miles outside of any identified tsunami hazard areas (Cal EMA 2009).

A seiche is a standing wave in an enclosed or partially enclosed body of water, such as a lake, bay, or estuary, which oscillates back and forth from one side of the waterbody to the other. The motion of a seiche is similar to that of water sloshing back and forth between the walls of a swimming pool. Seiches can be caused by earthquakes, tsunamis, very strong winds, and severe storm fronts. Even during a large seismic event, a seiche is not likely to affect the South San Francisco Bay region or the Lower Penitencia Creek channel.



N

0 100 200 400
Feet

FEMA 100-year Flood Zone

Lower Penitencia Creek Project Reaches

Creeks

Project Boundary

Staging Area

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Figure 3.9-2
Local Hydrology and Flood Hazard Areas

Lower Penitencia Creek Improvements Project

During the last century, rising global temperatures caused land ice to melt and ocean waters to expand, increasing the elevation of mean sea level (msl). Along the California coast, measured msl has risen at a rate similar to the global estimates of about 17-20 centimeters (cm) per year (CEC 2009). With rising msl, coastal areas become more vulnerable to extreme high tides, storm surges, coastal erosion, loss of wetlands, and shoreline retreat. Although projected msl increases in California vary depending on model scenario and exact location, estimates of increases in msl south of Cape Mendocino are predicted to be in the range of 12-61 cm per year (CEC 2009; National Academy of Sciences 2012). With extensive urban development along the coastal areas surrounding San Francisco Bay, a substantial rise in msl may dramatically affect much of the existing infrastructure, including transportation (e.g., harbors/ports, roadways, airports), energy facilities, wastewater and stormwater treatment facilities, residential/ commercial/industrial buildings, and recreation corridors. NOAA and the Pacific Institute created a series of maps showing areas that would be vulnerable to projected sea level rise of varying degrees. An estimated sea-level rise scenario of 55 inches (1.4 meters) in 50 years shows overtopping or potential flooding outside of both levees in the project area during 100-year flood events under the existing channel conditions without the proposed project (NOAA 2016; Pacific Institute 2009).

3.9.3 Impact Analysis

Methodology

The methods used to evaluate the environmental impacts of the proposed project on hydrology and water quality involved a review of reports and publications pertaining to hydrology and water quality as provided in the section overview above.

Impacts on hydrologic conditions were evaluated based on how the proposed project could affect hydrologic functions by comparing baseline conditions to anticipated conditions with construction and operation of the proposed project.

Impacts on water quality from the proposed project were assessed qualitatively, based on the degree to which the proposed project could result in violations of water quality standards or impairment of beneficial uses. The beneficial uses established by the San Francisco Bay RWQCB and the requirements set in the applicable NPDES permits were used for the impact analysis.

Flood hazards were assessed by comparing the project site to the identified 100-year floodplain and conducting a qualitative evaluation of the ability of proposed project activities to affect flood hazards by constructing facilities in a floodplain or altering drainage patterns or flow quantities. Tsunami, mudflow, and seiche impacts were evaluated by identifying the project's proximity to defined tsunami hazard areas, reviewing the topography of the project site and the surrounding area, determining the project's proximity to large waterbodies, and qualitatively evaluating the project's likelihood of affecting the probability or occurrence of these hazards or probable risks to human life or property.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on or off site;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place structures within a 100-year flood hazard area that would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

Impact Summary

Table 3.9-1 summarizes hydrology and water quality impacts of the proposed project.

Table 3.9-1. Summary of Impacts Hydrology and Water Quality

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
HYD-1: Violate any water quality standards or waste discharge requirements; or otherwise substantially degrade water quality	LS	None	LS
HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table	LS	None	LS

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)			
HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, or siltation on- or off-site	LS	None	LS
HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site	LS	None	LS
HYD-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	~~NI~~LS	None	~~NI~~LS
HYD-6: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or place structures within a 100-year flood hazard area structures which would impede or redirect flood flows	NI	None	NI
HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	B	None	B
HYD-8: Inundation by seiche, tsunami, or mudflow	NI	None	NI

B = Beneficial; NI = No Impact; LS = Less than Significant

Environmental Impacts

Impact HYD-1: Violate any water quality standards or waste discharge requirements; or otherwise substantially degrade water quality (Less than Significant)

Construction Impacts

Construction and earth-moving activities adjacent to and within the Lower Penitencia Creek channel could affect water quality and thereby result in adverse effects on beneficial uses identified by the San Francisco Bay RWQCB. More specifically, construction activities that would disturb channel bank and bed material (e.g., construction of the vegetated bench in

Reach 1 and dewatering) could cause erosion and sediment transport downstream. Increased suspended sediment loads could increase turbidity, water temperature, and dissolved oxygen. Construction activities and use of equipment adjacent to and within the channel (e.g., at Staging Area B) could also lead to the unintentional release of construction debris, fuels, lubricants, solvents, or other pollutants into the channel. Additionally, disturbance of deposited sediments or fill soils may contain contaminants or hazardous materials that may affect water quality of Lower Penitencia Creek or receiving waterbodies (i.e., Coyote Creek and San Francisco Bay). The following proposed project elements would have potential to affect water quality: construction of the new headwalls at the San Andreas Drive bridge; construction of the new replacement levee and wetland bench in Reach 1; construction of sheet pile floodwalls in Reaches 1, 2, 3, and 4; and dewatering activities that would occur throughout Reaches 1, 2, and 4, and potentially in Reach 3 (if Staging Area B is used). Additional discussion about construction activities that could result in water quality impacts is provided below.

Water Discharges

In-channel construction work for the proposed project would likely occur between mid-June and mid-October when channel flow is lowest. However, the semi-diurnal tidal cycle would necessitate dewatering of the creek channel including approximately 800 feet in Reach 1, 500 feet in Reach 2, and 800 feet in Reach 4. If Staging Area B is utilized, short sections of the secondary channel in Reach 3 would also require dewatering near the northern and southern concrete ramps that provide access to the central berm. Additionally, depending on the layout of equipment needed to construct floodwalls on the south bank of Reach 2 and both banks of Reach 3, it may be necessary to dewater the entire length of Reaches 2 and 3 during construction of the floodwalls. In total, between 2,100 feet and 5,100 linear feet of channel would be dewatered. As discussed in Chapter 2, construction activities would be phased and only a portion of the channel would be dewatered at a given time within a four-month period. All water in the dewatered areas would be removed and creek flows and runoff would be diverted around the work areas using water-tight coffer dams located at the upstream and downstream ends of the construction areas. Diversion of creek and runoff water would only occur during the summer dry season (June 15 through October 15). Discharge of sediment-laden water (water that contains high concentrations of suspended solids or high turbidity) could affect water quality in the channels and downstream receiving waters. The District would implement BMP WQ-7 to isolate construction areas from tides and water flows that could entrain pollutants and BMP WQ-15 to ensure that the diverted water would meet water quality standards and not degrade water quality or substantially increase turbidity of the downstream receiving waters. In addition, BMP WQ-6 would be implemented to prevent contact between creek water and freshly poured concrete, which can adversely affect water quality. BMPs HM-7 and HM-8 would prohibit vehicle and equipment cleaning, servicing, or maintenance within the creek channel and HM-9 would ensure proper handling of hazardous materials to protect water quality. Impacts to water quality would be less than significant.

Soil Discharges

Even though construction would take place during the dry season, an intense wind or rain event or tidal ebb and flow could result in substantial soil erosion. Pollutants from operating equipment could also accidentally be released into the channel.

The proposed project would be required to comply with applicable water quality permits such as the NPDES Construction General Permit. As part of compliance with the Construction

General Permit, a SWPPP would be prepared to prevent polluted dewatered surface water or groundwater from being discharged into other waterbodies. The SWPPP would include appropriate erosion control, spill prevention, and other construction BMPs. The District's Best Management Practices Handbook includes many BMPs that are intended to prevent and control erosion and sediment transport as well as accidental release of pollutants. District BMPs AQ-1, BI-3, WQ-4, WQ-5, WQ-9, WQ-10, and WQ-16 would be implemented to minimize the potential for soil erosion at construction areas, and promote stabilization and revegetation of disturbed areas after construction is complete. These BMPs would be incorporated into the proposed project's SWPPP. By limiting in-water construction activities to the dry season, complying with the project's Construction General Permit, and implementing the above-listed BMPs, adverse effects of soil discharges on water quality would be less than significant.

Operational Impacts

During project operation and similar to current practice, maintenance activities would involve vegetation management, trash and debris removal, maintenance road grading, fence repair, graffiti removal, wildlife conflict management, bank stabilization, sediment removal, and other activities that are covered under the SMP and programmatic permits issued for SMP activities extending through 2023 (SCVWD 2014a). In accordance with the MS4 permit, the District would implement appropriate BMPs at the District's maintenance road repair sites to minimize debris and waste materials from entering surface waterways during routine maintenance road repair activities. New maintenance activities would entail periodic maintenance and repair of the floodwalls and headwalls, which may involve some in-channel work. Similar to the construction phase, implementation of BMPs AQ-1, BI-3, HM-7, HM-8, HM-9, HM-10, WQ-1, WQ-4, WQ-6, WQ-11, WQ-15, and WQ-16 would minimize adverse water quality effects. As such, operational effects on water quality would be less than significant.

Impact HYD-2: Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted) (Less than Significant)

Construction Impacts

As discussed in Section 3.9.2, "Environmental Setting" above, due to the close proximity to San Francisco Bay and the perennial nature of Lower Penitencia Creek within the project area, groundwater is shallow, (i.e., between 4 and 20 feet bgs [SWRCB 2016]). Construction activities that involve excavation would likely encounter groundwater resources, and dewatering would be required.

Given that dewatering activities would be temporary in nature, occur in a phased manner by channel reach, and would occur only during dry-season months (mid-June to mid-October), adverse effects on groundwater levels would be less than significant.

Operational Impacts

Proposed maintenance activities described in Chapter 2, *Project Description,* would be similar to ongoing activities that are conducted through the District's SMP. New maintenance

activities, which include periodic maintenance and repair of the floodwalls and headwalls, would occur on an infrequent, as-needed basis. Such activities are not anticipated to require groundwater dewatering. Therefore, there would be no new operational impacts on groundwater recharge.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site (Less than Significant)

Construction Impacts

Project construction activities are not expected to substantially alter existing drainage patterns. During the construction phase, on-site drainage would continue to flow towards Lower Penitencia Creek. As discussed in Impact HYD-1, during construction activities, instream dewatering would occur in portions of the project area. This work would be temporary and all temporary diversions would be removed following project completion. Furthermore, District BMPs, such as BMP BI-3, BMP WQ-4, BMP WQ-5, BMP WQ-6, and BMP WQ-8, would limit temporary changes to existing drainage patterns and surface runoff. These BMPs would minimize effects on drainage patterns by ensuring proper removal of temporary diversion structures or cofferdams after work is complete, staging equipment and construction materials away from the channel, stabilizing construction entrances and exits with geotextile mats, isolating concrete near waterways, and minimizing use of hardscape in bank protection designs.

Operational Impacts

Lower Penitencia Creek tends to be highly depositional from the confluence of Lower Berryessa Creek downstream to the confluence with Coyote Creek. Under existing conditions, the project area requires routine sediment removal to maintain channel capacity. Sediment was most recently removed from the project area in 2015 (SCVWD 2016). In 2015, approximately 33,300 cy of sediment was removed from Reaches 2, 3, and 4. The depositional nature of this portion of Lower Penitencia Creek is to be expected based on its position within the lower watershed, low elevation gradient, and tidal influence.

Following completion of the Lower and Upper Berryessa Creek projects, the estimated 1-percent (100-year) design discharge for Lower Penitencia Creek at its confluence with Coyote Creek would increase from the current 4,830 cfs to an estimated 6,900 cfs (SCVWD 2016). The proposed project would contain the 100-year event within the channel without overtopping of banks, thereby increasing the amount of water conveyed within the channel. This increased volume of water may increase sediment transport during large stormflows. Despite an increase of suspended and bed sediment carried downstream during infrequent high flow events, overall sedimentation would be controlled by the more common lower flows and daily tidal ebb and flood. The low channel gradient and tidal influence in Lower Penitencia Creek would continue to result in a depositional environment within the project area. However, the proposed project would restore the in-channel floodplain and increase the cross-sectional area of the channel within Reach 1; thereby increasing sediment storage capacity. In addition, as described in Chapter 2, the proposed project, by increasing flow conveyance capacity in the channel, would reduce the degree and frequency of routine sediment removal in the channel. For these reasons, the project would not substantially alter

drainage patterns such that substantial changes in on- or off-site erosion and siltation would occur. This impact would be less than significant.

Impact HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site (Less than Significant)

Construction Impacts

As discussed in Impact HYD-3, construction of the proposed project would not result in substantial alteration of drainage patterns or increased runoff. During construction activities, instream dewatering would occur in portions of the project area, as discussed in Impact HYD-1. Dewatering would temporarily divert creek and tidal waters from portions of the creek channel under active construction during the summer dry season (June 15 through October 15). This work would be temporary and all temporary diversions would be removed following project completion. Furthermore, District BMPs, such as BMP BI-3, BMP WQ-4, and BMP WQ-5, would limit temporary changes to existing drainage patterns and surface runoff. These BMPs would minimize effects on drainage patterns by ensuring proper removal of temporary diversion structures or cofferdams after work is complete, and staging equipment and construction materials away from the channels. As such, impacts on existing drainage patterns during project construction would be less than significant.

Operational Impacts

The purpose of the proposed project is to accommodate other channel capacity projects upstream of the project area. Under current conditions, the estimated 100-year design discharge for Lower Penitencia Creek at its confluence with Coyote Creek is 4,830 cfs. As described in Chapter 2, *Project Description,* after completion of the Lower and Upper Berryessa Creek projects, the estimated 100-year discharge will increase to 6,900 cfs.

As described in Impact HYD-3, the proposed project would relocate and raise the levee in Reach 1, raise the levee in Reach 4, construct sheet pile floodwalls, and construct new headwalls on the San Andreas Drive bridge. Collectively, these improvements would adequately convey the increased flows from the upstream channel improvement projects. All other project elements would be designed to accommodate a 100-year design discharge of 6,900 cfs. The new floodwalls would be designed to accommodate the ultimate 8,700 cfs flow. This would avoid flooding of developed areas adjacent to the project area during 100-year flood discharge and would extend flood protection benefits downstream to the Coyote Creek/Lower Penitencia Creek confluence. The proposed project would maintain the FEMA certification of the Lower Penitencia Creek east levee, located between California Circle and the Lower Berryessa Creek confluence. The Lower Penitencia Creek channel passing under the two Caltrans bridges across Lower Penitencia Creek (I-880 and I-880 southbound ramps) has existing flow conveyance capacity to convey the 100-year flow. After construction of the proposed project, the creek would continue to have capacity to convey the 100-year flow without overtopping of the creek banks at the two Caltrans bridges. The project would not increase flood hazards to the Caltrans bridges. Based on a hydraulic analysis completed for the proposed project, hydrologic modeling was performed to determine the peak flow rates on Coyote and Lower Penitencia Creek during a 100-year event. According to the analysis used for determining the 1-percent water surface profile on which the project design is based,

flow capacity of Coyote Creek (downstream of the project area) was found to be adequate to convey the combined flows during the 100-year event while maintaining freeboard (Zedler, pers. comm., 2017). The project would not increase flood hazards to areas downstream of the Lower Penitencia Creek/Coyote Creek confluence.

The proposed project would be beneficial by providing flood protection for Milpitas residents and businesses adjacent to the creek. Therefore, this impact would be less than significant.

Impact HYD-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (Less than Significant)

Construction and Operation Impacts

The proposed project would not introduce substantial new impervious surfaces that would result in or contribute to increased runoff such that the capacity of the City's existing stormwater drainage system would be exceeded. Although project construction would modify more than 10,000 sf of maintenance roads, changes in the amount of impervious surface area would be minor. After project construction is complete, the top-of-bank maintenance roads in Reaches 2, 3, and 4 of the Lower Penitencia Creek channel would be similar to existing maintenance roads in length, and surfacing materials. Because the Reach 2 floodwall would displace the existing paved access driveway to the City of Milpitas pump station located south of Reach 2, a new driveway connecting to California Circle would be built. The new drive would be surfaced with permeable aggregate base.

In portions of Reaches 3 and 4, some sections of the existing maintenance roads/trails on the levee crests would be widened by ~~two~~ up to four feet to extend to the base of the newly installed floodwalls, which would result in a minor increase in road surface area. Road/trail widths would increase from the current width of 10 feet to 14 feet. The road, including the widened areas, would be surfaced with permeable aggregate, which would be similar to the existing road surface. In Reach 4, existing roads/trails paved with concrete on the east levee would be replaced with roads/trails surfaced with permeable aggregate base rock. In Reaches 1 through 3, a total of 7,742 square feet of impervious surfaces would be created through widening of maintenance roads/trails paved with asphaltic concrete. In Reach 4, a total of 1,112 square feet of existing roads/trails paved with asphaltic concrete would be replaced with aggregate base. As a result, the project would result in a net increase of 6,630 square feet of new impervious surfaces.

~~The existing depressed maintenance road in Reach 3 would not be modified. the existing levee crest maintenance road would be removed when the levee is demolished and replaced by a new maintenance road on the crest of the newly constructed setback levee. The new levee crest road would be surfaced with compacted aggregate, similar to the road it would replace. Overall, post-construction maintenance roads would similar in area and surface materials as the existing channel maintenance roads.~~

~~The proposed headwalls on the San Andreas Drive Bridge would be located on the bridge deck, an existing impervious surface. The headwalls would not result in increased impervious surface area and would not affect runoff rates.~~

~~The project floodwalls would be composed of coated steel and would be impervious. The proposed project would include about 7,000 linear ft. of floodwalls, topped by a 1 ft. wide coated steel cap. The total impervious surface area would be about 7,000 sf (0.16 ac), which would represent less than one percent of the total project area of 25.47 acres. That change would not substantially affect storm runoff rates. The floodwalls would be located at or near the cress of existing levees, which serve as existing local runoff divides; thus, they would not change runoff flow directions from existing conditions.~~

~~The proposed project would not substantially increase the number of impervious surfaces at the project site or otherwise substantially affect stormwater runoff rates or volumes. After construction, storm runoff from the project area would not exceed the capacity of existing stormwater drainage systems. The proposed project would not generate new sources of polluted runoff. After project construction is complete, the top-of-bank maintenance roads in Reaches 2, 3, and 4 of the Lower Penitencia Creek channel would be similar to existing maintenance roads in length, and surfacing materials. In portions of Reaches 3 and 4, some section of the existing maintenance roads on the levee crests would be widened by two to four feet to extend to the base of the newly installed floodwalls, which would result in a minor increase in road surface area.~~

~~The proposed project would include resurfacing or widening of over 10,000 square feet of the District's existing maintenance roads and the District would be required to comply with Provision C.3. of the Municipal Regional Permit, which encourages source control measures that limit pollutant generation, discharge and runoff (e.g., bioswales, bioretention units, and other low impact development options).~~ Although this project is not subject to the source control, site design, and stormwater requirements pursuant to the Municipal Regional Stormwater Permit (NPDES No. CAS612008), the design of the proposed project would be consistent with the policies contained in the Municipal Regional Permit by minimizing runoff generation, promoting infiltration of storm water, and using vegetated areas to filter pollutants from the storm water before it enters the creek. The project would minimize generation of stormwater by surfacing new and existing roads with permeable material wherever possible and removing existing impervious pavement where possible. The maintenance roads in Reaches 1 and 3 would have cross-slopes directing stormwater runoff from the roads to vegetated areas on the banks of the creek, including the wetlands bench and transitional vegetated areas in Reach 1. This would promote infiltration of stormwater into the soil. The vegetated areas receiving stormwater would filter sediment and other pollutants from the stormwater, reducing the amount of pollutants reaching the creek channel. Additionally, the project design would include landscaping consistent with the guidelines referenced in section C.3.a.i(8) of the Municipal Regional Permit. Revegetation at the project area would use native plants that are adopted to the local climate. No irrigation systems would be installed and artificial watering would be limited to the minimum necessary to establish the plants. After the establishment period is complete, no irrigation or artificial watering would be required. ~~Compliance with applicable provisions in the~~The project would be furthering stormwater policies in the Municipal Regional Permit and prevent stormwater pollution; therefore~~would ensure that~~ this impact would be less than significant.

Impact HYD-6: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or place within a 100-year flood hazard area structures which would impede or redirect flood flows (No Impact)

Construction and Operation Impacts

The proposed project would not include the construction or modification of any homes in a flood hazard area; therefore, the criterion regarding placement of housing within the flood hazard area does not apply to the proposed project and is not discussed further.

During construction, coffer dams would be temporarily installed within the channel to divert flows around the construction work areas. If Staging Area B is utilized, the staging of equipment and materials would also occur within the 100-year flood hazard area. However, because construction activities would take place during the summer months when flood hazards are low, temporary use of cofferdams and staging of equipment and materials in Staging Area B are not anticipated to impede or redirect flood flows. In the long-term, the project would involve placement of new structures within the 100-year flood hazard area (e.g., new levee, wetland bench, and floodwalls). However, because the purpose of the proposed project is to improve flood protection and because the new structures would be designed to accommodate 100-year flood flows, the proposed project would not be expected to impede or redirect those flows.

Impact HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam (Beneficial)

Construction and Operation Impacts

Anderson and Coyote Reservoirs are located on Coyote Creek about 33 and 40 miles upstream of the Lower Penitencia Creek confluence. Failure of either or both of these dams could result in severe short-term flooding of Coyote Creek (ABAG 1995). However, due to the distance from the project area, any flooding would greatly dissipate before it reached the project area. The proposed project would not increase the flood risks due to failure of either dam.

Additionally, failure of levees adjacent to Coyote Creek protecting the south baylands area may result in flooding to the lower (downstream) portions of Lower Penitencia Creek (ABAG 1995). After construction of the proposed project, Coyote Creek would continue to have capacity to convey the combined flows of Lower Penitencia Creek and Coyote Creek during the 100-year event. The proposed project would not increase the risk of Coyote Creek levee failure. The proposed project would increase the conveyance and floodwater storage capacity of Lower Penitencia Creek, thereby reducing potential flood damage resulting from failure of the Coyote Creek levees. The proposed project would not increase flood risks due to levee failure.

The proposed project addresses issues of inadequate flood protection provided by the existing levees during a 100-year flood event. As part of the hydrologic determination of flood elevations and freeboard height, the potential effects of sea-level rise were taken into consideration as the proposed project was designed to accommodate an expected increase of

55 inches (2.59 feet) in sea level over the proposed project's 50-year design life. As such, the impact would be beneficial.

Impact HYD-8: Inundation by seiche, tsunami, or mudflow (No Impact)

Construction and Operation Impacts

The project site is not near the ocean coastline and is not located within a tsunami hazard area (Cal EMA 2009). In addition, the project site is not located adjacent to any large waterbodies and, therefore, would not be at risk of a seiche. The project site is not adjacent to any steep slopes and would not be at risk for damage by mudflows. For these reasons, inundation by seiche, tsunami, or mudflow would not occur. There would be no impact.

3.10 Land Use and Planning

3.10.1 Overview

This section describes the setting and impacts of the proposed project related to land use and planning. The "Regulatory Setting" section describes applicable laws, regulations, and policies related to land use and planning, while the "Environmental Setting" section describes the existing land use designations and characteristics at the project site and vicinity. The "Impact Analysis" section then evaluates impacts on land use and planning that could result from the proposed project.

3.10.2 Regulatory Setting

No federal or state laws, regulations, or policies related to land use and planning are applicable to the proposed project. Local plans relevant to the proposed project include the *City of Milpitas General Plan*, *Milpitas Trails Master Plan*, and *Bikeway Master Plan Update*.

Specific land use goals and The *City of Milpitas General Plan* (2012) provides the framework for land use planning in the City and identifies land use designations that inform the City's zoning ordinance. The General Plan land use map (City of Milpitas 2012) designates the project site (i.e., bed and banks of Lower Penitencia Creek) as Parks and Open Space (POS). The land use designations for surrounding areas include Industrial Park (IP); Multi-family Residential, Very High Density (MFH); General Commercial (GC); Manufacturing and Warehousing (MW); and Multi-Family Residential, Medium Density (MFM).

The Lower Penitencia Creek Trail is identified as a planned trail in the *Milpitas Trails Master Plan* (City of Milpitas 1997). The *Bikeway Master Plan Update* identifies the path on the west side of Reach 4 as an existing Class I bikeway. The *Bikeway Master Plan Update* also identifies the levee-maintenance roads along the west side of Lower Penitencia Creek (Reaches 1, 2, and 3 of the proposed project) as a location for a proposed Class I bike path (City of Milpitas 2009).

Appendix B summarizes policies contained in the above-described plans that are relevant to the proposed project.

3.10.3 Environmental Setting

Land uses in the project area include residential, commercial, and office/industrial park uses. The project site itself is currently used for flood protection and stormwater conveyance, as well as recreational and transportation purposes (i.e. bridge crossings). Reaches 1 and 2 are surrounded by highway and street systems (i.e., I-880, Dixon Landing Road, and California Circle), with no adjacent residential or commercial development. Reach 3 is bordered by multifamily and single-family residential development to the east and office/industrial park development to the west. Apartment complexes and three-story town homes are located along the northern portion of Reach 3 to the east. Moving south toward Milmont Drive and the confluence with Lower Berryessa Creek, there are more single-family homes to the east of Reach 3. New single-family homes and townhomes are currently being constructed immediately west of Reach 3. Reach 4 is surrounded by single-family homes to the east and industrial/office park development to the west.

The project site is designated as Parks and Open Space in the *City of Milpitas General Plan* and is characterized by the engineered, mostly earthen flood control channel and the District's maintenance roads on both sides of the channel in Reaches 2, 3, and 4. Along the east bank of Reach 3, the northern portion of the maintenance road is paved and is part of the City's Penitencia Creek Trail. Approximately 800 feet south of California Circle Drive, the paved trail continues slightly east and then south, paralleling the District's maintenance road and channel. Within Reach 4, the maintenance road on the west side of the channel is paved and is considered a designated City of Milpitas trail. Other segments of the District's maintenance access roads are used for recreation even though such roads are not designated for this purpose.

3.10.4 Impact Analysis

This discussion describes and evaluates impacts related to land use and planning from the proposed project. This evaluation is based in part on the existing regulations and land uses/environmental resources in the project area, as described above.

Methodology

The analysis of impacts related to land use and planning compares aspects of the proposed project to applicable land use plans and policies. The *City of Milpitas General Plan*, *Milpitas Trail Master Plan*, and *Bikeway Master Plan Update*, which are described in Appendix B, were reviewed to characterize existing land uses within the project vicinity. Any identified inconsistencies between applicable land use plans and elements of the proposed project were evaluated in consideration of the specific significance criteria described below.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact related to land use and planning if it would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact Summary

Table 3.10-1 summarizes land use impacts of the proposed project.

Table 3.10-1. Summary of Impacts Land Use

Impact	Impact Determination Before Mitigation	Applicable Mitigation Measures	Impact Determination After Mitigation
LU-1: Physically divide an established community	LS	None	LS
LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	LS	None	LS
LU-3: Conflict with any applicable habitat conservation plan or natural community conservation plan	NI	None	NI

LS = Less than Significant; NI = No Impact

Environmental Impacts

Impact LU-1: Physically divide an established community (Less than Significant)

Construction Impacts

As described in Chapter 2, *Project Description*, the proposed project would include construction of floodwalls in Reaches 1, 2, 3 and 4; a wetland bench and replacement levee in Reach 1; and headwalls at the San Andreas Drive bridge in Reach 4. Project construction would generally occur within existing District ROW and easements along the channel, which includes the District's maintenance roads on the south side of the channel in Reach 1 and both sides of the channel in Reaches 2, 3, and 4. The staging of equipment and materials may occur at three locations: Staging Area A, a vacant area south of Reach 1; Staging Area B, on the central berm in Reach 3; and Staging Area C, adjacent to Reach 4 southwest of the Milmont Drive bridge. Staging Area A is currently owned by the City of Milpitas, Staging Area B is within the District's ROW, and Staging Area C is privately owned. The District would obtain a temporary construction easements or fee title from the City of Milpitas to use Staging Area A and a temporary easement from the property owner of Staging Area C. Construction activities would require temporary closure of the Penitencia Creek Trail, which coincides with the District's maintenance road on the east side of the channel in Reach 3. The effects of temporary trail closure are described in Section 3.12, *Recreation.*

Because project construction would primarily be limited to the District's ROW and easements would be obtained from the City for areas where construction would occur outside of the District's ROW (within Reaches 1, 2 and 3), project construction would not result in adverse effects related to physical division of an established community. Construction-related effects would be less than significant.

Operational Impacts

The proposed project would not introduce any new land uses or result in any land use changes. Following project construction, use of the trails and maintenance roads along both sides of the creek would be similar to existing conditions. Where the Penitencia Creek Trail crosses the outboard side of the eastern levee along Reach 3, pedestrian accessibility would be maintained. The District would construct earthen pedestrian ramps on both sides of the Reach 3 floodwall to ensure continued access to the trail. The proposed floodwalls and other project elements would not preclude use or future development of trails along the project reaches. In addition, District maintenance activities (e.g., periodic vegetation trimming, graffiti removal, and trash and debris removal) would be similar to existing maintenance activities that occur under the District's SMP. The floodwalls and headwalls would be repaired and maintained on an infrequent and as-needed basis. As such, the proposed project would not physically divide the community during project operation. This impact would be less than significant.

Impact LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect (Less than Significant)

Construction Impacts

Consistency with policies relevant to various other resource topics are addressed in other sections of Chapter 3. Numerous land use plans and policies govern the project's impacts on the environment during construction (e.g., noise standards contained in the *City of Milpitas General Plan*, air quality standards and regulations, goals and policies related to wetlands and biological resources). Due to the nature of these policies and regulations, impacts during project construction are addressed in other resource sections of this EIR and are not addressed here. Given that land use plans such as the general plan and *Milpitas Trails Master Plan* identify long-range planning goals and policies, temporary conflicts with such plans during construction (e.g., temporary closure of creek-side trails and restriction of access to the creek during construction activities) are considered less than significant.

Operational Impacts

Potential conflicts with land use plans during project operation or due to proposed project components would primarily be related to future use and development of the trails along the project reaches and continued opportunities for recreational use of the creek. As described in the regulatory setting section above, the project site is designated as Parks and Open Space in the *City of Milpitas General Plan*, and several goals and policies in the general plan relate to provision of trail systems and recreational opportunities along creeks in the City. The proposed project would not permanently alter existing land uses or introduce new land uses into the area

As described in Appendix B and in Impact LU-1, the *Milpitas Trails Master Plan* and *Bikeways Master Plan Update* identify a proposed trail and Class I bikeway along the project reaches. The general plan also contains goals and policies for linking facilities through streamside trail systems and for coordination between the District and the City regarding recreational access and trail development along District-managed streams. As described in Impact LU-1, the proposed project would not preclude future use and development of trails along Lower

Penitencia Creek or prevent or substantially inhibit recreational use of the creek. The City's Penitencia Creek Trail would be allowed to cross over the proposed floodwalls via ramps.

In addition, the proposed project has been designed to retain existing recreational trails within the project site. Throughout the project's planning process, the District has taken into consideration community benefits beyond flood protection, including the quality of the recreation experience provided (SCVWD 2016). Consistent with *City of Milpitas General Plan* Guiding Principle 4.d-A-8, which is provided in Appendix B and requires coordination between the City and District on creek projects, early project planning was conducted in coordination with the City.

Overall, given that existing and proposed recreational trails would be retained, there would be no conflicts with existing land use plans or policies. The proposed project would not conflict with the general plan land use designation for the project site of Parks and Open Space and would allow for future development of trails and bikeways proposed in the *Milpitas Trails Master Plan* and *Bikeways Master Plan Update*. As such, this impact would be less than significant.

Impact LU-3: Conflict with any applicable habitat conservation plan or natural community conservation plan (No Impact)

Construction and Operational Impacts

As described in Section 3.4, *Biological Resources,* the Santa Clara Valley Habitat Plan covers much of Santa Clara County but does not include the areas within the City of Milpitas. No other habitat conservation plans or natural community conservation plans apply in the project area. Therefore, no impact related to conflicts with habitat conservation plans or natural community conservation plans would occur.

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3.11 Noise and Vibration

3.11.1 Overview

This section describes the existing noise environment in the vicinity of the project area, presents relevant noise and vibration regulations, identifies sensitive receptors that could be affected by the proposed project, and evaluates the noise and vibration impacts of the proposed project. Mitigation measures to avoid or reduce impacts are proposed, as appropriate.

3.11.2 Overview of Noise and Vibration Concepts and Terminology

Noise

In the CEQA context, noise can be defined as unwanted sound. Sound is characterized by various parameters, including the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound level, or sound intensity. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary enormously within the range of human hearing, a logarithmic scale is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all frequencies in the spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive, creating the A-weighted decibel (dBA) scale.

Different types of measurements are used to characterize the time-varying nature of sound. Below are brief definitions of these measurements and other terminology used in this section.

- **Decibel (dB)** is a measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude.
- **A-weighted decibel (dBA)** is an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Maximum sound level (L_{max})** is the maximum sound level measured during a given measurement period.
- **Minimum sound level (L_{min})** is the minimum sound level measured during a given measurement period.
- **Equivalent sound level (L_{eq})** is the equivalent steady-state sound level that, in a given period, would contain the same acoustical energy as a time-varying sound level during that same period.
- **Day-night average sound level (L_{dn} or dBL)** is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels during the period from 10:00 p.m. to 7:00 a.m. (typical sleeping hours). This weighting adjustment reflects the elevated sensitivity of individuals to ambient sound during nighttime hours.
- **Community noise equivalent level (CNEL)** is the energy average of the A-weighted sound levels during a 24-hour period, with 5 dB added to the A-weighted sound levels

between 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels between 10:00 p.m. and 7:00 a.m.

In general, human sound perception is such that a change in sound level of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level. **Table 3.11-1** presents approximate noise levels for common noise sources, measured adjacent to the source.

Table 3.11-1. Examples of Common Noise Levels

Common Outdoor Activities	Noise Level (dBA)
Jet flyover at 1,000 feet	110
Gas lawnmower at 3 feet	100
Diesel truck at 50 feet traveling 50 miles per hour	90
Noisy urban area, daytime	80
Gas lawnmower at 100 feet, commercial area	70
Heavy traffic at 300 feet	60
Quiet urban area, daytime	50
Quiet urban area, nighttime	40
Quiet suburban area, nighttime	30
Quiet rural area, nighttime	20

Source: Caltrans 2009

Vibration

Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may be composed of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hertz (Hz). Most environmental vibrations consist of a composite, or "spectrum," of many frequencies. The normal frequency range of most ground-borne vibrations that can be felt generally starts from a low frequency of less than 1 Hz and extends to a high of about 200 Hz. Vibration information for this analysis has been described in terms of the peak particle velocity (PPV), measured in inches per second (in/sec), or of the vibration level measured with respect to root-mean-square vibration velocity in decibels (VdB), with a reference quantity of 1 micro-inch per second (µin/sec).

Vibration energy dissipates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High-frequency vibrations attenuate much more rapidly than do those characterized by low frequencies, so that in a far-field zone distant from a source, the vibrations with lower frequency amplitudes tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, a ground-to-foundation coupling loss usually results, but the vibration also can be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows, shaking of loose items, or the motion of building surfaces. In some cases, the vibration of building surfaces can also be radiated as sound and heard as a low-frequency rumbling noise, known as ground-borne noise.

Ground-borne vibration is generally limited to areas within a few hundred feet of certain types of industrial operations and construction/demolition activities, such as pile driving. Road vehicles rarely create enough ground-borne vibration amplitude to be perceptible to humans unless the receiver is in immediate proximity to the source or the road surface is poorly maintained and has potholes or bumps. Human sensitivity to vibration varies by frequency and by receiver. Generally, people are more sensitive to low-frequency vibration. Human annoyance also is related to the number and duration of events; the more events or the greater the duration, the more annoying the vibration becomes.

3.11.3 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies for construction-related noise and vibration apply to the proposed project. However, the Federal Transit Administration (FTA) *Guidelines for Construction Vibration in Transit Noise and Vibration Impact Assessment* states that for evaluating daytime construction noise impacts in outdoor areas, a noise threshold of 90 dBA L_{eq} should be used for residential areas (FTA 2006).

The FTA's recommended thresholds for human annoyance vary by the frequency of the vibration source and the type of sensitive receptor. The most conservative (lowest) ground-borne vibration annoyance level thresholds are for frequent events (more than 70 vibration events of the same source per day), and are as follows: 65 VdB for buildings where vibration would interfere with interior operations, 72 VdB for residences, 75 VdB for institutional land uses with primarily daytime uses.

State Laws, Regulations, and Policies

Caltrans has recommended threshold criteria to determine vibration-related structural damage potential and vibration-related annoyance potential (Caltrans 2013). The guideline thresholds developed by Caltrans vary based on the building type and age, the level of human annoyance response (i.e. barely perceptible up to severe), and/or whether the vibration source is transient or continuous/frequent intermittent[1]. The closest potentially sensitive vibration receptors are new residential units located on parcels adjoining Reach 3 of the project area. For new residential structures, Caltrans lists a maximum PPV of 1.0 in/sec for transient vibration sources (Caltrans 2013). For continuous/frequent sources potentially affecting new residential structures, the recommended maximum PPV is 0.5 in/sec (Caltrans 2013).

California requires each local government entity to implement a noise element as part of its general plan. California Administrative Code Title 4 presents guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The state land use compatibility guidelines are listed in **Table 3.11-2**.

[1] Transient sources include a single isolated vibration event such as blasting. Continuous/frequent intermittent sources include impact pile drivers, vibratory pile drivers, and vibratory compaction equipment. (Caltrans 2013).

Table 3.11-2. State Land Use Compatibility Standards for Community Noise Environment

Land Use Category	Community Noise Exposure L_{dn} or CNEL (dB)						
	50	55	60	65	70	75	80
Residential Low Density Single Family, Duplex, Mobile Homes							
Residential Multi-Family							
Transient Lodging Motels, Hotels							
Schools, Libraries, Places of Worship, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial, Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Normally Acceptable	Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: California Administrative Code Title 4

Local Laws, Regulations, and Policies

City of Milpitas General Plan

The City of Milpitas General Plan contains several policies that relate to noise levels (See Appendix B). The Noise Element of the General Plan includes land use compatibility standards that are derived from the state standards shown in Table 3.11-2 and are nearly identical to the state standards. Community noise levels are based on 24-hour noise exposure; therefore "all individual noise readings must be averaged over 24-hour period to give an equivalent noise level" (City of Milpitas, 2002). General Plan Policy 6-I-1 calls for avoiding community noise level increases of 3 decibels (db) dBL or more at residential property lines, and community noise exposure above 65 dB dBL at residential property lines.

Policy 6-I-9 calls for enforcement of established truck routes. Policy 6-I-3 calls for restricting the hours of operation, technique, and equipment in construction activities to minimize noise impacts.

City of Milpitas Noise Abatement Ordinance

Chapter 213 of the City of Milpitas Municipal Code contains regulations to abate noise. Section V-213-3 of the Code states that all construction activities and construction-related operations, including delivery of construction materials, supplies, or improvements on or to a construction site, shall be restricted to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and weekends. No construction work should be conducted or performed on holidays (including New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). However, there are some limited exemptions from the time restrictions, which are provided in Section V-213-3, Part 3.06. These exemptions apply to furnishing utility-type services, including construction and maintenance of utility facilities and operation to construct and maintain facilities within the public ROW, and are subject to approval by the City's Public Works Director.

3.11.4 Environmental Setting

Existing Noise Sources

The project site is located in the northwest corner of Milpitas and is divided into four reaches (see Figure 2-3). Reaches 1 and 2 are largely surrounded by I-880 and highway infrastructure, while Reaches 3 and 4 are bordered by commercial and residential uses to the west and residential areas to the east. The Union Pacific Railroad tracks are approximately 0.2 mile east of Reaches 3 and 4. The Noise Element of the *City of Milpitas General Plan* shows community noise levels of 80 dB and 70 dB along I-880 and the railroad, respectively, and community noise levels at the project site are 60+ to 65+ dBL (City of Milpitas 2002). In addition to transportation infrastructure, ambient noise in the project vicinity is also influenced by nearby commercial, office, and residential uses (e.g., landscape maintenance, delivery vehicles, people talking, parking lot vehicle movements, and car doors closing). Periodic vegetation management and sediment removal activities associated with the District's SMP (2014) also contribute to ambient noise in the project area.

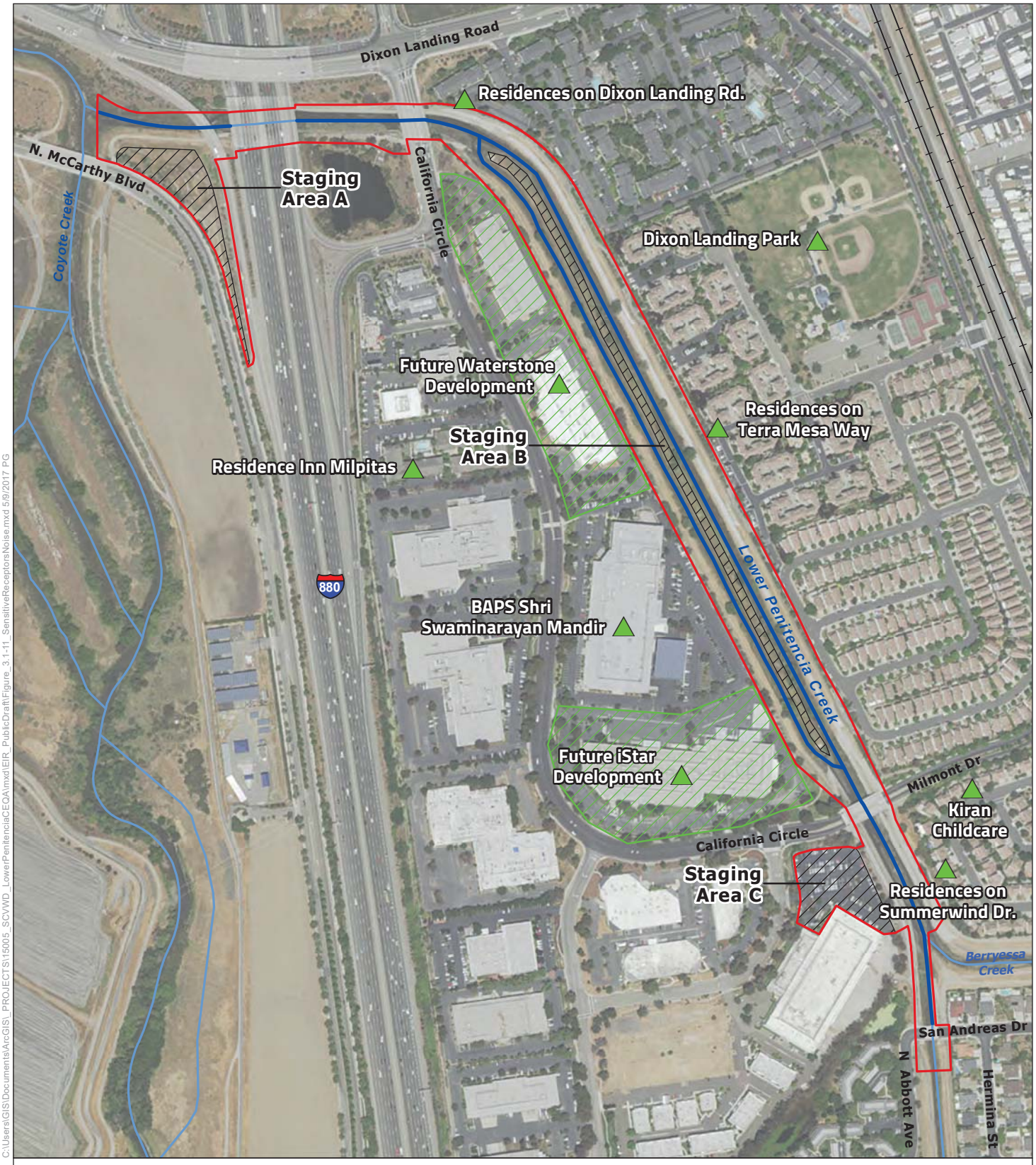
Existing Vibration Sources

In addition to noise, major transportation infrastructure, such as I-880 and the Union Pacific Railroad, can also be a source of vibration in the project vicinity.

Sensitive Receptors

The nearest existing sensitive receptors are the apartments and homes located along Summerwind Drive, Terra Mesa Way, Dixon Landing Road, and California Circle, some of which are 90-120 feet from the project site. In addition to these residential sensitive receptors, Kiran Childcare is located approximately 251 feet east of Reach 4. A religious facility, the BAPS Shri Swaminarayan Mandir, and the Residence Inn Milpitas are located approximately 140 feet and ~~480~~550 feet west of Reach 3, respectively.

In addition to the existing sensitive receptors, new residential receptors will be located in the future iStar and Waterstone developments located along California Circle. The closest residential receptors at the iStar and Waterstone developments are located approximately 10 feet away from the project footprint. **Figure 3.11-1** shows these existing and future sensitive receptors in the area surrounding the project site.



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Prepared by:
Horizon WATER and ENVIRONMENT

Project Boundary
Sensitive Receptors
Staging Area
Future Developments

Figure 3.11-1
Sensitive Receptors

Lower Penitencia Creek Improvements Project

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3.11.5 Impact Analysis

Criteria for Determining Significance

The proposed project would have a significant effect related to noise if it would result in any of the following conditions:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or, applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Table 3.11-3 summarizes noise and vibration thresholds used for the purposes of this analysis.

Table 3.11-3. Applicable Noise Thresholds

Thresholds	Source
Noise Thresholds	
Ambient noise levels greater than 65 dB Ldn or +3 dB Ldn increase at a residential property line	City of Milpitas General Plan (City of Milpitas 2002)
Construction noise generated on holidays or unapproved work outside of 7:00 a.m.–7:00 p.m.	City of Milpitas Noise Abatement Ordinance
Onsite construction noise in excess of 90 dBA L_{eq} at residential and noise-sensitive land uses	FTA Guidelines (FTA 2006)
Vibration Thresholds	
Annoyance thresholds for: Buildings with sensitive interior operations 65 VdB Residences 72 VdB Institutional land uses 75 VdB	FTA Guidelines for Construction Vibration (FTA 2006)

Thresholds	Source
Damage threshold	
Vibration in excess of 0.5 in/sec PPV	Caltrans Guidelines for Construction Vibration (Caltrans 2013)

Methodology

Impacts were assessed for project construction activities by applying FTA's *Transit Noise and Vibration Impact Assessment* methodology (FTA 2006). This methodology assumes that the two loudest pieces of construction equipment (using the construction equipment list from CalEEMod) would operate simultaneously at the same location under full power, assuming the following:

- full power operation for a full 1-hour period;
- no obstructions to the noise travel paths;
- typical noise levels from construction equipment; and
- both pieces of equipment operating at the center of the project site.

Using these assumptions, the noise levels at specific distances can be obtained using the following equation:

$$L_{eq}(equip) = EL_{50ft} - 20log_{10}(D/50)$$

Where:

L_{eq} (equip) = the noise emission level at the receiver at distance D over 1 hour

EL_{50ft} = noise emission level of a particular piece of equipment at a reference distance of 50 feet

D = the distance from the receiver to the piece of equipment in feet

To add the two loudest pieces of equipment together, the following equation applies:

$$L_{total} = 10\ log_{10}(10^{\frac{L1}{10}} + 10^{\frac{L2}{10}})$$

Where:

L_{total} = the noise emission level of two pieces of equipment combined

L_1 = the noise emission level of equipment type 1

L_2 = the noise emission level of equipment type 2

For the vibration analysis, the two pieces of equipment anticipated to be the largest sources of vibration were used, along with VdB and PPV values from the FTA guide (FTA 2006). The formulas below were used in calculations relating to vibration-related threshold distances:

$$PPV = PPV_{ref} \times (\frac{25}{D})^{1.5}$$

$$L_v(D) = L_v(25ft.) - 30\log(\frac{D}{25})$$

Where:

PPV = peak particle velocity in in/sec of the equipment adjusted for distance

PPV_{ref} = the reference vibration level in in/sec at 25 feet

L_v = vibration level

D = the distance from the equipment to the receiver

Noise and vibration levels generated by equipment used during project construction at the proposed project's nearest sensitive receptors that could be affected were estimated by using the FTA reference guide (FTA 2006). For the purposes of this analysis, the noise and vibration analysis takes into consideration potential effects on the closest sensitive receptors expected to be located at the iStar and Waterstone residential developments. Construction of these developments will be complete before construction of the proposed project begins and given the high housing demands in the Milpitas area, it is likely that these developments will be occupied by the time construction of the proposed project begins. The iStar and Waterstone residential developments are proposed to include 148 and 84 residential units, respectively (City of Milpitas 2014 and 2017). For these reasons and due to their close proximity to the project site, this section evaluates noise and vibration effects on these residential receptors. This section also indicates the distance from the project site to the relevant noise and vibration thresholds as an indication of the extent of noise and vibration impacts.

This analysis was performed conservatively. It takes into account worst-case construction equipment assumptions and uses the closest sensitive receptors of a given category to the project site.

Impact Summary

Table 3.11-4 summarizes noise and vibration impacts of the proposed project.

Table 3.11-4. Summary of Impacts Noise and Vibration

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	S	Mitigation Measure NOI-1	SU
NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	S	Mitigation Measure NOI-1	SU
NOI-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	LS	None	LS
NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	S	Mitigation Measure NOI-1	SU
NOI-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI
NOI-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI

LS = Less than Significant, NI = No Impact, S = Significant, SU = Significant and Unavoidable

Environmental Impacts

Impact NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or, in the applicable standards of other agencies (Significant and Unavoidable)

Construction Impacts

During project construction, heavy equipment including scrapers, trucks, excavators, a Giken silent piler, and bulldozers, would be operating in the project area and could generate noise levels affecting residences and other sensitive receptors near the construction work areas. The noises associated with construction activities would be temporary and would cease once construction is complete. If scrapers and trucks were operated together in close proximity, this equipment would generate combined noise levels of 106 dBA at the nearest sensitive receptor location (residences) at a distance of 10 feet from Reach 3 of the project site. If scrapers and trucks were operated simultaneously along the western portion of Reach 3, residences located within 50 feet could experience noise levels at 91.5 dBA. Calculations used to determine the proposed project's construction-related noise levels are presented in

Appendix G of this EIR. These noise levels would be greater than the FTA significance threshold of 90 dBA at residential and noise-sensitive land uses. Construction activities temporarily exposing nearby residences to noise levels exceeding the FTA standards would be a significant impact.

As described in Chapter 2, *Project Description,* construction activities would occur on weekdays and weekends during the daytime hours, 7:00 a.m. to 7:00 p.m., with the potential for construction to infrequently occur during extended hours (i.e. before 7 a.m. or after 7 p.m.). Work performed during extended hours could cause increased noise exposure to nearby sensitive receptors, particularly occupants of nearby residences. Nighttime construction noise would be more annoying and disruptive to sensitive receptors than daytime noise. Construction hours would generally be consistent with the City of Milpitas noise ordinance. In the unlikely event that construction would be required before 7 a.m. or after 7 p.m., the District would obtain prior approval from the City of Milpitas Public Works Director as provided in Section V-213-3, Part 3.06 of the Municipal Code. The proposed project would conform with City policies on construction timing contained in the City of Milpitas Noise Abatement Ordinance.

~~Existing designated truck routes provide access to the project site, and most project construction traffic would be confined to those routes in conformance with General Plan Policy 6-I-9. However, construction of headwalls on the San Andreas Drive bridge would require trucks to travel on San Andreas Drive, which is not a designated truck route, during a portion of the construction period This would be a significant impact.~~The proposed project would conform with City Policy 6-I-3 by installing sheet piles with a silent piler to construct foundations for floodwalls, which is a construction technique that minimizes noise generation compared to alternative construction techniques, such as driven or cast-in-place piles.

City Policy 6-I-1 calls for avoiding noise level increases of 3 dB or more L_{dn} or levels more than 65 dB dBL at residential property lines. Estimated year 2010 community noise levels in the project vicinity range from 65+ to 70+ dBL, which exceeds the city policies for residential community noise exposure (City of Milpitas 2002). Project construction would add to the existing noise levels. Individual daytime construction noise events would generate noise levels up to 91.5 dbA at 50 feet from the source. Those noise events would be intermittent and sporadic, most of the time construction noise levels would be much lower. When averaged over 24 hours, construction noise would likely result in a 3 dB increase in community noise levels. Because the existing community noise levels in the project vicinity already exceed the residential community noise threshold in General Plan Policy G-I-1, additional noise generated by project construction would be inconsistent with Policy G-I-1. Although this impact would be temporary, occurring only during the two four-month construction periods, it would be significant.

~~Note that the proposed project would conform with City Policy 6-I-3 by installing sheet piles with a silent piler to construct foundations for floodwalls, which is a construction technique that minimizes noise generation compared to alternative construction techniques, such as~~

~~driven or cast-in-place piles.~~Mitigation Measure NOI-1 would be implemented to reduce this significant impact.

Operational Impacts

Once project construction is complete, maintenance activities of project elements would be similar to current activities (e.g., trash and debris removal, vegetation management, maintenance road grading), which are covered by the District's SMP (2014). Periodic maintenance and repair of the new headwalls and floodwalls would be conducted. Vehicle trips generated by this maintenance work would be minimal, and the maintenance work would not generate substantial noise that would exceed the City of Milpitas noise ordinance or conflict with city noise policies. This impact would be less than significant.

Mitigation Measures

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures

The District and construction contractor will implement the following noise- and vibration-reducing measures during all construction activities, unless as specified below, to minimize impacts on nearby sensitive receptors:

- All noise-producing project equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise control features that are readily available for those types of equipment.

- Mobile noise-generating equipment and machinery will be shut off when not in use.

- Ensure proper tuning of vibration-causing equipment.

- Vibration damping devices will be used to the extent feasible.

- Use of vibratory equipment will be limited to the extent feasible.

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction will be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust will be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used, such as drills rather than impact equipment, whenever feasible.

- Electric stationary equipment (e.g., generators) will be used where feasible.

- Noise and/or vibration shields, such as sound aprons or temporary enclosures with sound-absorbing material, will be used on or around construction equipment, particularly if construction activities are conducted after 7:00 pm. For all construction activities occurring within 60 feet of residences at any time of day temporary noise and vibration barrier will be installed between the project site and the nearest sensitive receptors. Following the completion of construction activities within that distance, the barrier will be removed.

- The District will notify all residences and other sensitive receptors within 500 feet of the project site prior to the initiation of the proposed construction activities. The notification will provide the name and contact information, including a phone number, of a District representative for use before and during construction activities to address any questions or concerns regarding the project's construction activities or anticipated noise and vibration levels. If any occupants or other sensitive receptors report sensitive operations that could be affected, construction activities will be modified to minimize vibration near those buildings. Potential modifications include limiting the hours of operation for pieces of equipment that are major vibration sources and maximizing the distance between these pieces of equipment and sensitive buildings.

Significance After Mitigation

Mitigation Measure NOI-1 requires the District and its construction contractor to implement several strategies aimed at minimizing the noise and vibration levels experienced by nearby sensitive receptors. This mitigation measure also requires installation of temporary noise barriers, which would be anticipated to attenuate noise levels at the receptor by 5 to 15 dB (FTA 2006). Despite implementation of these strategies, there would still be a potential for construction activities near sensitive receptors to result in noise levels that exceed the 90 dBA FTA threshold. Residences located within 50 feet of construction activities may experience noise levels that exceed the FTA threshold even after implementation of Mitigation Measure NOI-1. In addition, even with implementation of Mitigation Measure NOI-1, construction noise could temporarily cause a 3 dB L_{dn} or more increase in ambient noise levels at the property lines of nearby residential parcels. Based on this information, this noise impact would be significant and unavoidable during the construction phase.

Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (Significant and Unavoidable)

Construction Impacts

During construction, heavy machinery operating in the project area would generate ground-borne vibration. For this project, large bulldozers and loaded trucks would be the most substantial sources of ground-borne vibration. **Table 3.11-5** presents distances from the two sources at which vibration levels would reach damage thresholds (based on Caltrans guideline) and annoyance levels (based on FTA guidelines). Vibration-producing equipment would have to operate within 7.9 feet of a building to exceed the state threshold for damage to new residential structures. There are no buildings located within 7.9 feet of proposed construction work areas. Therefore, construction-period vibration would not damage nearby buildings.

The thresholds for residential human perception of noise vibration and for annoyance are 65 VdB and 72 VdB, respectively. The closest residences to the project site are the Waterstone and iStar developments, located about 10 ft. from the project area. As shown in Table 3.11-5, these residences would be sufficiently close to the project site that residents would perceive vibrations caused by project construction and would be annoyed by those vibrations. The annoyance thresholds would be temporarily exceeded for the short period of time when heavy construction equipment operates within 73 to 79 feet of the buildings and residents (see Appendix G).

Based on its distance from the project area, the BAPS Shri Swaminarayan Mandir religious institution would experience vibration levels of 69 VdB, which is above the perception threshold, but below the annoyance level threshold of 75 VdB for institutional uses. Some commercial buildings located on California Circle or Fairview Way may experience vibrations above the 65 VdB level threshold, which could affect sensitive equipment such as electron microscopes, lithographic equipment, and optical microscopes (if present). Vibrations-produced by construction equipment operating within 125 to 135 feet of buildings containing equipment sensitive to vibrations could temporarily interfere with operation of the sensitive equipment (see Appendix G). Based on this information, construction-related vibration impacts would have a significant impact.

Table 3.11-5. Construction Equipment and Vibration Distance

Equipment	Distance to PPV of 0.5 in/sec	Distance to Noise Vibration of 65 VdB[1]	Distance to Noise Vibration of 72 VdB[1]	Distance to Noise Vibration of 75 VdB[1]
Large Bulldozer	7.9 ft.	135 ft.	79 ft.	63 ft.
Loaded Trucks	7.1 ft.	125 ft.	73 ft.	58 ft.

Notes: ft. = feet; PPV = peak particle velocity; in/sec = inches per second; VdB = vibration velocity in decibels

[1] This is the human perception threshold. 65 VdB is the ground-borne vibration annoyance level for buildings with sensitive interior operations (e.g. laboratory equipment), 72 VdB is the ground-borne vibration annoyance level for residents; 75 VdB is the ground-borne vibration annoyance level for institutional uses.

Source: FTA 2006

Operational Impacts

Operation and maintenance activities would be similar to current activities performed by the District. None of these activities currently generate, or are anticipated to generate, substantial ground-borne vibration. Therefore, long-term vibration effects would be less than significant.

Mitigation Measures

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures (see full text of measure in Impact NOI-1 analysis above)**.**

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would ensure that occupants of nearby residences and buildings are contacted prior to the initiation of construction activities. This measure also contains several measures that would reduce the amount of ground-borne vibration that occurs. However, due to the proximity of nearby institutional uses and the limits on how much vibration dampening can be achieved, Mitigation Measure NOI-1 would

not reduce all construction-related vibration to below the annoyance level for institutional uses or below levels that could temporarily interfere with operation of sensitive equipment in nearby buildings. Even after implementation of these measures, vibration impacts may still exceed the vibration annoyance thresholds for sensitive receptors or interference thresholds for sensitive equipment. Even with implementation of Mitigation Measure NOI-1, this vibration impact would be significant and unavoidable during project's construction.

Impact NOI-3: Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (Less than Significant)

Once constructed, the proposed project would eliminate or greatly reduce the need for periodic sediment removal, while other maintenance activities in the project area would be similar to current activities. I-880 would continue to be the dominant source of noise in the area and, given their placement, the floodwalls along Reaches 3 and 4 may help reduce highway-related noise levels for residences east of the project area. Thus, there would be no permanent increase in ambient noise levels. This impact would be less than significant.

Impact NOI-4: Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (Significant and Unavoidable)

Construction Impacts

As discussed in Section 3.11.3, there are multiple existing residences within 10-120 feet of the project area and other sensitive receptors, including a daycare, hotel, and religious institution, within 550 feet. Residences at the Waterstone and iStar developments would be located within 10 feet of the project area. According to noise contours in the *City of Milpitas General Plan* Noise Element, the project area currently experiences ambient noise levels of 65+ to 70+ dB, mainly due to the proximity of transportation infrastructure, including I-880 and an active railroad corridor. Construction activities would temporarily and intermittently generate noise levels above 70 dB, the ambient noise level in the vicinity of I-880 and the maximum noise level considered conditionally acceptable (Table 3.11-2), for sensitive receptors near the project area and above 100 dB for the nearest residences. Because project construction would temporarily generate noise levels up to 100+ dBA, which would be substantially above existing ambient noise levels in the vicinity, this impact would be significant.

Mitigation Measures

> **Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures** (see full text of measure in Impact NOI-1 analysis above).

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would ensure that several noise-reduction measures are implemented. Although construction noise would be temporary and would be limited to daytime hours, it would still represent a substantial increase over ambient noise levels. Mitigation Measure NOI-1 would reduce the level of construction-generated noise by 5 to 15 dB (FTA 2006). However, construction activities would still result in temporary construction-period noise up to 85+ dB, which is substantially above existing ambient noise levels of 70+ dB. Despite implementation of these strategies, construction activities would

still result in substantial temporary increase in ambient noise levels experienced by nearby residences. This noise impact would be significant and unavoidable during the construction phase.

Impact NOI-5: Within 2 miles of a public or public-use airport such that the project would expose people to excessive noise levels (No Impact)

The Mineta San Jose International Airport is the closest public airport to the project site. It is 5 miles from the project site, and the noise contours from its master plan do not overlap the project area (City of San Jose 2010). Therefore, there would be no impact.

Impact NOI-6: Within the vicinity of a private airstrip such that people would be exposed to excessive noise levels (No Impact)

No private airports are located within 19 miles of the project site. Thus, the proposed project would not affect people residing or working within the vicinity of a private airstrip and there would be no impact.

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3.12 Recreation

3.12.1 Overview

This section presents an overview of recreational activities in and adjacent to the project site, summarizes the regulatory framework related to recreation, and evaluates impacts of the proposed project on recreational resources.

3.12.2 Regulatory Setting

No federal or state regulations are applicable to recreation in relation to the proposed project. Local plans and policies applicable to the proposed project are summarized in Appendix B.

3.12.3 Environmental Setting

The project site is situated in an area predominantly surrounded by residential, office/industrial park, and commercial uses. More specifically, surrounding land uses include a combination of low- and medium-density single-family and high-density multi-family housing, commercial uses, and office parks. There are several park and recreational facilities, including neighborhood parks, creek levee trails and bike paths, in the project area.

Parks and Community Facilities

Milpitas has more than 25 parks with various amenities such as softball fields, tennis courts, basketball courts, handball courts, bocce ball courts, volleyball nets, horseshoe units, par courses, and barbecue facilities. The City's parks and recreational facilities are operated and maintained by the City of Milpitas Parks Maintenance Services Division (City of Milpitas 2015a). As summarized in **Table 3.12-1**, Dixon Landing Park is the nearest community park in the project vicinity.

Bikeways and Trails

The project vicinity has several bike paths or multi-use paths, bicycle routes, and trails used by nearby residents for casual recreation or transportation (see Table 3.12-1). Bikeways have three different classifications:

- Class I bikeways are considered bike paths or shared paths that provide bicycle travel on a paved right-of-way completely separate from a street or highway.
- Class II bikeways are often referred to as bike lanes. These are typically designated by a striped or stenciled lane for one-way travel on a street or highway.
- Class III bikeways are generally referred to as bike routes. Signage is typically installed along Class III bikeways signifying shared use with pedestrian or motor vehicle traffic, typically on low-volume roads.

According to the City's *Bikeway Master Plan*, the District's maintenance road located west of Reach 4 is also a Class I bike path. California Circle, Milmont Drive, and North McCarthy Boulevard are Class II bikeways. The maintenance roads on the west side of Reach 3 and the

south side of Reaches 1 and 2 are shown as proposed Class I bike paths in the *Bikeway Master Plan* (2009).

The Penitencia Creek Trail is a paved path located east of Reach 3 and is accessible from Palisades Drive. This trail parallels this reach and eventually connects with the District's maintenance road mid-way of Reach 3. This trail also continues south of Milmont Drive and consists of the District maintenance road west of Reach 4. As shown in Table 3.12-1, the Coyote Creek Trail is located southwest of Reach 1 and generally parallels North McCarthy Boulevard. No specific data are available on level of use of these trails but during a reconnaissance site visit conducted in June 2015, the trail was moderately used by nearby residents.

While some District maintenance roads are also designated City trails, other District maintenance roads that parallel Lower Penitencia Creek in the project area are undesignated but are used informally by nearby residents for walking and jogging. Based on the site visit conducted in June 2015, the maintenance roads adjacent to Reaches 3 and 4 seem to be used primarily by nearby residents and are moderately used. The level of use of the District maintenance road adjacent to Reach 1 is likely low, given the presence of security gates and fencing. The level of use of the District maintenance road adjacent to Reach 2 is also likely low as the road is short and dead ends at the I-880 crossing.

Table 3.12-1. Parks and Recreational Facilities in the Vicinity of the Proposed Project

Recreational Facility	Jurisdiction	Distance from Project Site	Features
Parks			
Dixon Landing Park	City of Milpitas	Approximately 0.1 mile east of Reach 2.	11-acre park with 3 tennis courts, 6 barbeque pits, 10 picnic tables, basketball hoop, play equipment, restrooms, and parking lot
Trails and Bikeways			
Penitencia Creek Trail	City of Milpitas	The existing trail is located on District ROW in Reach 3 (east side) and the west side of Reach 4. A planned trail includes the remaining length of the proposed project.	The trail provides access to the industrial area of Milpitas and the Coyote Creek Trail.
Coyote Creek Trail	City of Milpitas	Approximately 100 feet southwest of Reach 1.	The paved trail runs north-south for approximately 2 miles along the City of Milpitas' western limits.
Class I Bikeway	City of Milpitas	Within District ROW on west bank of Reach 4.	Paved path

Recreational Facility	Jurisdiction	Distance from Project Site	Features
Proposed Class I Bikeway	City of Milpitas	A paved path is proposed along Lower Penitencia Creek. With endpoints at North McCarthy Boulevard and Milmont Drive, the path would parallel the south side of Reaches 1 and 2 and extend along the west side of Reach 3.	Paved path
Class II Bikeways	City of Milpitas	North McCarthy Boulevard (adjacent to Reach 1), California Circle (adjacent to Reaches 2 and 3), and Milmont Drive (adjacent to Reaches 3 and 4).	Bike lanes
Class III Bikeways	City of Milpitas	Dixon Landing Road (approximately 200 feet north of Reach 2).	Bike route

Sources: City of Milpitas 2015b, City of Milpitas 2009.

3.12.4 Impact Analysis

Methodology

This impact analysis describes the impacts on recreation associated with construction and operation of the proposed project. Impacts were evaluated qualitatively, based on the potential for the proposed project to disrupt existing recreational facilities and use.

Generally, construction activities may result in a short-term loss of recreational opportunities by disrupting use of or access to recreation areas or facilities. Potential effects regarding temporary loss of access to recreational facilities (e.g., Penitencia Creek Trail) is addressed in Section 3.13, *Transportation and Traffic.* A long-term effect could occur if a recreational opportunity is eliminated as a result of construction and/or operation of the proposed project.

Criteria for Determining Significance

The proposed project would result in a significant impact on recreation if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Summary

Table 3.12-2 summarizes recreation impacts of the proposed project.

Table 3.12-2. Summary of Impacts Recreation

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LS	None	LS
REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	LS	None	LS

LS = Less than Significant

Environmental Impacts

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (Less than Significant)

Construction Impacts

As described in the environmental setting above and in Chapter 2, *Project Description*, the proposed project would involve installing floodwalls, constructing a wetland bench and relocating and raising a levee, installing headwalls at the San Andreas Drive bridge, and revegetation. Such activities would require temporary closure of the Penitencia Creek Trail and may temporarily increase use of other nearby recreational facilities. As described in Section 3.13, *Transportation and Traffic*, implementation of Mitigation Measure TRA-1 would result in signage being installed to detour recreationists away from the construction work areas.

Given the number of other nearby recreational facilities in Milpitas (e.g., the Berryessa Creek Trail, Coyote Creek Trail, sidewalks on California Circle and Milmont Drive) and the fact that the Penitencia Creek Trail is moderately used, impacts related to increased use of other nearby recreational facilities would not be substantial and would not result in physical deterioration of these other recreational facilities. Therefore, the impact would be less than significant.

Operational Impacts

Once project construction is complete, the Penitencia Creek Trail would be re-open for public use. As described in Chapter 2, the east levee floodwall in Reach 3 would include a pedestrian crossing to prevent the new floodwall from becoming a barrier across this trail. Project-related maintenance activities would be similar to current practices, including trash and debris removal, vegetation management, maintenance road grading, management of wildlife

conflicts, graffiti removal, and fence repair. New maintenance activities would involve periodic inspections of the floodwalls and the headwalls and, if repairs are necessary, temporarily trail closure may be necessary. Since such repairs would be infrequent and any trail closures would be short-term, long-term effects on recreational facilities would be less than significant and substantial deterioration of the facilities would not result.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (Less than Significant)

Construction and Operational Impacts

As described in Chapter 2, the proposed project involves construction of a pedestrian crossing over the Reach 3 floodwall to ensure connectivity with the Penitencia Creek Trail. The ~~proposed project~~ pedestrian crossing would include earthen ramps on top of the east levee crossing over the floodwall. The slope of the trail would be increased to meet the ramp, and would not be sloped greater than 1:12 to ensure compliance with the American with Disabilities Act. ~~As this element is part of the proposed project, the environmental impacts and mitigation measures associated with the proposed pedestrian crossing are described throughout this EIR.~~ In most resource sections, the environmental effects of the pedestrian crossing ~~project~~ are described collectively with other project components. Based on that approach, the proposed project was found to result in significant impacts in the area of pertaining to air quality, biological resources, geology and soils, hydrology and water quality, noise and vibration, transportation/traffic, utilities, and hazardous materials (see ~~Please refer to~~ Sections 3.2 through 3.11 and Section 3.13 through 3.14). ~~for a description of impacts and mitigation measures associated with construction and operation of the proposed pedestrian crossing and Reach 3 floodwalls. Implementation of Mitigation Measures AQ-1, AQ-2, BIO-1 through BIO-14, GEO-1, HYD-1, NOI-1, TRA-1, HAZ-1, and UTL-1 through UTL-5 would minimize adverse effects of the proposed project, including those associated with the pedestrian crossing at the Reach 3 floodwall.~~ Construction and operation of the pedestrian crossing would not result in a significant impact to these resources due to its small size and the limited scale of the potential effects. There are no sensitive resources at the pedestrian crossing work area and construction associated with this facility would be short in duration and thus generate minimal air pollutant emissions, greenhouse gas emissions, and noise and vibration. As discussed in Section 3.9, *Hydrology and Water Quality*, implementation of District BMPs AQ-1, BI-3, WQ-4, WQ-5, WQ-9, WQ-10, and WQ-16 would minimize the potential for soil erosion at construction areas, and promote stabilization and revegetation of disturbed areas after construction is complete. ~~With the exception of construction-related noise and vibration effects on nearby sensitive receptors, these mitigation measures would collectively reduce environmental effects of the proposed project to less-than-significant levels.~~ Construction of the proposed crossing ~~ramps~~ would not result in significant adverse physical effects to the environment.

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3.13 Transportation and Traffic

3.13.1 Overview

This section first summarizes transportation and traffic terminology used throughout this section and then describes the regulatory and environmental settings related to traffic and transportation. This section also presents the methodology used to conduct the impact analysis, and evaluates the traffic impacts associated with the proposed project. Applicable District BMPs are identified and mitigation measures are proposed to reduce significant impacts of the proposed project.

Transportation and Traffic Terminology

The following are definitions of key transportation and traffic terms used in this section. These are based on the *Highway Capacity Manual* (HCM) published by the Transportation Research Board (2000) and the City of Milpitas General Plan Update (2002).

Level of Service. Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

The City of Milpitas utilizes TRAFFIX software and the HCM methodology to evaluate intersection operations. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Control delay is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average control delay and LOS is shown in **Table 3.13-1**.

Delay. Delay refers to the additional travel time experienced by a vehicle or traveler that results from (1) the inability to travel at optimal speed and (2) stops due to congestion or traffic control.

The following roadway classification definitions are taken from Table 3-3 of the City of Milpitas General Plan Update 2002 Circulation Element.

- **Freeways.** The function of a freeway is to provide for inter-regional and intra-regional mobility. Access to freeways is restricted to primary arterials and expressways via interchanges.
- **Expressways.** The function of an expressway is to provide for movement of through traffic. It offers limited access to abutting properties and access varies according to situation.
- **Arterials.** Arterials collect and distribute traffic from freeways and expressways to collector streets, and vice versa. Access to arterials varies according to situation.

- **Collectors.** Collectors serve as connectors between local and arterial streets and provide direct access to parcels.
- **Local roads.** Local roads provide unrestricted access to parcels.

Table 3.13-1. Level of Service Definitions for Signalized Intersections

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of the congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay volumes generally indicate poor signal progression, long cycle lengths, and high V/C ratios. Individual failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	> 80.0

Source: Transportation Research Board 2000: p. 10-16

3.13.2 Regulatory Setting

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. The state agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance. Work within the state ROW requires an encroachment permit from Caltrans.

Caltrans' *Guide for the Preparation of Traffic Impact Studies* (2002) contains requirements for preparation of a traffic impact analysis for various types of facilities. The Santa Clara Valley Transportation Authority (VTA), however, is designated as Santa Clara Valley's Congestion

Management Agency, and has more recently updated guidelines (VTA 2014a) VTA's guidelines are described below.

Caltrans also provides *Transportation Management Plan Guidelines* (Caltrans 2015) that address work activities on the state highway system. The proposed project would not affect any portion of I-880 such that traffic restrictions or detours would be needed. Therefore, this analysis is not subject to TMP guidelines.

As described in Chapter 2, *Project Description,* construction of the replacement levee in Reach 1 and the floodwall in Reach 2 would take place within Caltrans ROW. An encroachment permit from Caltrans would need to be obtained prior to construction in these areas.

Regional Laws, Regulations, and Policies

Santa Clara Valley Transportation Authority Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) is designated as Santa Clara Valley's Congestion Management Agency (VTA 2014a). The Congestion Management Program (CMP) statute requires that uniform methods be used for evaluating transportation impacts of land use decisions on the CMP system. The VTA's CMP requires that agencies use the VTA *Transportation Impact Analysis (TIA) Guidelines* to evaluate the transportation impacts of all land use decisions within the agency's jurisdiction that are projected to generate 100 or more net new week day (AM or PM peak hour) or weekend peak hour trips. For projects requiring TIAs, a copy of the TIA report shall be submitted to VTA at least 20 calendar days prior to the date the development decision or recommendation is scheduled to be made by the lead agency.

The CMP statute states that "in no case shall the LOS standards established be below level of service E or the current level, whichever is farthest from level of service A." If the baseline LOS for a roadway is LOS F, then the LOS must be maintained as LOS F, and mitigation measures must be implemented when project-specific impacts could result in an LOS exceeding the threshold.

3.13.3 Environmental Setting

Vehicle Access

Direct vehicular access to the project site is provided primarily via I-880, Dixon Landing Road, California Circle, Milmont Drive, North McCarthy Boulevard, and North Milpitas Boulevard. San Andreas Drive provides access to the west bank of the Lower Penitencia Creek channel in Reach 4, but does not connect to the other roads listed above.

> ***I-880*** is a north-south freeway facility that extends from San Jose in the south (where it becomes State Route 17) to Oakland in the north. Within the project vicinity, I-880 primarily has four northbound and four southbound mixed-flow lanes as well as a high-occupancy-vehicle (or carpool) lane in each direction.
>
> ***Dixon Landing Road*** is a five- to six-lane, east-west, divided major arterial road that begins at its intersection with North McCarthy Boulevard west of I-880 and ends at North Milpitas Boulevard. It provides access to I-880 and has a sidewalk on the

south side of the road in the project vicinity. The roadway is a designated truck route. It is also a designated bike route between California Circle and Conway Street.

California Circle is a five-lane, north-south, undivided collector road that begins in the north at its intersection with Dixon Landing Road and becomes Milmont Drive at its southeastern end. It has a two-way-left-turn-lane and sidewalks on both sides between the northbound I-880 ramps and Milmont Drive. At the bridge over Lower Penitencia Creek (referred to as "California Circle bridge"), a sidewalk exists on the east side of the bridge. California Circle provides access to several adjacent office buildings. The roadway (up to Fairview Way) is a designated truck route. Parking is prohibited on both sides of the road.

Milmont Drive is a two-lane, north-south, undivided residential local street that begins north of Kato Road and ends at the Milmont Drive bridge where it becomes California Circle. It provides local access to the adjacent residential neighborhoods. It has bike lanes on both sides and a sidewalk on the west side of the road. Parking is prohibited on both sides of the road.

North McCarthy Boulevard is a four-lane, north-south, divided arterial road that runs parallel to the west side of I-880. It begins in the north at its intersection with Dixon Landing Road and ends at Montague Expressway on the south. It has bike lanes and sidewalks on both sides of the road and provides access to the Coyote Creek Trail. In the project vicinity, parking is prohibited on both sides of the road.

North Milpitas Boulevard is a four-lane, north-south, major arterial road that begins in the north at Dixon Landing Road, where it connects with Warm Springs Boulevard in Fremont, and ends at East Calaveras Boulevard, where it becomes South Milpitas Boulevard. It has bike lanes and sidewalks on both sides of the road. Parking is prohibited on both sides of the road.

San Andreas Drive is a two-lane, east-west local street that begins at the north end of North Abbott Avenue and ends at the north end of Pescadero Street. It has sidewalks on both sides of the street and an approximate curb-to-curb width of 40 feet. Approximately 65 feet east of the north end of North Abbott Avenue, San Andreas Drive crosses over Lower Penitencia Creek. This crossing is referred to as the San Andreas Drive bridge. Parking is allowed on both sides of the street.

Existing Transit Service

Transit service in the project vicinity is provided by the Alameda–Contra Costa Transit District (AC Transit) and Santa Clara Valley Transportation Authority (VTA). AC Transit operates Bus Routes 217 and 239. Route 217 operates along Warm Springs Boulevard and North Milpitas Boulevard between the Milpitas Great Mall and Fremont BART station on 30-minute headways during peak hours. Route 239 operates between Dixon Landing Road at Warm Springs Boulevard and the Fremont BART station via Mission Boulevard and Grimmer Boulevard on 60-minute headways on weekdays. VTA runs Route 66 between Dixon Road at North Milpitas Boulevard and Kaiser San Jose on 15-minute headways during peak hours. The closest bus stops are located at the intersection of Dixon Landing Road and North Milpitas Boulevard, which is approximately 0.6 mile from the project site.

Existing Bicycle and Pedestrian Facilities

Sidewalks are present on both sides of North Milpitas Boulevard. Dixon Landing Road has sidewalks on both sides of the road between California Circle and North Milpitas Boulevard. A continuous sidewalk is present on the west side of Milmont Drive between Dixon Landing Road and California Circle. California Circle has sidewalks on both sides of the road, except between Dixon Landing Road and the I-880 northbound ramps (over the California Circle bridge). At the Dixon Landing Road/California Circle intersection, a sidewalk is provided only on the east side of California Circle. San Andreas Drive has sidewalks on both sides of the street.

Existing bicycle facilities in the project vicinity are provided via a network of Class II bike lanes and bike routes, which are shared with vehicular traffic. Existing bike lanes are provided on California Circle, Milmont Drive, North McCarthy Boulevard, and North Milpitas Boulevard. No existing bike lanes are provided on Dixon Landing Road, except a very short section between North McCarthy Boulevard and the southbound I-880 off-ramp. The *City of Milpitas Bikeway Master Plan* (2009) shows future bike lanes on both sides of Dixon Landing Road along the entire length between North McCarthy Boulevard and North Milpitas Boulevard. The recently completed Fremont Boulevard extension from Lakeview Boulevard in Fremont to Dixon Landing Road in Milpitas also has bike lanes on both sides of the road.

In addition to bikeways and sidewalks on nearby public streets, an existing pedestrian path runs along the east side of Lower Penitencia Creek (Reach 3), starting on the east side of the California Circle bridge and ending on the north side of the Milmont Drive bridge. It currently provides a direct link between Dixon Landing Road near California Circle and the residential neighborhood between Lower Penitencia Creek and Milmont Drive.

Existing Traffic Volumes

For the purposes of this analysis, traffic volumes under existing conditions were determined based on traffic counts conducted in July and September 2015. Traffic counts were collected at the following key study intersections around proposed construction staging areas:

1. Dixon Landing Road and North McCarthy Boulevard/Fremont Boulevard
2. Dixon Landing Road and southbound I-880 ramps
3. Dixon Landing Road and northbound I-880 ramps/California Circle
4. California Circle and northbound I-880 ramps
5. Dixon Landing Road and Milmont Drive
6. Dixon Landing Road and North Milpitas Boulevard

For the intersection of Dixon Landing Road and Milmont Drive, traffic counts collected in June 2012 (prior to the start of BART Silicon Valley project construction) were used because the existing lane configuration on Dixon Landing Road (one lane in each direction) is only temporary and will be restored back to 2012 conditions by the time construction commences for the proposed project (VTA 2017). **Figure 3.13-1** shows existing traffic volumes for the above-referenced intersections.

3.13.4 Impact Analysis

Methodology

The impacts of the proposed project were evaluated in accordance with LOS policies and methodologies applicable in the City of Milpitas and in accordance with the requirements of the VTA, the administering agency for the Congestion Management Program (CMP) of Santa Clara County. This analysis was also conducted in consideration of the State CEQA Guidelines thresholds related to transportation and traffic.

This study includes an analysis of weekday A.M. and P.M. peak-hour traffic conditions at the above-listed signalized intersections. The A.M. peak hour of traffic is typically between 7:00 AM and 9:00 A.M., and the P.M. peak hour is typically between 4:00 P.M. and 6:00 P.M. It is during these periods that the most congested traffic conditions occur on an average weekday. Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing conditions are represented by existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from recent traffic counts, which are presented in **Appendix H**, *Traffic Memorandum*.

Scenario 2: *Existing plus Project Conditions*. Existing plus project conditions were estimated by adding to existing traffic volumes the additional traffic generated by the proposed project during construction. Existing plus project conditions were evaluated relative to existing conditions to determine the proposed project's impacts.

Scenario 3: *Existing Conditions plus Approved and Pending Developments*. A list of approved and pending developments that would add traffic in the same time frame and geographic area as the proposed project was obtained from the City of Milpitas. (See "Signalized Intersection LOS Analysis" below.) Traffic volumes generated by approved and pending projects were added to existing traffic volumes to estimate this scenario. The roadway network was assumed to be unchanged from existing conditions for this scenario.

Scenario 4: *Existing Conditions plus Approved and Pending Developments and Project Conditions*. Project-generated traffic was added to the Scenario 3 traffic volumes, which accounts for traffic volumes generated by approved and pending projects in the City of Milpitas, to estimate "Existing Conditions plus Approved and Pending Developments." These conditions were evaluated relative to Scenario 3 conditions to determine project-related impacts. This scenario is equivalent to cumulative conditions with the proposed project taken into consideration.

Source: Hexagon 2016

Figure 3.13-1.
Existing Traffic Volumes

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Project Construction Phasing Assumptions

For the purposes of this analysis, it was assumed that all construction-related traffic would be generated over a single 2-month period, despite the fact that construction would occur within an 8-month period spread over 2 years. By assuming a compressed 2-month project schedule, far more truck trips were assumed to occur during the AM and PM commute periods than would otherwise occur if truck traffic were distributed evenly over an 8-month schedule. It was also assumed that the majority of construction work would take place during the daytime between 7:00 A.M. and 5:00 P.M.

Construction Traffic Generation Estimates

Estimates of construction trips generated by the proposed project were developed based on the number of workers and the amount of materials being hauled to and from the project site (described in Chapter 2). A maximum of 40 workers would be on site; it is anticipated that approximately 5,800~~00~~ cy of material would require trucking to or from the project site. Trucking to the site is called on-hauling and trucking away from the project site is called off hauling. As of May 2017, it is estimated that 2,300 cy would be off-hauled and 3,~~50~~46~~0~~0 cy would be on-hauled. The project's construction trip generation estimates were developed in 2016 using more conservative assumptions, and estimated that 10,200 cy of material would require trucking to or from the project site. Other assumptions included: (1) nearly all workers would drive and arrive/depart during the same 60-minute commute periods; (2) each material truck would carry 10 cy; (3) all construction activities within the different reaches would occur simultaneously; (4) all truck trips would occur over a 2-month construction period; (5) all truck trips would be spread evenly over a typical 8-hour workday; and (6) for the LOS calculations, all truck trips would be equivalent to two passenger vehicle trips (also known as passenger car equivalents [PCE]). As shown in **Table 3.13-2**, the proposed project would generate approximately 158 daily trips, with 43 trips occurring during each of the AM and PM peak commute hours.

It is expected that, during final design of the proposed project, the material quantities could vary slightly from what was assumed for this analysis. In addition, on an average workday, fewer than 40 workers would likely be on site during construction. For this reason, and because truck hauling was assumed to be distributed over 2 months rather than 8 months, the trip generation calculations presented for this analysis are believed to be conservative (i.e., greater than would likely be the case).

Table 3.13-2. Construction Trips Generated by the Proposed Project

Actual	Project Characteristics		Trip Time Period	Average Employee Trips [2]	Average Heavy Vehicle Trips [3]	Total Trips		
	Max. Workers	Material Yardage [1] (CY)				To the Project Site	From the Project Site	Total
Actual	40	10,200	AM Peak Hour	40	3	40	3	43
			PM Peak Hour	40	3	3	40	43
			Daily	132	26	79	79	158
PCE Adjusted [3]	40	10,200	AM Peak Hour	40	6	41	5	46
			PM Peak Hour	40	6	5	41	46
			Daily	132	52	92	92	184

Note: cy = cubic yards; PCE = passenger car equivalents.

Assumes one commute trip per employee per peak hour and miscellaneous trips such as deliveries, visitor trips, and lunch trips.

[1] Material off-hauled (e.g., excess soil) is estimated to be 6,500 cy; material hauled on site (e.g., concrete) is estimated to be 3,500 cy.

[2] Based on 10 cubic yards of material per heavy vehicle trip during the busiest 2-month work schedule. Truck trips evenly distributed throughout 8 hours of a typical day.

[3] Assumes each heavy vehicle trip is equivalent to two passenger trips with respect to impacts on roadway capacity.

Source: Hexagon 2016 (provided in Appendix H)

The proposed project's trip distribution and assignment were developed based on the locations of complementary land uses (i.e., similar types of land uses to those surrounding the proposed project area) and data from the Creekside Warehouse Traffic Impact Analysis (City of Fremont 2013). The Creekside Warehouse project is located on the Fremont Boulevard extension, just north of Dixon Landing Road. Warehouse trips are a reasonable proxy for construction trips because they comprise both employee trips and heavy vehicle trips. The project trip distribution is shown in **Figure 3.13-2** and the project trip assignment is shown in **Figure 3.13-3**.

Signalized Intersection LOS Analysis

Traffic volumes for background conditions were estimated by adding the existing traffic volumes to the trips generated by approved and pending developments. **Figure 3.13-4** shows the background traffic volumes. The City of Milpitas identified the following approved and pending development projects in the project vicinity and requested that trips anticipated due to build-out of these development projects be included in the proposed project's Background Conditions scenario (Chan, pers. comm., 2015):

- *Springhill Marriot Suites at 1201 Cadillac Court* a 124-room hotel development at the southwest quadrant of the Cadillac Court/California Circle intersection
- *Holiday Inn Suites at 1100 Cadillac Court* a 129-room hotel development at the southeast quadrant of the Cadillac Court/Fairview Way intersection

- *Waterstone Residential* an 84-single-family-unit residential development located on California Circle just south of Dixon Landing Road
- *iStar Residential* a 144-townhouse-unit residential development located on California Circle just west of the Milmont Drive bridge

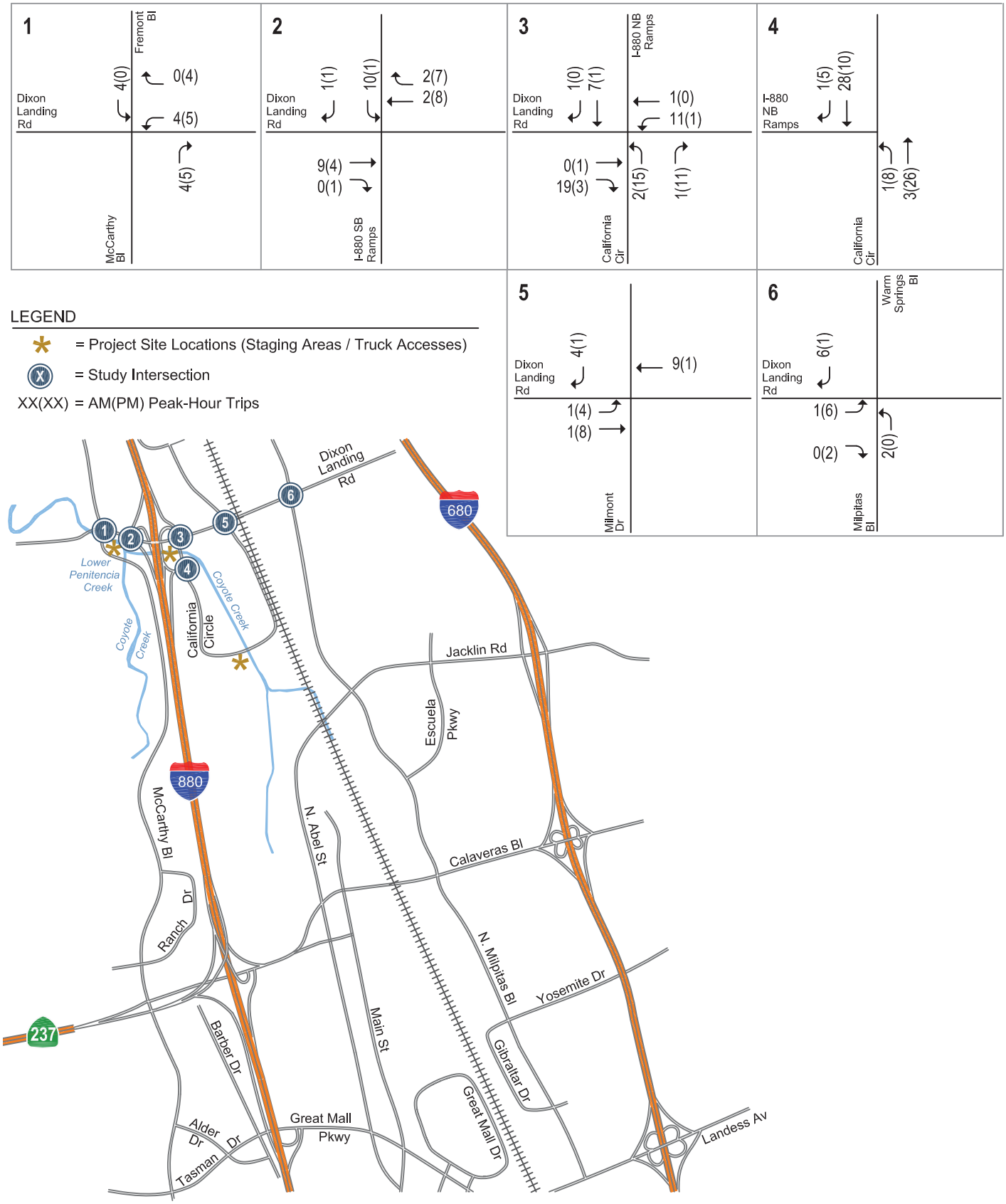
Under Existing plus Project Conditions and Existing Conditions plus Approved and Pending Developments, the roadway network was assumed to be unchanged from existing conditions. The traffic volumes for the Existing Plus Project Conditions and Existing Conditions plus Approved and Pending Developments Plus Project are shown in **Figure 3.13-5** and **Figure 3.13-6**, respectively.

Source: Hexagon 2016

Figure 3.13-2.
Project Trip Distribution

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project



Source: Hexagon 2016

Figure 3.13-3.
Project Trip Assignment

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Lower Penitencia Creek Improvements Project

Source: Hexagon 2016

Figure 3.13-4.
Background Traffic Volumes

Prepared by:
Horizon WATER and ENVIRONMENT

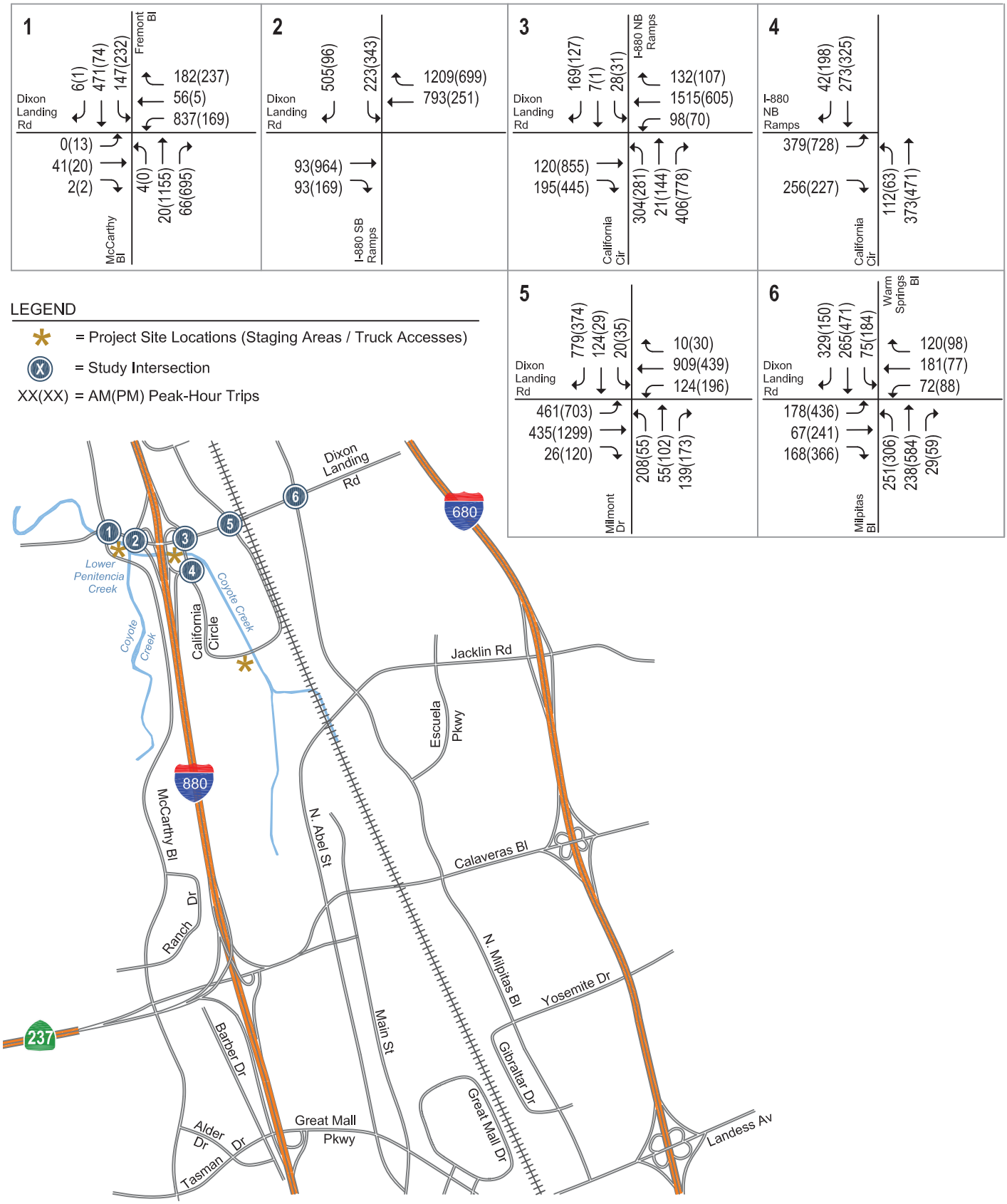
Lower Penitencia Creek Improvements Project

Source: Hexagon 2016

Figure 3.13-5.
Existing Plus Project Traffic Volumes

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project



Source: Hexagon 2016

Figure 3.13-6.
Background Plus Project Traffic Volumes

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact related to transportation and traffic if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities.

LOS Standards and VTA CMP Guidelines

The City of Milpitas' LOS standard for non-CMP signalized intersections is LOS D (City of Milpitas 2002). All of the study intersections are non-CMP intersections according to the *VTA 2014 Monitoring and Conformance Report* (VTA 2014b). According to the City of Milpitas' LOS standards (City of Milpitas 2002), a project would create a significant adverse impact on traffic conditions at a signalized intersection if, for either peak hour:

1. The LOS at the intersection would be degraded from an acceptable LOS D or better under no project conditions to an unacceptable LOS E or LOS F under project conditions, or

2. If the intersection is already operating at an unacceptable LOS E or LOS F under no project conditions, the addition of the proposed project traffic would cause an increase in average critical delay of 4 seconds or more and the volume-to-capacity ratio (V/C) would be increased by more than 0.01 when proposed project traffic is added.

A significant impact at a signalized intersection would be mitigated to a less-than-significant level when appropriate measures are implemented that would restore intersection LOS to an acceptable level or restore the intersection to operating levels that are better than no project conditions.

According to the *2014 VTA CMP Transportation Impact Analysis Guidelines* (VTA 2014a), a project would have an adverse impact on pedestrian and bike circulation if: (1) its vehicle trips would present a barrier to bikes/pedestrians safely crossing roadways, or (2) it would reduce or sever existing or planned bike/pedestrian circulation in the area. A project would have an adverse impact on transit service if it would: (1) cause vehicular congestion that would significantly degrade transit operations, or (2) conflict with existing transit service plans or preclude future transit service to the project area.

Impact Summary

Table 3.13-3 summarizes transportation and traffic impacts of the proposed project.

Table 3.13-3. Summary of Impacts Transportation and Traffic

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
TRA-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit	S	Mitigation Measure TRA-1	LM
TRA-2: Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	LS	None	LS
TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	NI	None	NI
TRA-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	S	Mitigation Measure TRA-1	LM
TRA-5: Result in inadequate emergency access	S	Mitigation Measure TRA-1	LM

NI= No Impact; LS = Less than Significant; LM = Less than Significant with Mitigation; S = Significant

Environmental Impacts

Impact TRA-1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (Less than Significant with Mitigation)

The policies in the City of Milpitas *General Plan*, City of Milpitas *Bikeway Master Plan Update,* and City of Milpitas *Trails Master Plan* and VTA's *Transportation Impact Analysis Guidelines* (which comply with Caltrans's Traffic Impact Analysis requirements) establish measures of effectiveness for the performance of the circulation system that are intended to address the long-term and permanent effects of a project on the circulation system (e.g., roads, sidewalks, and bicycle and transit facilities). Given the nature of the proposed project (improvements to an existing flood control channel), the project would not permanently affect the City's transportation and circulation system. Therefore, the following analysis evaluates temporary impacts on the overall transportation and circulation system during the construction phase, including roadways, pedestrian and bicycle facilities, and public transit; and overall compatibility with goals and policies contained in the City of Milpitas *General Plan*, City of Milpitas *Bikeway Master Plan Update,* and City of Milpitas *Trails Master Plan* and guidelines contained in VTA's *Transportation Impact Analysis Guidelines*.

Construction Impacts

Trucks on Local Roadways

For local residential streets, such as Milmont Drive and San Andreas Drive, traffic generated by construction vehicles could result in a substantial traffic increase due to the relatively small traffic volume on these streets. Milmont Drive and San Andreas Drive are located in close proximity to residential uses, which are typically sensitive to heavy vehicle traffic. According to the City of Milpitas *General Plan*, Milmont Drive and San Andreas Drive are not designated truck routes. While construction traffic would not degrade the level of existing traffic to an unacceptable level (as discussed in Impact TRA-2 below), the addition of heavy trucks and other construction vehicles could temporarily disrupt traffic flow on these residential streets. Potential use of Milmont Drive and San Andreas Drive by heavy vehicles during construction would constitute a significant impact. Mitigation Measure TRA-1 would be implemented to address this impact.

Pedestrian and Bicycle Facilities

Currently, sidewalks on both sides of San Andreas Drive provide neighborhood pedestrian access to North Abbott Avenue and the surrounding local streets. There are no bike lanes on this street. Construction of the proposed headwalls at the north (downstream) face and the south (upstream) face of the San Andreas Drive bridge would require sidewalk closure on both sides of San Andreas Drive. As the District would construct only one headwall at a time, at least one sidewalk would remain open throughout the San Andreas Drive bridge construction phase. Based on site observations, there is minimal pedestrian and bicycle activity on San Andreas Drive in the vicinity of the San Andreas Drive bridge. However, temporary sidewalk closure on one side of the San Andreas Drive bridge would require

detouring of pedestrians to the opposite sidewalk on the bridge. In addition, during headwall construction, bicyclists would continue to share the road with motorists along this street.

As described in other sections of this ~~D~~EIR, the Penitencia Creek Trail runs along the east side of Reach 3. The trail starts on the east side of the California Circle bridge and ends on the north side of the Milmont Drive bridge. As described in Chapter 2, this trail would require temporary closure throughout the duration of project construction activities within and along Reach 3. This would result in temporary conflicts with the City of Milpitas *Trail Master Plan* and City of Milpitas *Bikeway Master Plan* as temporary closure of the Penitencia Creek Trail would reduce linkages to other alternative transportation routes in the vicinity for pedestrians, bicyclists, and joggers. While the trail and sidewalk on the San Andreas Drive bridge are temporarily closed, pedestrians and bicyclists would be required to find other similar facilities in the area to use (e.g., sidewalks and paths) or alternative modes of transportation.

Implementation of BMP TR-1 (Use Suitable Public Safety Measures), which requires that fences, barriers, lights, flagging, guards, and signs be installed around the work areas, would help increase public awareness and minimize traffic safety impacts on pedestrians and bicyclists. However, the BMP would not effectively reduce this impact as the measure does not address temporary lane reduction at the San Andreas Drive bridge work area, impacts of heavy truck traffic on residential streets, or temporary closure of pedestrian facilities like the Penitencia Creek Trail. These effects on pedestrian and bicycle mobility, and temporary conflicts with goals and objectives established in the City of Milpitas *General Plan*, *Trail Master Plan*, and *Bikeway Master Plan* are considered significant. Mitigation measure TRA-1 would be implemented to address this impact.

Public Transit

Given that there are no transit services on Milmont Drive, California Circle, Dixon Landing Road, or San Andreas Drive in the project vicinity, it is anticipated that very few, if any, construction workers would use public transit. Most construction workers would arrive at the project site either by driving alone or carpooling. In addition, the proposed project would not remove or alter the existing transit service in any way, nor would it materially increase the intersection delay on existing bus routes. For these reasons, the proposed project's impact on transit service would be less than significant.

Mitigation Measures

Mitigation Measure TRA-1: Traffic Control Plan

The District will develop a traffic control plan in accordance with professional traffic engineering standards to reduce the effects of project construction activities and traffic on surrounding local roads, bicycle and pedestrian facilities, and emergency access. The District and/or its contractor will coordinate development and implementation of this plan with the City of Milpitas. Components of the Traffic Control Plan will include, but not be limited to, the following:

- Restrict truck access to truck routes designated by the City.
- Confine heavy truck traffic such as material hauling to California Circle.

- Prohibit work-site access via residential streets (e.g., Milmont Drive and San Andreas Drive) to the extent feasible. Should construction staging require use of Milmont Drive and San Andreas Drive by heavy vehicles for brief periods, the District and/or its contractor will coordinate with the City of Milpitas to obtain approval.

- Provide advance construction warning signage for lane reduction at San Andreas Drive during headwall construction at the bridge.

- Provide advance notification of necessary closures of sidewalks on San Andreas Drive and maintain pedestrian access during construction of the headwalls where safe to do so. For the San Andreas Drive sidewalk closures, detour pedestrians away from construction activity to the sidewalk on the opposite side of the street. For the Penitencia Creek Trail closure, route pedestrians along the existing sidewalks on California Circle and Milmont Drive, where appropriate.

- To accommodate the temporary closure of the Penitencia Creek Trail along Reach 3 and the narrowing of travel lanes on the San Andreas Drive bridge, provide signage that indicates where bicycles and motor vehicles should share the roadway, and detour bikes to Milmont Drive and California Circle, where appropriate.

- Traffic handling plans for San Andreas Drive shall be prepared and implemented in accordance with Caltrans and *California Manual on Uniform Traffic Control Devices* (MUTCD) standards. The traffic handling plans shall demonstrate how two-way traffic operations can be maintained during work hours (e.g., use of flaggers) and when construction activity ends each day.

- Notify and consult with emergency service providers such as police and fire stations, hospitals, and schools prior to the start of construction. The District will maintain emergency access at all times, by whatever means necessary, to expedite and facilitate the passage of emergency vehicles.

Significance After Mitigation

Implementation of Mitigation Measure TRA-1 would ensure that a traffic control plan is developed and implemented to minimize effects related to truck traffic on residential streets and minimize pedestrian and bicycle safety impacts during construction. This measure would reduce temporary conflicts with goals and objectives, including measures of effectiveness, outlined in the City of Milpitas *General Plan*, City of Milpitas *Trail Master Plan,* City of Milpitas *Bikeway Master Plan,* and VTA's *Transportation Impact Analysis Guidelines*. This impact would be less than significant with mitigation.

Impact TRA-2: Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways (Less than Significant)

Construction Impacts

Freeway Segments

According to the CMP guidelines, a freeway segment should be studied when a proposed development would add traffic to a segment that totals more than 1 percent of its capacity. **Table 3.13-4** shows this comparison. The methods used to assign project traffic to the roadway network are described in the "Construction Traffic Generation Estimates" section in Section 3.13.4, above. The capacity of a mixed-flow lane, as specified by the HCM, is 2,200 vehicles per hour (vph) on four-lane facilities and 2,300 vph on facilities with six or more lanes. HOV lanes and auxiliary lanes were not included in this calculation. Some stretches of I-880 between SR 237 and Mission Boulevard have five mixed-flow lanes in each direction, but the capacity analysis in Table 3.13-2 uses four mixed-flow lanes in each direction to be conservative (i.e., the analysis understates the number of available lanes and thereby overstates the project effect).

The number of construction trips that the proposed project would add to the freeway would be less than 1 percent of its capacity in both directions in both the AM and PM peak hours. Based on this comparison, the proposed project would not result in a substantial impact on freeway segments, and no additional analysis is required.

Table 3.13-4. Freeway Segment Evaluation

Freeway	Segment	Direction	Mixed Flow Lanes	Capacity per Lane[1] (vph)	Total Capacity (vph)	1% of Capacity	Project Trips	
							AM	PM
I-880	SR 237 to Dixon Landing Road	NB	4	2,300	9,200	92	8	1
I-880	Dixon Landing Road to Mission Boulevard	NB	4	2,300	9,200	92	2	13
I-880	Mission Boulevard to Dixon Landing Road	SB	4	2,300	9,200	92	11	2
I-880	Dixon Landing Road to SR 237	SB	SB	2,300	9,200	92	2	8

Notes: NB = northbound; SB = southbound; SR = State Route; vph = vehicles per hour.

[1] Mixed-flow lane capacity is based on the ideal capacity cited in the 2000 HCM.

Source: Data from TRB 2000 modified and analyzed by Hexagon; see Appendix H.

Intersection LOS Analysis

As shown in Table 3.13-2 in the "Methodology" section above, project construction is anticipated to total 43 AM and 43 PM peak-hour trips on local roadways near the project site. The results of the intersection LOS analysis are summarized in **Table 3.13-5**. The results show that, measured against the City of Milpitas LOS standards, all signalized study intersections are projected to operate at an acceptable LOS D or better during the AM and PM peak hours under both "Existing plus Project Conditions" and "Existing Conditions plus Approved and Pending Developments and Project" scenarios. Therefore, the proposed project would not result in a substantial adverse effect at the study intersections. The LOS calculation sheets are shown in Appendix H.

Based on the above analysis, truck trips and construction worker vehicle trips generated during project construction would not substantially affect capacity on nearby freeway

segments, nor would it degrade the City of Milpitas LOS standards. Conflicts with the VTA's CMP or the City of Milpitas LOS standards would be less than significant.

Operational Impacts

Once construction is complete, maintenance activities described in Chapter 2 would be similar to those that currently occur under the District's SMP with the exception of occasional repair and maintenance of the new floodwalls and headwalls. Minimal truck trips would be generated for the project's maintenance activities. Therefore, the proposed project would not result in long-term conflicts with the City of Milpitas LOS standards or the VTA's CMP. This impact would be less than significant.

Table 3.13-5. Intersection LOS Analysis Summary

Study Intersection Number	Intersection	Peak Hour	LOS Standard	Existing		Existing plus Project		Background (Existing plus Approved)			
								No Project		With Project	
				Avg. Delay[1]	LOS[1]	Avg. Delay[1]	LOS[1]	Avg. Delay[1]	LOS[1]	Avg. Delay[1]	LOS[1]
1	Dixon Landing Road and North McCarthy Boulevard	AM	D	23.4	C	23.4	C	23.4	C	23.5	C
		PM	D	45.4	D	46.5	D	48.6	D	49.8	D
2	Dixon Landing Road and SB I-880 Ramps	AM	D	7.5	A	7.5	A	7.6	A	7.6	A
		PM	D	12.7	B	12.7	B	11.8	B	11.8	B
3	Dixon Landing Road and NB I-880 Ramps/California Circle	AM	D	14.4	B	17.7	B	15.7	B	19.7	B
		PM	D	26.3	C	35.3	D	27.5	C	38.6	D
4	California Circle and NB I-880 Ramps	AM	D	11.3	B	12.7	B	11.7	B	13.0	B
		PM	D	13.9	B	26.2	C	14.8	B	33.6	C
5	Dixon Landing Road and Milmont Drive	AM	D	40.1	D	40.3	D	40.4	D	40.6	D
		PM	D	26.1	C	26.1	C	26.2	C	26.2	C
6	Dixon Landing Road and North Milpitas Boulevard	AM	D	31.5	C	31.6	C	31.7	C	31.7	C
		PM	D	39.8	D	39.6	D	39.6	D	39.6	D

Notes: LOS = level of service.

Signalized intersection levels of service and delays reported are for average control delay per vehicle.

Source: Hexagon 2016 (provided in Appendix H)

Impact TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (No Impact)

Construction and Operational Impacts

There are no airports in the project vicinity. As such, the proposed project would not affect existing air traffic patterns during construction or operation. There would be no impact.

Impact TRA-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Less than Significant with Mitigation)

Construction Impacts

The presence of large, slow-moving construction-related vehicles and equipment among the general-purpose traffic on roadways in the project area could result in substantial safety hazards, especially on nearby residential streets. In addition, as described in Impact TRA-2, construction of the proposed headwalls at the San Andreas Drive bridge may require temporary lane closures or narrowing of travel lanes. A single-lane, two-way traffic control operation may need to be in place on the bridge deck during peak hours when construction work is in progress. In the event that temporary lane closures are needed, traffic safety hazards could occur near the San Andreas Drive and North Abbott Avenue corner (approximately 50 feet west of the bridge) as there would be limited space at this sharp, 90-degree turn and driver visibility may be somewhat limited. As a result, construction at this location may temporarily increase vehicular safety hazards. Implementation of BMP TR-1 would involve installation of fences, barriers, lights, flagging guards, and signs to address the potential for safety hazards. While this measure would generally avoid confusion for drivers, bicyclists, and pedestrians, the presence of construction vehicles and equipment would still pose a significant impact related to traffic safety.

Operational Impacts

The proposed project would not involve changes to any road configurations that could create sharp curves or dangerous intersections. Therefore, no impact related to safety hazards in the long-term would occur.

Mitigation Measures

> **Implement Mitigation Measure TRA-1: Traffic Control Plan** (see full text of measure in Impact TRA-1 above).

Significance After Mitigation

The presence of slow-moving construction vehicles and equipment would pose a significant impact related to traffic safety even with implementation of BMP TR-1. Implementation of Mitigation Measure TRA-1 would reduce this impact by requiring development of a traffic control plan that would account for movement of construction vehicles and equipment and recommend warnings devices, signage, and traffic controls to prevent hazards to other road users. The District would require the contractor to implement the traffic control plan during construction, which would reduce this impact to less than significant with mitigation.

Impact TRA-5: Result in inadequate emergency access (Less than Significant with Mitigation)

Construction Impacts

The presence of slow-moving construction trucks and vehicles could delay or obstruct the movement of emergency vehicles on local roads in the project vicinity. As discussed in Impacts TRA-2 and TRA-4, the temporary lane reduction at the San Andreas Drive bridge crossing would reduce roadway capacity and could substantially increase the response time for emergency vehicles traveling through the work area. This impact is considered significant.

Operational Impacts

Once construction is complete, local roads in the project vicinity would operate similar to existing conditions. Access to the project area would continue to occur using existing access roads and local roads. In addition, because maintenance activities would occur on a periodic and as-needed basis, impacts related to impaired emergency access during project operation would be less than significant.

Mitigation Measures

> **Implement Mitigation Measure TRA-1: Traffic Control Plan** (see full text of measure in Impact TRA-1 above).

Significance After Mitigation

Mitigation Measure TRA-1 requires the preparation an implementation of a construction-period traffic control plan. The plan would identify effects on traffic flow from construction activities and traffic, and specify measures to ensure that affected roadways remain open for use by emergency responders at all times. The District would require the construction contractor to adhere to the plan throughout construction. This measure would reduce this impact to less than significant with mitigation.

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3.14 Utilities and Service Systems

3.14.1 Overview

This section evaluates the proposed project's impacts on utilities and service systems, including water supply, wastewater, stormwater, natural gas, electricity, and solid waste management. The regulatory setting section describes applicable laws, regulations, and policies related to utilities and service systems, and the environmental setting section describes existing utility infrastructure and utility supplies and demands at the project site and surrounding area. The impact analysis section evaluates impacts on utilities and service systems in light of the existing regulatory and environmental settings. Resources used to prepare this section include information and regulations from the various service providers, as referenced below; the City of Milpitas *General Plan*; and state regulations. The proposed project's effects on energy use are described in Section 3.7, *Greenhouse Gas Emissions and Energy Use.*

3.14.2 Regulatory Setting

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies relate to utilities and service systems and the proposed project.

State Laws, Regulations and Policies

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (CIWMA) (PRC Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at least 50 percent by the year 2000 (PRC Section 41780). California has since established a goal of 75 percent recycling, composting, or source reduction by 2020. The California Department of Resources Recycling and Recovery (CalRecycle) administers the CIWMA and assigns jurisdictions tailored per capita and employee disposal rate targets to determine compliance and to focus efforts on successful implementation of diversion programs. Targets are met if a jurisdiction's per capita disposal rate is below or at the target rate (i.e., if each resident is disposing of the target amount or less each year). CalRecycle notes that meeting the disposal rate targets is not necessarily an indication of compliance (CalRecycle 2017a). The most recent information from CalRecycle indicates that Milpitas is meeting its per capita and employee disposal rate targets, as shown in **Table 3.14-1** below.

Table 3.14-1. City of Milpitas Per Capita and Employee Disposal Targets and Rates

Report Year	Annual Per Capita Disposal Rate (ppd) Per Resident	Annual Per Capita Disposal Rate (ppd) Per Employee
Target	**6.3**	**9.7**
2011	4.2	7.2
2012	4.5	7.2
2013	5.0	8.2
2014	4.9	7.9
2015	5.3	8.4

Note: ppd = pounds per day

Source: CalRecycle 2017a

Title 8, Section 1541 of the California Code of Regulations: Excavations

Section 1541 of the California Code of Regulations requires, among other things, that excavators identify the location of subsurface utilities prior to initiating construction, as follows: "the approximate location of subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation" (Section 1541[b][1]). Additional requirements of Section 1541 include training of employees involved in excavation work, notification by excavators of regional notification centers (see California Government Code Section 4216 et seq. below) and all known owners of subsurface installations, protection of subsurface installations when the excavation is open, and notification of regional notification centers and utility owners in the event of damage or accidents.

California Government Code Section 4216 et seq.

California Government Code Section 4216 et seq. requires owners and operators of underground utilities to become members of and participate in a regional notification center, which notifies them of planned excavation reports from public and private excavators. This section of the California Government Code also requires every subsurface installation operator to locate and field mark, if known, subsurface installations that may be affected by the excavation prior to the excavation start date indicated by the excavator. In the project area, Underground Service Alert–Northern California (USA North) is the main notification center that is compliant with Section 4216.

3.14.3 Environmental Setting

Water

The City of Milpitas receives potable water from both the District and the San Francisco Public Utilities Commission (SFPUC). The City of Milpitas purchases approximately 65 percent of its water from the District and the remainder from SFPUC (SCVWD 2011). Water provided by the District is primarily from the Sacramento–San Joaquin River Delta with some contributions from local watersheds (e.g., Anderson, Calero Reservoirs), while the water provided by the SFPUC originates primarily from its Hetch Hetchy watershed in the Sierra Nevada mountains. In addition to the potable supplies it receives from the District and the

SFPUC, the City of Milpitas purchases recycled water from the South Bay Water Recycling Program (SBWR), which is administered by the City of San Jose, for irrigation, industrial, and other purposes (SCVWD 2011).

The City of Milpitas owns, operates, and maintains a potable water distribution system consisting of approximately 200 miles of water main, 4,300 valves, 1,600 fire hydrants, five water tanks, four pumping stations, and one well serving more than 16,000 service connections (City of Milpitas 2011a). The City of Milpitas also operates and maintains a recycled water system, owned by the City of San Jose SBWR, which consists of approximately 20 miles of recycled main and associated facilities, serving one industrial and 180 irrigation services in the City. In 2010, the City of Milpitas delivered approximately 9,143 acre-feet of potable water to customers (City of Milpitas 2011a).

Wastewater

The City of Milpitas owns and operates its municipal sewer collection system, consisting of 175 miles of gravity pipe, 5 miles of force main, and two pump stations (City of Milpitas 2011b). Wastewater collected by the City of Milpitas' sewer collection system is routed to the San Jose–Santa Clara Regional Wastewater Facility for treatment. The San Jose–Santa Clara Regional Wastewater Facility treats an average of 110 million gallons per day (mgd) of wastewater, with treatment capacity of up to 167 mgd (City of San Jose 2015). This facility is the largest tertiary treatment plant in the western United States, serving 1.4 million residents and 17,000 business-related sewer connections in an eight-city area. The City of Milpitas discharged 8.4 mgd to the San Jose–Santa Clara Regional Wastewater Facility in 2009/2010 and is contractually limited to a flow of 14.25 mgd (City of Milpitas 2002).

Stormwater

The City of Milpitas *Storm Drain Master Plan* (Schaaf & Wheeler 2013) identifies two stormwater lagoons in the project area: California Circle Lagoon and Abbott Lagoon. California Circle Lagoon is located along the left bank of Reach 2, downstream of the California Circle bridge and upstream of the I-880 crossing. Abbott Lagoon is located at the upstream terminus of Reach 4, just west of North Abbott Avenue. These lagoons drain adjacent streets and ultimately discharge stormwater to Lower Penitencia Creek via pump stations (Schaaf & Wheeler 2013).

Solid Waste

Solid waste generated by the proposed project would be transported to one of a number of landfills in Santa Clara County or neighboring Alameda County. **Table 3.14-2** shows active landfills in the project vicinity that could potentially accept solid waste generated by the proposed project.

Table 3.14-2. Active Landfills in Santa Clara and Alameda Counties

Landfill	Maximum Permitted Capacity (cy)	Remaining Estimated Capacity (cy)	Percentage of Capacity Remaining	Remaining Capacity Date	Estimated Closure Date
Santa Clara County					
Guadalupe Sanitary Landfill	28,600,000	11,055,000	38%	January 1, 2011	January 1, 2048
Kirby Canyon Recycling and Disposal Facility	36,400,000	16,191,600	45%	June 11, 2001	December 31, 2022
Newby Island Landfill	57,500,000	21,200,000	37%	October 31, 2014	January 1, 2041
Zanker Material Processing Facility	640,100	640,100	100%	August 22, 2012	November 1, 2025
Alameda County					
Altamont Landfill and Resource Recovery	124,400,000	65,400,000	53%	December 31, 2014	January 1, 2025
Vasco Road Sanitary Landfill	32,970,000	7,959,079	24%	July 31, 2014	December 31, 2022

Note: cy = cubic yards.

Source: CalRecycle 2017b

Electricity and Natural Gas

Electricity and natural gas are provided to the project area by PG&E. According to the proposed project's Planning Study Report (SCVWD 2016), two parallel PG&E gas lines traverse Reach 1 (one 30-inch-diameter and another 36-inch-diameter gas line). There is also a 10-inch underground nitrogen line in the vicinity of the two gas lines.

In addition, PG&E also operates overhead high-voltage power lines mounted on steel-lattice towers on the east overbank in Reaches 3 and 4. Five power line towers are located east of Reaches 3 and 4. In Reach 2, overhead electrical distribution lines cross the channel.

3.14.4 Impact Analysis

Methodology

The following impact analysis is both qualitative and quantitative in nature. The evaluation involved comparing anticipated service system demands from the proposed project to existing system provider capacity and facilities.

Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

Additionally, this ~~D~~EIR applies the following additional criterion and considers that the proposed project would have a significant effect on utilities and service systems if it would:

- Disrupt operation or require relocation of local utilities that results in substantial disruption of service.

Impact Summary

Table 3.14-3 summarizes utilities and service system impacts of the proposed project.

Table 3.14-3. Summary of Impacts Utilities and Service Systems

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
UTL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	LS	None	LS
UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	NI	None	NI
UTL-3: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	LS	None	LS

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	LS	None	LS
UTL-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	LS	None	LS
UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	LS	None	LS
UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste	LS	None	LS
UTL-8: Potential disruption and/or relocation of existing utilities	LS		LS

LS = Less than Significant, NI = No Impact,

Environmental Impacts

Impact UTL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (Less than Significant)

Construction and Operational Impacts

As described in Chapter 2, *Project Description,* the proposed project would be limited to conducting channel improvements in Lower Penitencia Creek for the purpose of providing increased flood protection. The proposed project would not generate wastewater during operation of the project and therefore would not require construction of any new wastewater treatment facilities. During the construction phase, construction workers would use portable restrooms that would be off-hauled by the contractor for disposal. Short-term increases in wastewater generated by construction workers would not substantially increase the volume of wastewater in the system such that exceedance of wastewater treatment requirements would be an issue at the San Jose–Santa Clara Regional Wastewater Facility. This impact would be less than significant.

Impact UTL-2: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (No Impact)

Construction and Operational Impacts

As the purpose of the proposed project is to improve flood protection, the proposed project would not require any new water supply or water treatment facilities. Therefore, no new water or wastewater treatment facilities would be required. Project construction would

require some amount of water for dust control purposes, but this amount of water would not be anticipated to be substantial and would be supplied by a water truck rather than the City of Milpitas' municipal system. Therefore, no impact related to construction of new water treatment facilities or insufficient existing entitlements would occur.

Impact UTL-3: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

A project could have a significant adverse impact on an existing stormwater drainage system if it substantially increases impervious area such that it would require or result in the construction of new or expanded stormwater drainage facilities.

Construction Impacts

The proposed project would involve improvements to Lower Penitencia Creek, which is a stormwater drainage facility that collects and conveys flow from several local storm drain facilities and tributaries. As stated in the City's Storm Drain Master Plan, all City-owned stormwater facilities drain to District-owned creeks and channels. Penitencia Creek conveys flows from local storm drain facilities to Coyote Creek and eventually to San Francisco Bay. Throughout project construction, all local stormwater facilities would remain in operation. Portions of the creek would be dewatered during construction by diverting creek flow into pipes that would convey the flow around the construction area and back into the creek downstream from the construction area. All local storm drains emptying into Penitencia Creek would be connected to the diversion system so that they would continue to function properly. Dewatering would only occur during the summer dry season, when flows in the storm drains would be minimal; nonetheless, they would continue in operation with no reduction in capacity during creek dewatering.

As described in the environmental setting above, the City of Milpitas' *Storm Drain Master Plan* identifies several existing stormwater drainage facilities in the project area, including the California Circle Lagoon located along the left bank of Reach 2 (visible in Figure 2-3). Given its proximity to the proposed project area, operation of this facility could be affected during project construction (e.g., pumping of water from the lagoon to the creek channel may need to be suspended during certain construction activities). Project construction would occur during the dry season (June 15–October 15); therefore, limitations on pumping from this facility during construction within Reaches 1 and 2 would not be expected to cause adverse effects. The proposed project would not be anticipated to physically affect the lagoon itself, as it would be outside the construction work area. In general, effects on any existing stormwater drainage facilities would not be substantial, and the proposed project would not require or result in the construction of additional stormwater drainage facilities. This impact would be less than significant.

Operational Impacts

The proposed project would not substantially increase impervious areas or otherwise increase the generation of stormwater. The proposed modifications to the San Andreas Drive bridge would result in new headwalls at the downstream and upstream side of the bridge, but any increase in impervious area from the headwall would be minimal and would not substantially affect stormwater runoff generation rates. As mentioned above, the proposed project itself is an improvement of existing stormwater conveyance facilities and would be

operated similar to existing conditions following project construction. Lower Penitencia Creek would continue to convey stormwater flows and provide flood protection. This impact would be less than significant.

Impact UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources (Less Than Significant Impact)

Construction Impacts

Project construction would consume water for dust control and street cleaning. Recycled water would be used for these purposes. Small amounts of water would be consumed by construction workers, but would have a negligible impact on potable water supplies This impact would be less than significant.

Operational Impacts

During project operation, water use would be negligible. Water may be used to clean graffiti from structures, but that use would be infrequent and the amount of water used would be negligible. The wetlands plantings in Reach 1 would be flooded during high tides on a daily basis and would not require irrigation. Trees would be planted as required by the Milpitas Tree Protection Ordinance to compensate for trees removed during project construction. Those trees would require watering to establish. The number of trees to be planted would be less than 50, and they would be native trees adapted to the local climate. To the extent possible, recycled water would be used for irrigation. The amount of water required would not exceed available supplies. This impact would be less than significant.

Impact UTL-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments (Less than Significant)

Construction and Operational Impacts

As described in Impact UTL-1, the proposed project would not generate substantial volumes of wastewater that during construction or operation. Short-term increases in wastewater generated by construction workers would not substantially increase the volume of wastewater in the system such that treatment capacity would be an issue at the San Jose–Santa Clara Regional Wastewater Facility. Therefore, impacts regarding wastewater treatment capacity would be less than significant.

Impact UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs (Less than Significant)

The proposed project's impacts on existing landfill capacity during both construction and operation are discussed below.

Construction Impacts

As described in Chapter 2, *Project Description*, project construction would involve soil excavation for the replacement levee and vegetated bench in Reach 1, floodwalls, and headwalls at the San Andreas Drive bridge. Approximately 800 cy of accumulated sediment

would also be removed from Reaches 2 and 4 and about 1,500 cy of accumulated sediment would be removed from Reach 3. Soil excavated within Reach 1 would be reused to construct the setback replacement levee in Reach 1 and the raised levee in Reach 4, and to backfill low areas along the floodwalls. Based on geotechnical investigations performed for the project (Kleinfelder 2017), almost all of the excavated soils will be have suitable physical properties for reuse on site. The total volume of excess soil or sediment requiring off-site disposal or re-use is estimated at 2,300 cy.

As shown in Table 3.14-2, multiple landfills in Santa Clara County and Alameda County could serve the proposed project, and many of these have substantial remaining capacity. From a worst-case perspective, assuming that all construction waste generated by the proposed project requires disposal at the Vasco Road Landfill (i.e., the landfill with the lowest percentage of remaining capacity), the proposed project would reduce that facility's remaining capacity by less than 0.02 percent. Assuming all construction waste is disposed of at Zanker Material Processing Facility (i.e., the landfill with the lowest amount of total capacity), the proposed project would reduce remaining capacity by approximately 0.3 percent. These two scenarios represent the "worst-case" scenario as far as impacts on existing landfill capacity. While it is unlikely that all construction waste would be sent to one landfill, even if it were, it would not result in a significant impact on existing capacity. This impact would be less than significant.

Operational Impacts

As described in Chapter 2, project operation and maintenance activities following construction would be similar to existing conditions. New maintenance activities that could generate solid waste for disposal at a landfill include trash and debris removal associated with maintenance and repair of the floodwalls and headwalls. While these activities would generate some amount of waste that would require disposal at a solid waste landfill, this amount would be similar to existing operations and would not be substantial. For this reason, the proposed project's long-term effects on landfill capacity would be less than significant.

Impact UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste (Less than Significant with Mitigation)

As described in the regulatory setting section above, the CIWMA requires cities to divert 75 percent of solid waste by 2020. The City of Milpitas is currently meeting its per capita and employee target disposal rates under the CIWMA (see Table 3.14-1) (CalRecycle 2017a). While CIWMA targets are not directly applicable to the District or to individual construction projects, the project would be consistent with CIWMA policies by maximizing reuse of materials on site and minimizing the amount of waste generated.

Construction Impacts

As described in Impact UTL-2, the proposed project would involve excavation and demolition of existing structures, which could generate relatively large volumes of construction waste. Excavated material from the vegetated benches proposed for Reach 1 would be reused to construct the setback replacement levee in Reach 1 and the raised levee in Reach 4, and to backfill low areas along the floodwalls. About 2,300 cy of sediment would be removed from the creek channel would have unsuitable properties for on-site re-use. That sediment would be exported from the project site for off-site disposal. In total, about 90 percent of the excavated soil and sediment generated by the proposed project would be reused on-site. The

proposed project would also generate modest amounts of typical construction wastes, such as lumber, wire, metals, and plastics. By using sheetpiles to construct the floodwalls instead of cast-in-place concrete piles, which are commonly used, the proposed project would generate substantially less construction waste. All project-related waste would be handled, classified, temporarily stored, transported, and disposed of in conformance with applicable federal and state solid waste regulations. This impact would be less than significant.

Operational Impacts

Generation and disposal of solid waste during project operation would be similar to existing conditions. As described in Chapter 2, the District's ongoing maintenance activities, such as trash removal, vegetation management, and maintenance road grading, would continue following project construction. New maintenance activities would involve periodic repair and maintenance of the floodwalls and headwalls. These activities may generate small amounts of solid waste, but not substantially more than under existing conditions. Therefore, long-term effects pertaining to compliance with solid waste regulations would be less than significant.

Impact UTL-8: Potential disruption and/or relocation of existing utilities (Less than Significant)

Buried underground utilities may be encountered during project construction activities without adequate identification and avoidance measures, resulting in disruptions in service, damage, or potentially hazardous accident conditions (e.g., explosion from striking a natural gas pipeline). Such disruptions in service or hazardous accident conditions, as well as any necessary substantial relocation of existing utilities, could constitute a significant impact. The proposed project's potential to adversely affect existing utilities is discussed below for both project construction and operation.

Construction Impacts

As described in the previous impact discussions, project construction would involve excavation and use of heavy earth-moving equipment (e.g., excavator, backhoe). The proposed project also would involve modifications to the San Andreas Drive bridge, which may carry existing utilities. Two parallel PG&E gas lines traverse Reach 1 (one 30-inch and another 36-inch gas line). There is also a 10-inch underground nitrogen line in the vicinity of the two gas lines. In addition to these known utilities, there may be unknown buried utilities along the proposed project reaches that could be affected during project construction and excavation activities. Construction of the proposed vegetated benches, floodwalls, and levees would require excavation, which would present the possibility of impacts on unknown buried utilities.

As described in the environmental setting section above, PG&E electrical distribution lines and poles are present in Reach 2 and PG&E electric transmission lines traverse Reaches 3 and 4. Additionally, within Reaches 3 and 4, overhead electric transmission lines and steel lattice towers run parallel to the eastern levee and maintenance road. Use of tall equipment under the transmission lines would be a potential hazard as a contact between the equipment and power lines could disrupt operation of the powerlines. To avoid that hazard, the project design avoids locating floodwalls directly under the PG&E transmission lines. A number of underground utility lines are present within the project area, including water supply, wastewater, natural gas, and power lines. The District will require the contractor to notify

Underground Service Alert North prior to start of excavation or demolition activities and will coordinate with line utility owners and operators to ensure that project construction does not damage the lines or disrupt service. This construction impact would be less than significant.

Operational Impacts

During project operation, the proposed project would not be anticipated to affect, or have the potential to affect, existing utilities. Similar to existing conditions, project operations would include routine maintenance activities, such as trash and debris removal, vegetation management, maintenance road grading, management of wildlife conflicts, fence repair, and graffiti removal. New maintenance activities would involve periodic repair and maintenance of the floodwalls and headwalls. No substantial excavation or use of heavy equipment are anticipated to be necessary following project construction; therefore, no impacts on underground and aboveground utilities would be anticipated to occur. This operational impact would be less than significant.

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Chapter 4
OTHER STATUTORY CONSIDERATIONS

This chapter describes irreversible impacts, significant and unavoidable impacts, growth-inducing impacts, and cumulative impacts as required by the State CEQA Guidelines.

4.1 Irreversible Impacts

State CEQA Guidelines Section 15126.2(c) requires that an EIR must identify any irreversible impacts, also referred to as "irreversible environmental changes," which may be caused by a proposed project, including current or future commitments to using nonrenewable resources, and secondary, or growth-inducing, impacts that commit future generations to similar uses. Section 15126 of the State CEQA Guidelines states that significant irreversible environmental changes associated with a proposed project may include the following:

- uses of nonrenewable resources during the initial and continued phases of the project that may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely;
- primary impacts and, particularly, secondary impacts (such as highway improvements that provide access to a previously inaccessible area) that commit future generations to similar uses; and
- irreversible damage, which may result from environmental accidents associated with the project.

The irreversible commitment of nonrenewable resources would occur as a result of the proposed project. Construction activities would require the temporary use of heavy construction equipment, which would require the use of fossil fuels, and the permanent use of raw materials, including nonrenewable resources. The proposed project would provide flood protection to many Milpitas residences and businesses and would reduce the likely need for cleanup and repair work that could be required in the event that a 1-percent (100-year) flood event occurred.

Operation of the proposed project would result in irreversible changes associated with energy consumption. Such an increase in energy demands would be minimal as these would be limited to periodic maintenance activities of the newly installed floodwalls and San Andreas Drive bridge headwalls.

4.2 Growth Inducement

Section 15126.2(d) of the State CEQA Guidelines requires an EIR to include a detailed statement of a proposed project's anticipated growth-inducing impacts. The analysis of growth-inducing impacts must discuss the ways in which a proposed project could foster

economic or population growth or the construction of additional housing in the surrounding environment. The analysis must also address project-related actions that would remove existing obstacles to population growth, tax existing community service facilities and require construction of new facilities that would cause significant environmental effects, or encourage or facilitate other activities that could, individually or cumulatively, have a significant effect on the environment. A project would be considered growth inducing if it induces growth directly (through the construction of new housing or increasing population) or indirectly (by increasing employment opportunities or eliminating existing constraints on development). Under CEQA, growth is not assumed to be either beneficial or detrimental.

The proposed project would not involve new development or infrastructure installation that could directly induce substantial population growth in the project area. Construction-related jobs would increase in the Bay Area in the short term and would be anticipated to draw from the existing work force. The proposed project would not displace any existing housing units or persons, or create any housing units. Minimal, if any, job growth would be associated with operation of the proposed project, and would not generate sufficient economic activity to result in substantial population growth.

Adequate flood protection is one type of public service, though not the only, that is needed to support additional growth in the City of Milpitas. Other factors that influence residential, commercial or industrial growth in the region include the general plans and other policies of Milpitas, Santa Clara County, and other nearby cities, as well as the availability of water supply, wastewater treatment and disposal capacity, public schools, and transportation services. Economic factors also affect development rates and locations of development.

The proposed project would provide improved flood protection for existing residents and businesses and new residential developments that are currently being constructed near the Lower Penitencia Creek flood zone. Increased flood protection is necessary since future flows within Penitencia Creek are expected to increase as a result of upstream land use changes. However, the City of Milpitas is highly built out and the proposed project would not change current land uses in the project vicinity. Future and ongoing development in the City of Milpitas has been addressed in the City's general plan and other land use planning documents. As previously stated, the proposed project would not increase future density of local housing development or significantly increase economic activity.

For the reasons described above, the proposed project would not induce growth any direct or indirect population growth.

4.3 Cumulative Impacts

According to State CEQA Guidelines Section 15130(a)(1), a cumulative impact is created by the combination of a proposed project with other past, present, and probable future projects causing related impacts. Cumulative impacts can result from individually minor but collectively substantial projects taking place over time (State CEQA Guidelines Section 15355[b]). Under CEQA, an EIR must discuss the cumulative impacts of a project when the project's incremental contribution to the group effect is "cumulatively considerable." An EIR does not need to discuss cumulative impacts that do not result, at least in part, from the project evaluated in the EIR.

To meet the adequacy standard established by State CEQA Guidelines Section 15130, an analysis of cumulative impacts must contain the following elements:

- an analysis of related past, present, and reasonably foreseeable projects or planned development that would affect resources in the project area similar to those affected by the proposed project;
- a summary of the environmental effects expected to result from those projects with specific reference to additional information stating where that information is available; and
- a reasonable analysis of the combined (cumulative) impacts of the relevant projects.

The cumulative impacts analysis must evaluate a project's potential to contribute to the significant cumulative impacts identified, and it must discuss feasible options for mitigating or avoiding any contributions assessed as cumulatively considerable. The discussion of cumulative impacts is not required to provide as much detail as the discussion of the effects attributable to the project alone. Rather, the level of detail is to be guided by what is practical and reasonable.

4.3.1 Approach to Analysis

The following analysis of cumulative impacts focuses on whether the impacts of the proposed project are cumulatively considerable within the context of impacts resulting from the proposed project and other past, present, or reasonably foreseeable future projects. The cumulative impact scenario considers other projects proposed within the area defined for each resource that have the potential to contribute to significant cumulative impacts.

State CEQA Guidelines Section 15130 provides the following two alternative approaches for analyzing and preparing an adequate discussion of significant cumulative impacts:

- the list approach, which involves listing past, existing, and probable future projects or activities that have or would produce related or cumulative impacts, including, if necessary, those projects outside the control of the lead agency; or
- the projection approach, which uses a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions and their contribution to the cumulative effect.

This EIR uses the list approach for analyzing cumulative impacts. Activities related to the proposed project that are included in the cumulative analysis were determined using several factors, including the location and type of activity and the characteristics of the activity related to resources with the potential to be affected by the proposed project. In addition, regional or global conditions that might lead to cumulative impacts (e.g., GHG emissions) are also described.

Resource Topics Considered and Dismissed

Greenhouse gas emissions are, by nature, a cumulative issue and are already addressed in Section 3.7, *Greenhouse Gas Emissions;* therefore, this topic is not discussed further in this

section. For all other resource topics, as shown in **Table 4-1**, significant cumulative impacts do not exist.

Table 4-1. Resource Topics Dismissed from Further Consideration in the Analysis of Cumulative Impacts due to Lack of Significant Cumulative Impacts

Resource Topic	Rationale for Dismissing from Further Consideration
Aesthetics	The geographic scope of the cumulative aesthetics evaluation is the project site and the nearby areas within visual sight lines. Because the topography of the project vicinity is relatively level and the area is mostly urbanized, proposed improvements would only be visible from nearby viewpoints. Nearby development would be similar to existing urban development in the area and would be guided by the City of Milpitas General Plan as to allowable uses and size and bulk of structures. Based on the above and given the existing urbanized appearance of the area, there would be no significant cumulative impact to aesthetics when considering the proposed project and other projects in the area. The proposed project and other projects would not result in adverse effects on scenic resources, or substantially alter the visual character of the area. When considering the proposed project along with other projects, there would not be a significant cumulative impact on aesthetics.
Cultural Resources	The geographic scope of cumulative cultural resources evaluation includes the project area and immediate surroundings. Construction of the proposed project and other development projects in Milpitas could lead to cumulative loss of significant historic, archaeological, or paleontological resources. As described in Section 3.5, *Cultural Resources*, there are no historical resources and no known archaeological resources within the project site. The District would implement BMPs to ensure that archaeological resources, including Native American human remains are protected from damage and properly studied, recovered, and curatedin the event that they are found during project construction. State law requires other development projects to similarly protect archaeological resources and human remains uncovered during construction of those projects. When considering the proposed project along with other projects, there would not be a significant cumulative impact on\cultural resources.
Geology, Soils, and Seismicity	The geographic scope of geology, soils, and seismicity evaluation includes the project area and immediate surroundings. Other projects in Milpitas would be required to comply with California Building Code requirements. The proposed project and other developments would be designed to withstand seismic hazards (e.g., liquefaction) and expansive and corrosive soils. When considering the proposed project along with other projects, there would not be a significant cumulative impact to geology, soils, or seismicity.
Hazards and Hazardous Materials	With the exception of activities conducted by the District's SMP, there are no other cumulative projects that would be located within the same footprint as the proposed project. As described in Section 3.8, *Hazards and Hazardous Materials*, no known hazardous waste sites are located at the project site; however due to the urbanized nature of the area, potential exists for project excavations to encounter contaminated soil or groundwater. District BMPs would be implemented to ensure that contaminated media, if encountered, are

Resource Topic	Rationale for Dismissing from Further Consideration
	handled in compliance with federal and state laws regarding hazardous wastes. Other nearby cumulative construction projects such as the Lower Berryessa Creek Flood Improvements Project and iStar and Waterstone development projects would also be required to follow federal and state laws regarding contaminated soil or groundwater. Based on the lack of the known contamination in the project area, and legal requirements for handling of contaminated media if encountered in the future, the potential for other nearby projects to contribute to cumulative impacts regarding hazardous materials is low. When considering the proposed project along with other projects, there would not be a significant cumulative impact to hazards or hazardous materials.
Land Use	As described in Section 3.10, *Land Use and Planning,* the proposed project would not divide an established community or change land use at the project site or vicinity. The proposed project would also not conflict with local plans such as the *City of Milpitas General Plan, Milpitas Trails Master Plan* or the City of Milpitas' *Bikeway Master Plan*. Similar to the proposed project, other projects are subject to planning, environmental review, and permitting processes. Through those processes, inconsistencies with relevant plans and policies would be resolved before project implementation. When considering the proposed project along with other projects, there would not be a significant cumulative impact to land use.
Recreation	Similar to the proposed project, other nearby projects including the Upper Berryessa Creek Flood Protection Project and the Upper Penitencia Creek Project (described in detail in Table 4-3 below) have the potential to affect recreational trails in their respective project areas during construction. However, because these projects and the proposed project are in different stages of development, it is unlikely that they would be under construction simultaneously. The District's Lower Berryessa Creek Flood Protection Improvement Project adjoins the proposed project area and would temporarily affect recreational trails during construction. However, construction of Phase 1 of the Lower Berryessa Creek project, which is closest to the Lower Penitencia Creek Improvements Project area, has been completed and will not occur concurrently with construction of the proposed project. Construction of Phase 2 of the Lower Berryessa Creek project may overlap construction of the proposed project, but would be over 0.5 mile from the Lower Penitencia Creek project area. When considering the proposed project along with other projects, there would not be a significant cumulative impact to recreation.
Utilities and Service Systems	For aboveground and belowground utilities, the geographic scope for evaluating cumulative impacts includes the project area and immediate surrounding areas. With regards to solid waste management, the geographic scope includes Santa Clara County. The Lower and Upper Berryessa Creek projects are under construction and include plans to relocate aboveground and underground utilities lines as necessary. Buried underground utilities may be encountered during project construction activities. To prevent significant disruption of service, affected parties will be notified in advance of possible service disruptions and safety protocols would be implemented to avoid damage, or potentially hazardous accident conditions (e.g., explosion from

Resource Topic	Rationale for Dismissing from Further Consideration
	striking a natural gas pipeline). Other development projects would conform to the City of Milpitas General Plan and would not result in increased demand on utility and service systems beyond that which can be accommodated by existing and planned infrastructure. Milpitas is served by the San Jose/Santa Clara Water Pollution Control Plant, which has prepared a Master Plan to accommodate expected future increases in wastewater treatment growth in the plant's service area. Population growth within Santa Clara County would result in increased generation of solid wastes; however, this would be offset by the requirements for increased re-use and diversion of solid waste included in the CIWMA. Existing solid waste facilities in the County have many years of estimated capacity to accommodate solid wastes, and overall capacity would be increased by the Newby Island Sanitary Landfill Rezoning and Recyclery Project. That project would provide 15.12 million cubic yards of additional landfill capacity. When considering the proposed project along with other projects, there would not be a significant cumulative impact to utilities and services systems.

Geographic Scope of Analysis

The level of detail of a cumulative impact analysis should consider a proposed project's geographic scope and other factors (e.g., a project's construction or operational activities, the nature of the environmental resource being examined) to ensure that the level of detail is practical and reasonable. The discussion below focuses on the cumulative impacts of the proposed project for environmental resources that could be expected to be cumulatively affected by the proposed project in conjunction with other past, present, and reasonably foreseeable future projects. The specific geographic scope for each environmental resource topic analyzed in this EIR for cumulative impacts is provided below.

The defined specific geographic scope for each environmental resource area analyzed in this ~~D~~EIR to which the proposed project could contribute to cumulative impacts is provided below in **Table 4-2**.

Table 4-2. Geographic Scope for Resources with Significant Cumulative Impacts Relevant to the Proposed Project

Resource	Geographic Scope
Air Quality	San Francisco Bay Area Air Basin
Biological Resources	Lower Penitencia Creek Watershed
Hydrology and Water Quality	Upper and Lower Berryessa Creek, Lower Penitencia Creek, Coyote Creek, and South San Francisco Bay
Noise and Vibration	Project area and surrounding areas exposed to noise and ground-borne vibration generated in the project area (within the City of Milpitas)

Resource	Geographic Scope
Transportation and Traffic	I-880 and roadways with traffic generated by the proposed project, including Dixon Landing Road, California Circle, Milmont Drive, N. Milpitas Boulevard, and San Andreas Drive

Table 4-3 lists projects planned in the City of Milpitas that could affect resources that would also be affected by the proposed project. The list was developed by reviewing sources available on the City of Milpitas website, communication with City of Milpitas staff, and referring to the Governor's Office of Planning and Research CEQAnet database. While it is unlikely that every cumulative project is listed, the list of cumulative projects is considered comprehensive and is representative of the types of impacts that would be generated by other projects related to the proposed project. The evaluation of cumulative impacts assumes that the impacts of past and present projects are represented by baseline conditions, and that cumulative impacts are considered in the context of baseline conditions alongside reasonably foreseeable future projects.

Table 4-3. Reasonably Foreseeable Future Projects that Might Cumulatively Affect Resources of Concern for the Proposed Project

No.	Project Title	Brief Project Description	Distance from Proposed Project Site
Milpitas Development Projects			
1	Waterstone California Circle Residential Project	The project proposes development of 84 single-family homes on 10.7 acres at 1494-1600 California Circle. This project was approved in 2013. At the time the proposed project EIR was prepared, construction of the Waterstone California Circle project was underway. Construction is expected to be complete before construction of the proposed project commences.	Immediately west of Reach 3 of the project site
2	iStar Residential	The project proposes construction of 145 units on 9.45 acres at 1210 California Circle. Construction is expected to be complete before construction of the proposed project commences.	Immediately west of the southern portion of Reach 3
3	Springhill Marriott Suites	The project proposes construction of a new hotel at 1201 Cadillac Court. This project is identified as pending by the City of Milpitas.	Approximately 0.25 mile west of Reach 4
4	Holiday Inn 1100 Cadillac Court	The project proposes a two-lot subdivision of an undeveloped parcel with the Venture Commerce Center. A hotel would be developed at 1100 Cadillac Court. Approval to begin foundation was approved in September 2015; building permits are currently under review with the City of Milpitas Planning Department.	Approximately 0.25 mile southwest of Reach 4
5	Pacific Mall & Hotel	The project proposes development of 284,587 square feet of retail uses at a mall and a 12-story (240-room) hotel at 11 Ranch Drive. This project was approved in 2014; no building permits have been submitted (Rosas, pers. comm., 2015).	Approximately 1.2 miles southwest of Reach 4
6	Orchid	The project proposes construction of 199 units on 3.02 acres at 31 South Milpitas Boulevard.	Approximately 1.25 miles southeast of Reach 4
7	Taylor Morrison	The project proposes construction of 26 units and 5 live-work spaces on 1.26 acres at 75 South Milpitas.	Approximately 1.35 miles southeast of Reach 4
8	Los Coches Residential Project	The project consists of two separate parcels at 31 South Milpitas (one 7.4-acre built-out parcel and another 3.9-acre parcel). The project entails demolition of the entire 11.3-acre site and construction of 80 single-family residential homes, including on- and off-site pedestrian and bicycle-oriented trail improvements. Construction is currently underway.	Approximately 1.25 miles southeast of Reach 4

No.	Project Title	Brief Project Description	Distance from Proposed Project Site
9	Los Coches Live/ Work Residential Project	The project proposes development of 28 units and 4 live-work spaces on 9.65 acres planned at 345 Los Coches (at the intersection of South Milpitas Boulevard and Los Coches Street). Construction has not yet begun.	Approximately 1.35 miles southeast of Reach 4
10	905-980 Los Coches Street (Robson Single-Family)	The project proposes development of 83 dwelling units planned on 4.98 acres at 905-980 Los Coches Street. Construction is currently underway.	Approximately 1.6 miles southeast of Reach 4
11	Cerano Apartments	The project proposes development of 374 units on 7.58 acres at 501 Murphy Ranch Road.	Approximately 2.1 miles southwest of Reach 4
12	Coyote Creek Townhomes	The project proposes construction of 134 units on 9.2 acres at 601 Murphy Ranch Road. Construction is nearly complete (Rosas, pers. comm., 2015).	Approximately 2.1 miles southwest of Reach 4
13	Landmark Tower	The project proposes development of 375 units on 3 acres at 600 Barber Lane. Planning entitlements have been received but the project proponent has not yet submitted building plans.	Approximately 1.75 miles south of Reach 4
14	1102 Abel Street (Centria West)/ D.R. Horton	The project proposes development of 366 units on 5.2 acres at 1102 Abel Street. Construction is currently underway (Rosas, pers. comm., 2015).	Approximately 2.27 miles south of Reach 4
15	Ilara Apartments	The project proposes development of 204 dwelling units surrounding a parking garage on 2.83 acres at 1201 South Main Street. Construction is near completion (Rosas, pers. comm., 2015).	Approximately 2.45 miles south of Reach 4
16	Integral Properties	The project proposes development of 954 units on 13.36 acres at 1315 McCandless Avenue. Construction status is currently unknown (Rosas, pers. comm., 2015).	Approximately 2.45 miles south of Reach 4
17	Avenue Community	The project proposes development of 203 units on 9.68 acres at 1515 McCandless Avenue. Construction status is currently unknown (Rosas, pers. comm., 2015).	Approximately 2.7 miles south of Reach 4
18	Senior Lifestyle	The project proposes development of 387 units on 5.94 acres at 1504 South Main Street.	Approximately 2.7 miles south of Reach 4
19	D.R. Horton Harmony Project	The project proposes development of a mixture of 276 townhomes and condominiums on a 12.33-acre site at Montague Expressway and McCandless Drive. Construction is nearly complete (Rosas, pers. comm., 2015).	Approximately 3 miles southeast of Reach 4

No.	Project Title	Brief Project Description	Distance from Proposed Project Site
20	450 Montague Residential Project (Lyon Communities Montague)	The project proposes development of 89 units on 10.5 acres at 450 Montague Expressway. Planning entitlements have been obtained; the City of Milpitas Planning Department is currently reviewing building plans.	Approximately 2.8 miles southeast of Reach 4
21	Pace Contour	The project proposes development of 134 units on 9.2 acres at 300, 324-368 Montague Court.	Approximately 2.75 miles southeast of Reach 4
22	Traverse Residential Project	The project proposes development of 207 dwelling units on 12.5 acres at 569-625 Trade Zone Boulevard. Building permit has been approved for one 5-unit building as of December 2014 (Rosas, pers. comm., 2015).	Approximately 3 miles southeast of Reach 4
23	Edge	The project proposes development of 381 units and 8,100 square feet of commercial use on 5.6 acres at 765 Montague Expressway.	Approximately 2.75 miles southeast of Reach 4
24	Citation	The project proposes development of 732 units on 16 acres at 1200 Piper Drive.	Approximately 2.6 miles southeast of Reach 4
25	115-245 North McCarthy Boulevard (Equity Office)	The project proposes construction of 424,814 square feet of office space in six 5-story buildings and a parking garage. Site development and tentative map have been approved but building permit has not been issued (Rosas, pers. comm., 2015).	Approximately 1.3 miles southwest of Reach 4
26	Sinclair Frontage Road	The project proposes development of 80 single-family dwellings on 9.65 acres at 245-371 Sinclair Frontage Road. No building permit has been submitted yet (Rosas, pers. comm., 2015).	Approximately 1.7 miles southeast of Reach 4
27	New McCandless Drive Elementary School Project	The Milpitas Unified School District is proposing to acquire land on and in the vicinity of McCandless Drive and Houret Court in Milpitas to develop and operate a K-6 elementary school. The site is approximately 10 acres and would span several vacant and developed parcels. The school would alleviate increases in the District's existing and projected student enrollment and would be in operation by the 2018/2019 school year. The NOP was published January 2015 (CEQANet 2016).	Approximately 3 miles south of Reach 4

No.	Project Title	Brief Project Description	Distance from Proposed Project Site
Other SCVWD, Public Infrastructure, and Flood Protection Projects			
28	SCVWD Lower Berryessa Creek Flood Protection Project	The project proposes to provide flood protection in the event of a 100-year flood event. The project extends approximately 1.7 miles through the City of Milpitas from the confluence of Lower Berryessa Creek with Lower Penitencia Creek south to Calaveras Boulevard. It also includes approximately 2.1 miles of Calera and Tularcitos Creeks. Construction of the project's first phase (just south of the Milmont Drive bridge to Abel Street) began in 2015 (SCVWD 2015a). Overall project construction is scheduled for completion in 2018.	Adjacent to the southernmost portion of the project area
29	USACE Upper Berryessa Creek Flood Protection Project	The project proposes to increase flood protection throughout Upper Berryessa Creek to provide adequate flood protection from a 100-year flood event. Project area extends from Calaveras Boulevard to I-680. Construction of this project is scheduled for completion in 2017.	Approximately 1.5 miles southeast of project area
30	SCVWD Stream Maintenance Program	The District's SMP provides maintenance standards and guides maintenance activities for the District to meet its designed flood protection mandates. It is an ongoing, districtwide program that focuses on sediment removal, vegetation management (e.g., mowing of levee banks for fire safety purposes), and bank protection activities Regulatory permits for this ongoing project provide coverage through 2023. The project area along the Lower Penitencia Creek channel is maintained within the SMP. Reaches 3 and 4 of the Lower Penitencia Creek channel undergo periodic sediment removal, most recently in October 2015, to maintain conveyance capacity in the channel.	Overlaps the project area
31	SCVWD Upper Penitencia Creek Project	The Upper Penitencia Creek Project would provide flood protection in the event of a 100-year flood. The project encompasses approximately 4.2 miles of Upper Penitencia Creek from Dorel Drive to the Coyote Creek confluence in San Jose. The project is currently in the planning phase (SCVWD 2015b).	Approximately 5.5 miles south of the project area
32	BART Silicon Valley (formerly Silicon Valley Rapid Transit Corridor)	BART and VTA are working together to construct a 16.1-mile extension of the BART system from the planned Warm Springs Station in Fremont through Milpitas and San Jose to Santa Clara. The first phase of BART Silicon Valley (referred to as the Berryessa Extension Project) consists of the first 9.9 miles of the extension of BART from the current planned Warm Springs station, through Milpitas, to near Las Plumas Avenue in San Jose. Construction is currently underway at different areas along the planned line (CEQANet 2016). Roadway improvements for Dixon Landing Road/Milmont Drive are currently underway and were estimated to be complete by mid-2016 (VTA BART Silicon Valley 2016).	Approximately 0.25 mile east of Reach 3

No.	Project Title	Brief Project Description	Distance from Proposed Project Site
33	Newby Island Sanitary Landfill Rezoning and Recyclery Project	The City of San Jose proposes to rezone the Newby Island Sanitary Landfill and the adjacent Recyclery to increase the landfill's maximum permitted height and authorize uses that were unauthorized by the previous zoning. The project would allow an increase in capacity of the landfill by approximately 15.12 million cubic yards, excluding cover materials.	Approximately 0.2 mile west of the project area
34	San Jose/Santa Clara Water Pollution Control Plant Master Plan (Plant Master Plan)	The Plant Master Plan includes various improvements needed at the water pollution control plant to address aging infrastructure, reduce odors, accommodate anticipated population growth in the plant's service area, and comply with evolving water quality regulations. The Plant Master Plan also includes a long-term land use plan for lands surrounding the existing plant.	Existing Plant approximately 1.7 miles west of the project area; Plant Master Plan planning area approximately 0.5 mile west of the project area
35	City of Milpitas Bicycle Master Plan projects	According to the City of Milpitas *Bicycle Master Plan*, a Class I multi-use trail is proposed along Lower Penitencia Creek between North McCarthy Boulevard and California Circle. The timing of this trail project is unknown but would likely occur after completion of the proposed project.	Overlaps with Reaches 1 through 3
36	South San Francisco Bay Shoreline Study	The South San Francisco Bay Shoreline Study is a congressionally authorized study by USACE, the District, and the California Coastal Conservancy to identify and recommend flood risk management and ecosystem restoration projects along South San Francisco Bay for federal funding. This study is looking at the feasibility of options for managing flood risk along the South Bay shoreline, undertaking ecosystem restoration, and expanding public access. The goal of the study is to protect the parts of Santa Clara County's shoreline with the highest potential damages and threats to human health and safety from flooding. A tentatively selected plan for levee alignments, wetland restoration, and public access has been identified in the Alviso area. An Environmental Impact Study was completed in 2015.	Adjacent to Reach 1

Sources: City of Milpitas 2015a and 2015b; SCVWD 2015a and 2015b; Rosas, pers. comm., 2015

4.3.2 Significant Cumulative Impacts

This section describes the topic areas for which past, present, and reasonably foreseeable projects would cause significant cumulative impacts.

Air Quality

The San Francisco Bay Area air basin is considered in attainment or unclassified for all air pollutants except the state and federal ozone and particulate matter of 2.5 micrometers or less ($PM_{2.5}$) ambient air quality standards, and the state particulate matter of 10 micrometers or less (PM_{10}) ambient air quality standard. Ozone is primarily caused by emissions of ozone-precursors from on-road mobile (vehicle) emissions, off-road mobile sources, organic compounds evaporation, and consumer products (BAAQMD 2014). The primary sources of $PM_{2.5}$ are combustion from stationary sources, on-road motor vehicles, off-road mobile sources, and dust sources (BAAQMD 2014). In addition, PM_{10} emissions in the Bay Area air basin are primarily from fugitive dust from construction and farming operations, paved and unpaved road dust, domestic combustion, and on-road motor vehicles. In addition, accidental fires can contribute to PM_{10} and $PM_{2.5}$ emissions. (BAAQMD 2014).The projects listed in Table 4-3 would directly generate considerable amounts of NO_x and PM and indirectly ozone. Because the Bay Area is in nonattainment of federal and state ambient air quality standards for ozone and $PM_{2.5}$, and state standards for $PM_{10,}$ cumulative emissions would result in a significant cumulative impact on air quality.

Biological Resources

Future and ongoing development activities in Milpitas, other District projects such as the Lower Berryessa Creek Flood Protection Project, and the District's ongoing activities associated with the SMP could result in impacts on many of the same habitat types and species in the Lower Penitencia Creek Watershed that would be affected by the proposed project. Table 4-3 identifies several projects that have been or would be constructed near the project area (e.g. Lower Berryessa Creek Flood Protection Project, the District's SMP, iStar and Waterstone developments, and South San Francisco Bay Shoreline Study), potentially affecting biological resources during the same period as the proposed project. When considering the proposed project along with other projects in the same watershed, this is considered a significant cumulative impact.

Hydrology and Water Quality

As listed in Table 4-3, several nearby projects could result in a variety of impacts on water resources in the project vicinity. Specifically, these projects could include the Waterstone California Circle Residential Project (immediately west of Reach 3), South San Francisco Bay Shoreline Study, Plant Master Plan, the iStar Residential Project (immediately west of the southern terminus of Reach 3), and other District projects such as the Lower Berryessa Creek Flood Protection Project (directly upstream of the project area) and the USACE Upper Berryessa Creek Flood Protection Project. Additionally, the SMP activities are ongoing in the project area. Increased development, mostly through redevelopment or more intensive densification in urban areas, including the Berryessa Creek watershed, could lead to a variety of impacts on water resources, including new sources of point-source and non-point-source pollution. Because the San Francisco Bay RWQCB requires all new development to retain and manage additional runoff on site, the increase in impervious surfaces and increased volume

of stormwater runoff associated with additional development and urban densification are not anticipated to change substantially. According to the most recent list of water quality impairments under Section 303(d) of the CWA, Lower Penitencia Creek is not listed as impaired; however, the lower portion of Coyote Creek (downstream of Lower Penitencia Creek) is listed for diazinon and trash from stormwater runoff and illegal dumping. Construction projects in the area would have the potential to generate water pollutants, including trash and diazinon. Because increased intensity of urban development in the area could add to the impaired status of lower Coyote Creek, there would be a significant cumulative impact to water quality.

The Upper and Lower Berryessa Creek projects would increase the flow conveyance capacity of over 4 miles of creeks that are upstream of Lower Penitencia Creek. Those projects are under construction and would enlarge those channels to accommodate the 1% flow without overtopping of the creek banks. As a result of those projects, the 1% flow discharged to Lower Penitencia Creek would increase from the existing 4,830 cfs to 6,900 cfs, which would be a significant cumulative hydrologic impact.

Noise and Vibration

The geographic scope of cumulative noise impacts encompasses the project area as well as areas adjacent to construction access and haul routes that are located near noise-sensitive land uses. Several projects listed in Table 4-3 may overlap with the proposed project's construction activities. Projects located within 0.25 mile of the proposed project would generate noise that could, when combined with project construction noise, cause a significant cumulative noise impact. Those projects are: the Waterstone Residential Project, iStar Residential Project, Springhill Marriott, Holiday Inn/ 1100 Cadillac Court, Lower Berryessa Creek Flood Protection Project, Stream Maintenance Program (SMP), and Bart Silicon Valley Extension. Construction of the first four of those projects could occur simultaneously with project construction. Construction of Phase 1 of the Lower Berryessa Flood Protection Project was completed in 2016 and Phase 2 construction would occur more than 0.25 miles from the project site. SMP activities would not occur at the same time as project construction. Construction is also complete on the section of and Bart Silicon Valley Extension within 0.25 miles of the project site. Thus, construction of these latter three projects would not overlap project construction and would not add to cumulative noise impacts. Nevertheless, construction of the Waterstone, iStar, Springhill Marriott and Holiday Inn projects would occur at the same time as project construction, and would contribute to cumulative noise and vibration exposure of local residents and nearby noise-sensitive uses. Cumulative noise and vibration impacts due to construction activities at the project site and vicinity would be significant.

Transportation and Traffic

As described in Section 3.13, *Transportation and Traffic,* intersections evaluated for the proposed project operate at acceptable LOS; however, with increased development and population growth in Milpitas and adjacent areas, traffic congestion may worsen. Table 4-3 identifies several projects that would generate temporary and/or permanent new traffic on the same roadways and during the same period that would be affected by construction of the proposed project. The combined generation of traffic would temporarily result in a significant cumulative impact.

4.3.3 Project Contributions to Significant Cumulative Impacts

The following section describes the proposed project's contribution to significant cumulative impacts. **Table 4-4** summarizes the proposed project's contribution to cumulative impacts.

Table 4-4. Summary of Significant Cumulative Impacts and Project Contribution

Impact	Level of Significance Before Mitigation	Applicable Mitigation Measures	Level of Significance After Mitigation
CUM-1: Cumulative Impacts on Air Quality	S	Mitigation Measure AQ-1	NCC
CUM-2: Cumulative Impacts on Biological Resources	S	Mitigation Measures BIO-1 through BIO-13	NCC
CUM-3: Cumulative Impacts on Hydrology and Water Quality	S	None	NCC
CUM-4: Cumulative Impacts on Noise and Vibration	S	Mitigation Measure NOI-1	CC
CUM-5: Cumulative Impacts on Traffic Patterns and Safety Hazards	S	Mitigation Measure TRA-1	NCC

S = Significant; NCC = Not Cumulatively Considerable; CC = Cumulatively Considerable

Impact CUM-1: Cumulative Impacts on Air Quality (Not Cumulatively Considerable)

As described in Section 3.3.4, *Impact Analysis, ~~Air Quality~~*, emissions related to construction ~~and operation~~ of the proposed project would result in emissions of NO_x above the established BAAQMD thresholds. ~~not violate an air quality standard or make a substantial contribution to existing air pollution. According to the BAAQMD's established mass emissions thresholds of significance (BAAQMD 2010), projects emitting less than the project-level significance thresholds for construction and operational impacts (identified in Table 3.3-5) would not be expected to result in a considerable contribution to a significant cumulative impact (pertaining to existing regional ozone and PM issues). The significance thresholds that apply to cumulative impacts were developed considering other sources of air pollutants and overall growth of emissions in the air basin.~~

~~At the time of Draft EIR preparation, the BAAQMD was not recommending use of these construction thresholds due to ongoing litigation on unrelated thresholds. However, the District considers these thresholds to be appropriate for use in this analysis because they are based on substantial evidence developed by the BAAQMD as the level to ensure attainment of air quality standards.~~

~~The analysis of proposed project emissions presented in Section 3.3.4, *Impact Analysis*, shows that~~However, with implementation of BMP AQ-1 and Mitigation Measure AQ-1, the BAAQMD's significance thresholds would not be exceeded. Implementation of ~~Mitigation Measure AQ-1~~these measures would ~~further~~ reduce air emissions to ~~and ensure the proposed project's emissions would be reduced to~~ a level such that ~~it~~ the proposed project would not

make a considerable contribution to cumulative air quality impacts even when considering the other projects occurring in the area.

Impact CUM-2: Cumulative Impacts on Biological Resources (Not Cumulatively Considerable)

The proposed project could affect biological resources in the Lower Penitencia Creek watershed through habitat alterations or losses. Project activities would involve dry-season channel dewatering, floodwall construction, levee modifications, bench excavations, and bridge headwalls.

As discussed in Section 3.4, *Biological Resources,* the proposed project could adversely affect special-status species or habitat used by special-status species including longfin smelt, Central California Coast steelhead, western pond turtles, burrowing owls, Alameda song sparrow and San Francisco common yellowthroat, salt marsh harvest mouse, special-status bats, and Congdon's tarplant (see Impact BIO-1). Implementation of various District BMPs pertaining to water quality and biological resources would minimize the proposed project's potential impacts on these species. Projects in close proximity to the project area such as the Lower Berryessa Creek Flood Protection Project could also result in impacts on western pond turtles and special-status birds and bats. Construction of the iStar and Waterstone development could also result in adverse effects on special-status birds and bats, resulting in a significant cumulative impact.

As described in Section 3.4, the proposed project would implement a number of mitigation measures to reduce impacts on sensitive habitats and on special-status species, jurisdictional wetlands and other waters, and locally protected trees. Specifically, implementation of Mitigation Measures BIO-1 (Exclude Fish Prior to Dewatering Activities), BIO-2 (Conduct Preconstruction Surveys for Western Pond Turtles and Relocate if Necessary), BIO-3 (Conduct Preconstruction Surveys for Nesting Birds), BIO-4 (Implement Buffer Zones for Nesting Birds), BIO-5 (Develop and Conduct Worker Environmental Awareness Program), BIO-6 (Implement Hand Removal of Vegetation in Reach 1 and Staging Area A), BIO-7 (Install Exclusion Barrier and Conduct Salt Marsh Harvest Mouse Preconstruction Survey), BIO-8 (Salt Marsh Harvest Mouse Habitat Monitoring Plan), BIO-9 (Conduct Focused Preconstruction Survey for Congdon's Tarplant), BIO-10 (Compensate for Congdon's Tarplant Impacts), BIO-11 (Clean Construction Equipment), and BIO-12 (Dispose of Invasive Plants) would ensure the proposed project's contribution to cumulative impacts on special-status species would not be cumulatively considerable.

The proposed project would also result in temporary and permanent effects on jurisdictional wetlands and/or other waters of the U.S./state throughout all four reaches of Lower Penitencia Creek (see Impact BIO-3). The Lower Berryessa Creek Flood Protection Project, located upstream of the proposed project, would involve similar in-channel improvements and result in impacts on jurisdictional wetlands and other waters of the U.S./state. The Upper Berryessa Creek Flood Protection Project, located about two miles upstream of the proposed project would impact other waters of the U.S./state. Collectively, these projects could result in a significant cumulative impact on wetlands and other waters of the U.S./state. The proposed project includes creation of a wetland bench that would planted with native plants to create a tidal wetlands habitat. Mitigation Measure BIO-13 (Wetlands and Jurisdictional Waters Monitoring Plan and Contingency Actions) would ensure that the wetland bench supports ecological functions of wetland vegetation and the proposed project's contribution

to cumulative impacts to jurisdictional wetlands and other waters of the U.S./state would not be cumulatively considerable.

The project would remove about 33~~22~~ trees with dbh of 6 inches or greater from the ~~sparse riparian canopy~~top of bank along Reaches 2, 3, and 4 of the project area. The Lower and Upper Berryessa Creek projects would also remove a number of ~~riparian~~ trees, adding to the cumulative impact on ~~riparian habitat~~trees protected under the City's tree ordinance. The proposed project would plant replacement trees in conformance with the City's tree protection ordinance; thereby ensuring that the proposed project would not make a cumulatively considerable contribution to cumulative impacts on ~~riparian~~protected trees.

Impact CUM-3: Cumulative Impacts on Hydrology and Water Quality (Not Cumulatively Considerable)

As described in Section 3.8, *Hydrology and Water Quality*, project design includes creation of a wetland bench in Reach 1 which would provide storage for flood waters and increased areas of tidal wetlands that would have a beneficial effect on water quality. The project would also continue existing drainage patterns while reducing flood risks. The elimination of flood waters overtopping the creek banks during the 1% flow event would prevent flood waters washing of large amounts of pollutants from flooded urban areas into Lower Penitencia Creek, Coyote Creek, and South San Francisco Bay. Thus, the project would improve water quality of the water bodies during periodic high creek flows, which would increase in the future due to improvements under construction to Upper and Lower Berryessa Creek, which is the largest tributary to Lower Penitencia Creek. The proposed project would divert creek water around the work areas within the channel, and would discharge that water only if it would meet discharge standards, thereby preventing adverse effect on the quality of receiving waters. Additionally, the proposed project would implement a SWPPP to prevent discharge of substantial pollutants during project construction. The District would implement a number of BMPs to prevent release of pollutants to the creek, ensure proper handling of materials, and prohibit activities in the creek channel (e.g., vehicle fueling or maintenance) which would protect water quality. The proposed project would not make a cumulatively considerable contribution to cumulative impacts on water quality.

As described in Section 4.3.1, above, a significant cumulative impact related to hydrology would occur as the Lower and Upper Berryessa Creek projects would increase the 1-percent flow from 4,830 cfs to 6,900 cfs. Without the proposed project, Lower Penitencia Creek would not have the capacity to convey the 1-percent flood event and flood hazards would increase in the project vicinity. The proposed project would increase the capacity of Lower Penitencia Creek to convey increased 1-percent flows from the improved Upper and Lower Berryessa Creek without overtopping of the Lower Penitencia Creek banks. In addition, the project would extend flood protection benefits from the upper watershed projects downstream to the Lower Penitencia Creek and Coyote Creek confluence. The Coyote Creek channel downstream of the project area has sufficient flow conveyance capacity to accommodate the combined 1% flows of Lower Penitencia and Coyote Creek. Therefore, construction and operation of the proposed project would not increase downstream flood hazards. The proposed project's contribution to cumulative hydrologic impact would not be cumulatively considerable.

Impact CUM-4: Cumulative Impacts on Noise and Vibration (Cumulatively Considerable)

As described in Section 3.11, *Noise,* project construction activities would generate noise that would exceed FTA noise exposure thresholds and the City's General Plan Policy (6-I-1) which calls for avoiding noise level increases of 3dB or more than 65 dB L_{dn} at residential property lines ~~for nearby residential uses~~. Noise generated during construction of the proposed project would also contribute to the ambient noise environment and would result in a temporary increase in community noise levels that would exceed the City's General Plan Policy G-I-1 for community noise exposure of residential uses. Construction would also cause vibration exceeding annoyance levels at nearby residences, but would not cause damage to those structures. Because noise and vibration impacts are localized, affecting only the receptors in the immediate vicinity, and because construction of the project would occur for a short duration (up to 4 months at a given location), no individual receptor would be exposed to excessive noise or vibration levels from construction for an extended period. The following projects would be located within 0.25 mile of the project site and could be under construction simultaneously with the proposed project: the Waterstone Residential Project, iStar Residential Project, Springhill Marriott, and Holiday Inn/ 1100 Cadillac Court. Construction of these projects would generate noise exceeding FTA thresholds and the City's thresholds for residential noise exposure and would result in significant temporary increases in ambient noise. Cumulative noise impacts would be significant. Implementation of Mitigation Measure NOI-1 (Implement Noise- and Vibration-reducing Measures) would minimize noise and vibration impacts associated with construction of the proposed project. However, because that measure would not reduce construction noise generated by the project to below the FTA threshold for exposure of residential uses, would likely cause a 3 dB L_{dn} or more increase in ambient noise levels at the property lines of nearby residential properties, and the project would temporarily result in a substantial increase in ambient noise levels above existing noise levels, construction of the proposed project would result in a temporary but cumulatively considerable contribution to significant cumulative noise impacts.

Impact CUM-~~6~~5: Cumulative Impacts on Traffic Patterns and Safety Hazards (Not Cumulatively Considerable)

Project construction would generate trips on several roadways within the project area, primarily in Milpitas, from materials hauling and worker commute trips. Construction trip

generation is presented in Table 3.13-2 in Section 3.13, *Transportation and Traffic.* As shown in Table 3.13-5, construction trips generated by the project would not result in a degradation of LOS at any of the study area intersections. This table also shows that construction of the proposed project along with other approved projects (including the Springhill Marriot Suites, Holiday Inn Suites at 1100 Cadillac Court, Waterstone Residential, and iStar Residential Projects) would result in acceptable LOS at the study area intersections.

There is a possibility that the presence of slow-moving vehicles and equipment associated with both the proposed project and other projects could result in temporary safety hazards on local roads. This would be a significant cumulative impact. Implementation of Mitigation Measure TRA-1 (Traffic Control Plan), would minimize traffic safety hazards on local roads, including San Andreas Drive, where capacity would be temporarily reduced during construction of the San Andreas Drive bridge headwall. With implementation of this mitigation measure, the proposed project's contribution to this cumulative impact would not be cumulatively considerable.

4.4 Significant and Unavoidable Impacts

Section 15126.2(b) of the State CEQA Guidelines requires an EIR to describe any significant impacts that cannot be mitigated to a less-than-significant level. All of the impacts associated with the proposed project would be reduced to a less-than-significant level through the implementation of identified mitigation measures and BMPs, with the exception of the impacts discussed below. The following impacts have been identified as significant and unavoidable:

- Exposure of persons to or generation of noise levels in excess of standards established in excess of standards established in the local general plan or noise ordinance or, in the applicable standards of other agencies (Impact NOI-1)
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (Impact NOI-2)
- Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (Impact NOI-4)

In addition to the significant and unavoidable impacts described above, the project would make a cumulatively considerable contribution to significant cumulative noise impacts during project construction.

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Chapter 5
ALTERNATIVES

This chapter describes the regulatory requirements for evaluating alternatives in an EIR, presents the alternatives development process for the proposed project, describes the alternatives considered and those considered but dismissed from detailed analysis, provides environmental impact analysis of the alternatives considered, presents a comparison of alternatives, and identifies the environmentally superior alternative.

5.1 Regulatory Requirements

CEQA requires that an EIR evaluate a reasonable range of potentially feasible alternatives to the proposed project, including the No Project Alternative. The No Project Alternative allows decision makers to compare the impacts of approving the action against the impacts of not approving the action. Although no clear rule exists for determining a reasonable range of alternatives to a proposed project, CEQA provides guidance that can be used to define the range of alternatives for consideration in the environmental document.

The alternatives described in an EIR must feasibly accomplish most of the basic project objectives, should reduce or eliminate one or more of the significant impacts of the proposed project (although the alternative could have greater impacts overall), and must be potentially feasible (State CEQA Guidelines Section 15126.6[a]). In determining whether alternatives are potentially feasible, Lead Agencies are guided by the general definition of feasibility found in State CEQA Guidelines Section 15364: "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." In accordance with State CEQA Guidelines Section 15126.6(f), the Lead Agency should consider site suitability, economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, and jurisdictional boundaries in determining the feasibility of alternatives to be evaluated in an EIR. An EIR must briefly describe the rationale for selection and rejection of alternatives and the information that the Lead Agency relied on in making the selection. It also should identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process and briefly explain the reason for their exclusion (State CEQA Guidelines Section 15126.6[c]).

An EIR's analysis of alternatives is required to identify the environmentally superior alternative among all those considered (State CEQA Guidelines Sections 15126.6[a] and 15126.6[e][2]). If the "no project" alternative is identified as the environmentally superior alternative, then the EIR must also identify an environmentally superior alternative amongst the other (action) alternatives.

These guidelines were used in developing and evaluating the alternatives as described below.

5.2 Alternatives Development Process

The proposed project's purpose and objectives, as well as its significant environmental impacts, were considered while developing alternatives to the proposed project. In accordance with the requirements of CEQA, alternatives were developed that would achieve most of the proposed project's basic objectives while reducing one or more of its significant adverse environmental impacts. Alternatives development was also based on feasibility. As described in Chapter 2, *Project Description,* throughout the District's Natural Flood Protection (NFP) evaluation process, the District evaluated three potentially feasible design alternatives in addition to Design Alternative 2A, which was further refined to develop the proposed project. This chapter includes an evaluation of those modified design alternatives.

5.2.1 Project Goals and Objectives

The following goals and objectives are the same as those set out in Section 2.2 in Chapter 2, *Project Description*. The primary objective of the proposed project is to convey the increased flows from the improved Upper and Lower Berryessa Creeks to Coyote Creek without overtopping of the banks.

Specific project objectives are as follows:

- Convey the Lower Berryessa Creek 1-percent design flow;
- Meet required water surface elevations at the confluences of Lower Penitencia Creek with Coyote Creek and Berryessa Creek;
- Minimize the need for seasonal removal of sediment and non-woody vegetation;
- Maintain existing FEMA accreditation of the east levee located between California Circle and Berryessa Creek; and
- Ensure the project improvements meet FEMA certification requirements.

Alternatives were developed to meet most of the specific objectives listed above.

5.2.2 Significant Environmental Impacts of the Proposed Project

A number of project impacts have been identified as significant, but would be mitigated to a level of less-than-significant through implementation of mitigation measures. The proposed project would result in significant but mitigable impacts related to; biological resources; geology, soils, and seismicity; hazards and hazardous materials; and transportation and traffic. These impacts are listed in Table ES-1 in the *Executive Summary* of this ~~D~~EIR.

5.2.3 Significant and Unavoidable Environmental Impacts of the Proposed Project

The following impacts have been identified as significant and unavoidable:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance or, in the applicable standards of other agencies (Impact NOI-1)
- Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels (Impact NOI-2)

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (Impact NOI-4)

In addition to the significant and unavoidable impacts described above, the project would make a cumulatively considerable contribution to significant cumulative noise impacts during project construction.

5.3 Alternatives Considered

The following alternatives were considered for the proposed project:

- No Project Alternative
- Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal
- Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls
- Alternative 3: Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls

The proposed project corresponds to Design Alternative in the District's the Staff-Recommended Alternative Report (SCVWD 2015). Alternatives 1, 2, and 3 in this EIR correspond to e design alternatives in the Staff-Recommended Alternative Report as follows:

- EIR Alternative 1 = Design Alternative 1
- EIR Alternative 2 = Design Alternative 4
- EIR Alternative 3 = Design Alternative 6

These alternatives use different combinations and sizes of channel improvements to feasibly obtain the project objectives. During the District's NFP evaluation process, described in the PSR, the District determined that Design Alternative 2A would best meet the project objectives. This design alternative was then further refined to create the proposed project. **Table 5-1** summarizes the key components of the proposed project and each EIR alternative; the following sections describe characteristics of each alternative and generally describe the impacts associated with each alternative relative to the proposed project.

Table 5-1. Summary of Proposed Project and Characteristics of EIR Alternatives by Project Reach

Project/Alternative	Reach 1 Coyote Creek to I-880	Reach 2 I-880 to California Circle	Reach 3 California Circle to Milmont Drive	Reach 4 Milmont Drive to San Andreas Drive	San Andreas Drive Bridge
Proposed Project	▪ Relocate and raise south bank levee by up to 4 ft ▪ Wetland bench along south bank ▪ 50-foot-long section of floodwall on the north bank	▪ 6-ft-tall floodwall on south bank and a 25-foot-long section of floodwall on the north bank ▪ Removal of 70 cy of sediment during construction	▪ 5.5-ft-tall floodwalls on both banks ▪ Earthen ramps on top of levee that cross over floodwall and connect to existing Penitencia Creek Trail ▪ Removal of 1,500 cy of sediment during construction	▪ Up to 6-ft-tall floodwall on west bank ▪ Levee raised by up to 6 ft on east bank ▪ Removal of 730 cy of sediment during construction	▪ Headwalls on the downstream and upstream faces of bridge
No Project Alternative	No improvements	No improvements	No improvements	No improvements	No improvements
Alternative 1 (Reach 1 Raised Setback Levee, Floodwalls, and Ongoing Sediment Removal)	▪ Raise south bank levee by up to 4 ft	▪ 6-ft-tall floodwalls	▪ 4-ft-tall floodwalls on both banks	▪ 5-ft-tall floodwalls on both banks	▪ Headwalls on the downstream and upstream faces of bridge
Alternative 2 (Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls)	▪ Relocate and raise south bank levee by up to 4 ft. ▪ Wetland bench along south bank	▪ 5-ft-tall floodwall on south bank	▪ 3.5-ft-tall floodwall (up to 18.5 ft tall when viewed from channel interior) on west bank ▪ 25- to 45-ft-wide Wetland bench and depressed channel access road on west bank	▪ 3-ft-tall floodwalls on both banks	▪ Headwalls on the downstream and upstream faces of bridge

Project/Alternative	Reach 1 Coyote Creek to I-880	Reach 2 I-880 to California Circle	Reach 3 California Circle to Milmont Drive	Reach 4 Milmont Drive to San Andreas Drive	San Andreas Drive Bridge
			▪ Depressed in-channel maintenance road on west bank		
Alternative 3 (Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls)	▪ Raise south bank levee by up to 4 ft	▪ 5.5-ft-tall floodwall on south bank	▪ 4-ft-tall floodwalls on both banks ▪ Excavate and remove central berm ▪ Line channel with concrete	▪ 3-ft-tall floodwalls on both banks	▪ Headwalls on the downstream and upstream faces of bridge

5.3.1 No Project Alternative

Characteristics of this Alternative

Under the No Project Alternative, no new construction activities would occur. In Reach 1, the south levee would not be relocated or raised and no wetland bench would be constructed. Floodwalls would not be constructed in Reaches 1, 2, 3, or 4 and headwalls would not be added to the San Andreas Drive bridge. Ongoing maintenance activities, including sediment removal and vegetation management currently ongoing under the District's SMP, would continue in the future. This alternative would not meet the proposed project's primary objective of conveying Lower Penitencia Creek's 1-percent design flow (described further below), would not meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would not maintain certification of the east levee or meet FEMA certification standards. Additionally, the alternative would not minimize the need for removal of sediment and non-woody vegetation

Impact Analysis

The No Project Alternative would avoid all of the impacts associated with construction of the proposed project because no construction or ground disturbing activities would occur, and maintenance of the channel would continue under the SMP. These include temporary noise and ground-borne vibrations in proximity to sensitive receptors, air pollutant emissions from construction equipment and vehicles, temporary impacts on water quality, traffic delays, effects on wetland habitat and special-status species, and impacts on other biological resources. Significant and unavoidable impacts related to noise and ground-borne vibration effects on nearby residences resulting from the proposed project would be avoided. In addition, significant but mitigable impacts to air quality, biological resources, geology and soils, hazardous materials, and traffic and resulting from the proposed project would be avoided. Future maintenance of the channel would continue under the District's SMP and sediment removal would occur more frequently than under the proposed project, resulting in periodic disturbance of aquatic and riparian habitat that would be greater than if the proposed project were implemented. Additionally, the enhancements to Reach 1 tidal wetlands included in the proposed project would not be achieved, and the current degraded and isolated conditions of Reach 1 wetlands, which provide marginal habitat value, would continue indefinitely.

Under the No Project Alternative, the existing flood management infrastructure within Lower Penitencia Creek would continue to function and convey the current 1-percent (or 100-year) design discharge of 4,830 cfs. However, because USACE's Upper Berryessa Creek Flood Risk Management Project and the District's Lower Berryessa Creek Flood Protection Improvements Project will increase upstream conveyance capacity, larger flows will be conveyed to Lower Penitencia Creek after construction of those two projects is completed. Lower Penitencia Creek's 1-percent flow is projected to increase to an estimated 6,900 cfs after completion of the Lower and Upper Berryessa Creek projects. Lower Penitencia Creek would lack capacity to convey those increased flows during the 100-year discharge event under the No Project Alternative. In the event of a 100-year flood event, the No Project Alternative would likely result in substantial flood damage to nearby land uses, including residential, office space, the District's maintenance roads, nearby public roads, I-880, and the Penitencia Creek Trail. Flood damage and subsequent clean-up efforts could result in significant environmental effects, including erosion; adverse water quality effects; and

impacts on biological resources, cultural resources, traffic and circulation, noise, air quality, recreational resources, and utilities and service systems.

5.3.2 Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal

Characteristics of this Alternative

Under Alternative 1, which is Design Alternative 1 in the District's PSR, the south bank levee in Reach 1 would be raised by about 4feet (similar to the project) but would not be relocated, which would prevent creation of a wetland bench in Reach 1. Floodwalls would be constructed in Reaches 2, 3, and 4 and would be of similar height as those for the proposed project. Similar to the proposed project, headwalls would be constructed on the downstream and upstream sides of the existing San Andreas Drive bridge to prevent backwater from overtopping the bridge structure and flowing into neighboring residential neighborhoods during the 1-percent design flow. Maintenance for Alternative 1 would involve periodic sediment removal in Reaches 2 and 4, which would be more frequent than under the proposed project. As with the proposed project and similar to existing conditions, other routine maintenance activities would involve vegetation management along the channel and periodic maintenance and repair for the floodwalls and San Andreas Drive bridge headwalls.

The primary difference between this alternative and the proposed project is that the Reach 1 replacement levee would not be setback from the creek and a wetlands bench would not be created in Reach 1. Alternative 1 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. However, this alternative would not minimize the need for removal of sediment and non-woody vegetation.

Impact Analysis

Alternative 1 would be anticipated to have fewer construction impacts associated with relocating the replacement levee and constructing the wetland bench in Reach 1 than the proposed project. Alternative 1 would have less potential to disturb special-status species and habitat used by special-status species in this area. Temporary impacts on aquatic resources would also be reduced because Reach 1 construction would mostly or completely avoid disturbance of the seasonal wetlands on the south bank.

Alternative 1 would result in similar construction-related impacts as the proposed project, including temporary transportation and traffic impacts, use of hazardous materials, air emissions, noise and vibration, and impacts on hydrology and water quality. Alternative 1 also would increase operational impacts associated with increased sediment removal in Reaches 2 and 4 compared to the proposed project. These would include emissions from operation of excavation equipment and impacts on biological resources and water quality. Future maintenance of the channel would continue under the District's SMP and sediment removal would occur more frequently than under the proposed project because the project is designed to accommodate greater accumulation of sediment before removal is required. More frequent sediment removal would result in periodic disturbance of aquatic and riparian habitat that would be greater than if the proposed project were implemented. Additionally, the enhancements to Reach 1 tidal wetlands included in the proposed project would not be

achieved, and the current degraded and isolated conditions of Reach 1 wetlands, which provide marginal habitat value, would continue indefinitely.

5.3.3 Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls

Characteristics of this Alternative

Under Alternative 2, identified as Design Alternative 4 in the PSR, the south bank levee in Reach 1 would be relocated and raised by about 4 feet, which would create space for establishing a 50-foot-wide wetland bench immediately south of the existing channel (same as the proposed project). Floodwalls would be constructed in Reaches 2, 3, and 4. Floodwalls would be about 5 feet tall in Reach 2 and 3-3.5 feet tall in Reach 4. In Reach 3, the west bank floodwall would have a total height of 18.5 feet when viewed from inside the channel, but it would be partially below grade and extend about 4 feet above the existing levee. Since the existing levee would be removed, a new depressed maintenance road would be required within the creek channel at the base of the levee, and because the road would be exposed to creek flows, it would have to be surfaced with articulated concrete blocks, adding about 1.2 acres of new hardscape to the channel. This alternative would create enhanced tidal wetlands in Reach 1, similar to the proposed project. In Reach 3, a 25- to 45-foot-wide wetland bench and depressed channel access road would be constructed within the west side of the channel. Wetland vegetation would be planted in the bench. The channel access road would be located between the floodwall and the wetland bench.

The primary differences between Alternative 2 and the proposed project are as follows: (1) the west bank floodwall in Reach 3 for Alternative 2 would be substantially taller (when viewed from inside the channel) than the floodwall proposed as part of the project; (2) Alternative 2 would include a wetland bench in Reach 3, which is not part of the proposed project; and (3) an in-channel maintenance road would be built at the base of the west bank floodwall in Reach 3. Alternative 2 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards.

Impact Analysis

Compared to the proposed project, Alternative 2 may result in similar or greater impacts to aesthetic resources due to the taller floodwall on the west bank of Reach 3. Although the Reach 3 floodwall would only be 4 feet tall when viewed from areas outside the channel, due to construction of the wetland bench and depressed access road, it would be about 18.5 feet tall when viewed from within the channel or from the Penitencia Creek Trail on the east bank of the creek. This could result in greater visual impacts. Recreationists using the Penitencia Creek Trail would have unobstructed views of the taller floodwall and armored maintenance road at its base. The vegetation in the Reach 3 wetland bench would contribute to the aesthetic enjoyment for recreationists using the Penitencia Creek Trail.

The increased hardscape in the channel due to the Reach 3 floodwall and depressed maintenance road could result in increased pollutant flows to the creek, adversely affecting water quality. This would be partially offset by the wetland bench between the road and the

creek channel, which would help to filter pollutants from storm runoff before they reach the creek.

Alternative 2 also would have greater construction-related impacts than the proposed project due to construction of the depressed maintenance road and wetland bench in Reach 3, which would require substantially more excavation than the proposed project. Additionally, because the floodwall would be much taller than the floodwall proposed as part of the project, it may require a pile foundation, which would increase the amount of noise and vibration affecting residences located west of Reach 3 during construction. Alternative 2 would exacerbate the significant and unavoidable construction-related noise and vibration impacts resulting from the proposed project. Construction of the taller floodwall and depressed maintenance road components would result in increased haul truck trips (due to excavation and importing of construction materials) and therefore increased traffic impacts during construction. The excess soil generated by this alternative would be greater than for the proposed project; therefore, this alternative would exacerbate project-related impacts with regard to solid waste disposal. This alternative would also result in greater air emissions and noise impacts from operating equipment and vehicles.

The increased hardscape would replace existing aquatic and riparian habitat located on the side slope and base of the existing earthen levee which would be removed. Once construction is complete, Alternative 2 would create more wetland habitat than the proposed project. The wetland bench in Reach 3 would be planted with native species adapted to tidal conditions and may provide habitat for common and special-status species. Up to 3 acres of wetland vegetation would be established in this reach. This would be partially offset by the elimination of the Reach 3 central berm, which provides existing riparian habitat and would be retained by the proposed project.

5.3.4 Alternative 3: Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls

Characteristics of this Alternative

Under Alternative 3, identified as Design Alternative 6 in the District's PSR (SCVWD 2016), the south levee in Reach 1 would be raised by up to 4 feet but would not be relocated. Floodwalls would be constructed in Reaches 2, 3, and 4; the floodwall in Reaches 3 and 4 would be substantially shorter than the proposed project floodwalls. In Reach 3, the central berm would be excavated and removed. Throughout the entire length of this reach, the channel would be lined with concrete (trapezoidal shape, 1:1 side slopes). Increased maintenance activities would be required for graffiti removal the amount of exposed concrete would be substantially greater than for the proposed project. in Reach 3. However, this alternative would reduce vegetation management activities compared to the proposed project and existing conditions. As for the proposed project, headwalls would be constructed on the downstream and upstream sides of the existing San Andreas Drive bridge to prevent backwater from overtopping the bridge structure and flowing into neighboring residential neighborhoods during a 1-percent flood event.

The primary differences between Alternative 3 and the proposed project are as follows: (1) the Reach 1 levee would not be relocated and a wetland bench would not be constructed for Alternative 3; (2) the central berm in Reach 3 would be removed and replaced by a

concrete-lined channel; Alternative 3 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. This alternative would only partially meet objective to minimize the need for removal of sediment and non-woody vegetation. Alternative 2 would minimize vegetation removal because about 8 acres of vegetation would be permanently replaced with concrete lining, but the need for future sediment removal would not be minimized.

Impact Analysis

This alternative would reduce impacts associated with relocation of the replacement levee in Reach 1 and the construction of a wetland bench in Reach 1, which would occur under the proposed project. Because Alternative 3 would not include these features, which would involve substantial excavation and ground disturbance, it would avoid impacts on buried cultural resources and biological resources, including aquatic habitats and special-status species. However, it also would not realize the beneficial biological resources impacts from creating wetland habitat within the Reach 1 wetland bench. Additionally, concrete lining of Reach 3 would replace about 8 acres of existing aquatic and riparian habitat with concrete ling. The 8-acre increase in hardscape within the channel would have adverse effects on water quality as the pollutant-filtering properties of a natural vegetated channel bottom would be eliminated. Increased concrete lining would tend to raise water temperatures, which would diminish the channel's habitat value for aquatic special-status species such as longfin smelt.

Alternative 3 would result in greater construction-related traffic, noise, vibration, and air quality impacts due to excavation and removal of the Reach 3 berm and installing concrete lining in the Reach 3 channel. These activities would require substantially more haul truck trips in comparison to the proposed project. Lining the channel with concrete also would result in loss of about 8 acres riparian and aquatic habitat throughout Reach 3, most of which occurs on the berm and some of which is used by special-status species; this would adversely affect the ecological functions the existing creek channel may provide.

5.4 Alternatives Considered and Dismissed

The following alternatives were considered, but ultimately were dismissed from further analysis for one or more of the following reasons: (1) an alternative would not sufficiently meet most of the proposed project objectives; (2) an alternative was determined to be infeasible; (3) an alternative would not avoid or substantially reduce one or more significant impacts of the proposed project; (4) an alternative is closely similar to the proposed project; and/or (5) another similar alternative has been evaluated in detail in this EIR.

- **Conceptual Design Alternative 7: Off-Stream Detention Basin.** This alternative would involve constructing an off-stream detention basin. Based on future1-percent design flow of approximately 6,900 cfs on Lower Penitencia Creek at the Lower Berryessa Creek confluence, approximately 650 acre-feet of water would need to be detained. The RWQCB suggested this alternative in comment 5 of its EIR scoping comment letter dated July 28, 2015 (see Appendix A).

This alternative would require 43-65 acres of land near the creek to create a detention basin with a depth of 10-15 feet that would contain 650 acre-feet of flood water. In addition, this alternative would require acquisition of substantial amount of land, demolition of large numbers of existing structures, and possibly relocation of residents and/or businesses. Additionally, this alternative would require far more earth movement than the proposed project and would result in greater construction noise impacts than the proposed project. For both the proposed project and this alternative, construction noise impacts would be significant and ~~and~~ unavoidable, but the impact would be more severe for this alternative. Similarly, this alternative would result in significant impacts to air quality, and traffic that would be more severe than for the proposed project. The cost to implement this alternative would far exceed the project budget and this alternative was determined infeasible (SCVWD 2016).

- **Conceptual Design Alternative 8: Bypass Channel to Coyote Creek.** Under this alternative, a 2,500-foot-long bypass channel would be constructed across McCarthy Ranch Boulevard, I-880, and Cadillac Court. This bypass channel would also cross four privately owned parcels, three of which have been developed with commercial buildings and parking lots. Given the high value of land in Silicon Valley, it would be very costly for the District to successfully acquire these four parcels at a reasonable cost, which could possibly include relocating these businesses. This alternative would require breaching of the Coyote Creek and Lower Penitencia Creek levees. It would also require easements to tunnel below existing residential and industrial developments, as well as I-880. The feasibility of this alternative may also be constrained due the presence of important underground utility lines. Based on preliminary evaluation, this alternative could result in adverse thermal effects on fish habitat as water is discharged from a bypass to Coyote Creek (which has been designated as critical habitat for California Central Coast steelhead). For ~~this~~these reasons, and because this alternative would result in greater construction impacts (due to excavation) and potentially greater impacts on residential and commercial uses, the bypass channel alternative was dismissed from further consideration (SCVWD 2016).
- **Conceptual Design Alternative 9: Annual Sediment Removal.** Under this alternative, sediment would be removed from the channel on an annual basis. This alternative would not meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would not meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would not maintain certification of the east levee, and would not meet FEMA certification standards. This alternative would also not meet the objective to minimize the need for removal of sediment and non-woody vegetation. In addition, the annual removal of sediment and vegetation growing on it would result in substantial periodic disruption of the ecosystem. Additionally, dewatering of the creek during the dry season is required to remove sediment, and would dry out the creek for several months. The disruption and drying of the creek would stress the ecosystem. Full regrowth of vegetation generally takes more than one year, thus annual sediment removal would prevent full revegetation of the creek channel. By conducting such work on an annual basis, only poor-quality habitat would develop. For these reasons, this alternative was dismissed from further consideration (SCVWD 2016).

- **Geomorphic Channel Planted with Woody Riparian Trees and Reduced Channel Access Roads;** The RWQCB suggested this project alternative in comment 6 of its EIR scoping comment letter of July 28, 2015 (See Appendix A). This alternative would result in a wooded stream channel with higher roughness coefficients than the existing channel or the channel that would be constructed by the proposed project. Higher roughness values would decrease the flow capacity of the channel and prevent the channel from accommodating the design 1% flow, without either enlarging the channel or substantially constructing substantially higher floodwalls to convey the design flow. It is uncertain if the channel could be enlarged sufficiently or if floodwalls could be constructed of sufficient height to meet the project objectives of conveying Lower Penitencia Creek's 1-percent design flow and meeting the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks. If the design flow cannot be met, this alternative would not maintain certification of the east levee, and would not meet FEMA certification standards. It is unlikely that this alternative would meet the project objective focused on minimizing the need for removal of sediment and non-woody vegetation, as the entire project reach is tidal and even a geomorphic channel would be subject to ongoing deposition of tidal sediment.

  Enlarging the channel in Reaches 2, 3, and 4 would require the acquisition of substantial amounts of existing developed real estate and would be cost-prohibitive. In addition, enlarging the channel alternative would require substantially more earth movement than the proposed project and would result in greater construction noise impacts than the proposed project. For both the proposed project and this alternative, construction noise impacts would be significant and unavoidable, but the noise impacts would be more severe under this alternative. Similarly, this alternative would result in significant impacts to air quality, and traffic that would be more severe than for the proposed project.

  As this alternative would require taller floodwalls than the proposed project, the floodwalls would result in substantially greater impacts than the project with respect to aesthetics, air quality, construction noise and vibration, and hazards and hazardous materials. ~~Because this alternative would increase the severity of significant and unavoidable noise and vibration impacts, this alternative would not meet the District's responsibility to reduce and/or eliminate significant environmental impacts and was rejected by the District.~~ Additionally, this alternative would cost more to implement than the proposed project because floodwalls are relatively expensive to construct and construction costs increase significantly with increased wall height.

  This alternative would result in decreased long-term impacts to biological resources as it would restore or enhance more aquatic and riparian habitat than the proposed project. However, compared to the proposed project, this alternative would exacerbate significant environmental impacts pertaining to air quality, hydrology and water quality, construction noise and vibration, and traffic and transportation. For those reasons, this alternative was rejected.

5.5 Comparison of Alternatives and Environmentally Superior Alternative

CEQA does not provide a definition for the environmentally superior alternative; however, CEQA Guidelines Section 15126.6(e)(2) states that if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. For the purposes of this analysis, the

environmentally superior alternative is considered to be that alternative with the least adverse environmental impacts on the project area and its surrounding environment. The identification of the environmentally superior alternative considers the relative degree of significant impacts, as well as the relative degree of environmental benefit associated with each alternative as compared with the proposed project. The paragraphs below discuss and compare the environmental findings of the analyzed alternatives relative to one another and the proposed project.

The No Project Alternative would not meet the proposed project's primary objective of conveying Lower Penitencia Creek's 1-percent design flow (described further below), would not meet the the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would not maintain certification of the east levee or meet FEMA certification standards. Additionally, the alternative would not minimize the need for removal of sediment and non-woody vegetation.

In the event of a 100-year flood event, the No Project Alternative could result in substantial impacts related to erosion, water quality, biological resources, and recreation. Clean-up efforts could result in other impacts related to temporary traffic, noise, and air quality emissions. Although the extent of such effects is undetermined at this time, the potential damage to surrounding land uses is considered severe and worse than environmental impacts associated with the action alternatives. For this reason, the No Project Alternative is not considered environmentally superior.

Alternative 1 would meet most of the project objectives. When compared to the proposed project or Alternative 2, Alternative 1 would result in less severe construction-related impacts since less earth-moving activities would take place. In the long-term, Alternative 1 would require more frequent sediment removal work in Reaches 2 and 4, and therefore result in somewhat greater operational impacts on air quality, traffic, noise, biological resources, and water quality relative to Alternative 2. Significant impacts on air quality, traffic, noise and vibration, biological resources, water quality, and aesthetics would not be reduced under this alternative.

Alternative 3 would meet most of the project objectives. As with Alternative 1, this alternative would have fewer air quality, traffic, and noise impacts in Reach 1 because no levee relocation work would occur. However, because concrete lining of the channel is expected to require substantially more haul truck trips, this alternative would likely have greater air quality, traffic, hazard and hazardous materials, and noise and vibration impacts than the proposed project or Alternative 1. This alternative would also result in significant impacts on biological resources, including the loss of riparian habitat currently found throughout the central berm in Reach 3 and substantially greater impacts on water quality, including increased water temperature, due to the concrete lining of Reach 3. Significant impacts on air quality, traffic,

noise and vibration, biological resources, aesthetics, and water quality would not be reduced by Alternative 3.

Among the alternatives considered in this EIR (not including consideration of the proposed project), Alternative 2 is considered the environmentally superior alternative. When considering the proposed project against Alternative 2, however, the proposed project is environmentally superior. Alternative 2 would permanently create greater wetlands in the project area than the proposed project, but would also result in permanent removal of more riparian habitat and creation of more in-stream hardscape than the proposed project. Alternative 2 would also result in greater construction-related impacts associated with traffic, noise, vibration, hazards and hazardous materials, utilities and service systems, and air quality. While the proposed project would expose of residents to significant and unavoidable construction noise and vibration impacts, Alternative 2 would increase the severity of those impacts.

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Chapter 7
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CHAPTER 3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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CHAPTER 4. OTHER STATUTORY CONSIDERATIONS

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Valley Water

Clean Water • Healthy Environment • Flood Protection

Lower Penitencia Creek Improvements Project

Addendum to the Final Environmental Impact Report

State Clearinghouse No. 2015062026

Valley Water Project No. 40334005

February 3, 2020

Prepared by:

Environmental Planning Unit
Watershed Stewardship and Planning Division
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1. Background

Santa Clara Valley Water District (Valley Water) prepared a Lower Penitencia Creek Improvements Project Environmental Impact Report (EIR) to provide the public, responsible agencies, and trustee agencies with information about the environmental effects of the proposed project. The EIR was prepared in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14, Section 15000 et seq.). Valley Water Board of Directors adopted a resolution certifying the EIR on November 28, 2017.

The project would provide 1% flood protection for residents, businesses, and infrastructure along Lower Penitencia Creek within the City of Milpitas (Figure 1 in Appendix A). The project site is located in a developed area within the lower portion of Coyote Creek watershed. The project area extends from approximately a mile north of the Lower Penitencia Creek confluence with Coyote Creek to San Andreas Drive.

As approved, the project includes floodwalls in Reaches 2, 3, and 4, setback replacement levee and wetland bench in Reach 1, earthen ramps on the east bank of Reach 3, and bridge headwalls. In addition, the project also includes maintenance activities such as restoration of maintenance roads, hydroseeding, and stabilization in disturbed areas.

After certification of the Final EIR and approval of the project (Valley Water 2017) it was determined during design development that minor modifications would be necessary. This addendum is prepared to evaluate minor changes and additions to the project design. Proposed project modifications include floodwall design change and addition of two small floodwall segments. In addition, sediment removal activities and construction of the San Andreas Drive Bridge headwalls would no longer occur.

2. CEQA Considerations

This Addendum describes the addition/changes to the approved Lower Penitencia Creek Improvements Project Final EIR and the evaluations of new project activities necessary to achieve compliance with the California Environmental Quality Act (CEQA). The project additions/changes described herein do not require revisions to the adopted findings of the EIR or meet the criteria used to evaluate significance under CEQA, and therefore do not require the preparation of a subsequent EIR. Under CEQA, if changes to a project or its circumstances occur, or new information becomes available after adoption of the EIR, the lead agency must prepare a subsequent EIR or otherwise prepare a subsequent negative declaration, an Addendum, or no further documentation (CEQA Guidelines §15162 (c)).

The appropriate level of review is based on whether changes to the project, or to project circumstances, or changes resulting from new information not known at the time of approval of the original project, create new significant effects or substantial increase in the severity of previously identified effects. Under CEQA Guidelines §15164, an addendum to an adopted negative declaration may be prepared only if minor technical changes or addition are necessary or none of the conditions are described in CEQA Guidelines §15162 (i.e., no new significant environmental effects or a substantial increase in the severity of the previously identified significant effects) calling for the preparation of a subsequent EIR or negative declaration have occurred.

As described in the analysis below, the proposed changes would not result in new significant impacts or a substantial increase in severity of significant impacts identified in the certified Final EIR. Therefore, preparation of a subsequent MND or EIR is not required. Based on the information contained in this report, Valley Water, as a lead agency, has determined that an addendum to the EIR is appropriate level of review necessary to comply with CEQA. This addendum will be considered by Valley Water in conjunction with the EIR when taking action on this project.

3. Description of Proposed Changes to the Project

The Final EIR, on page 2-9 to 2-18, describes the project improvements along Lower Penitencia Creek. However, several aspects of the project design have been modified and removed since the project approval. The proposed project changes include a floodwall design change, two additional small floodwall segments, and elimination of sediment removal and San Andreas Drive Bridge headwalls activities (Figure 2 in Appendix A). Proposed changes are described below.

In Reach 1, the proposed project originally included an installation of approximately 50 feet of sheetpile floodwall at the northwest corner of Interstate 880 bridge. The proposed design modifications would change the floodwall type from sheetpile to concrete and the length of floodwall would decrease from 50 feet to 43 feet. The floodwalls would be constructed to be 3 to 5 feet in height.

In Reach 2, the proposed project originally included an installation of approximately 25 feet of sheetpile floodwall on top of existing northeast bank levee near I-880. The proposed changes would modify the project to include two additional floodwall segments in this reach. The first additional concrete floodwall would be approximately 90 feet long and 4.5 feet tall. The floodwall would be installed on the northeast bank of the channel near California Circle. The second additional concrete floodwall would be approximately 44 feet long and 5.5 feet tall. The floodwall would be installed on the northeast bank of the channel near I-880.

In Reach 4, the project originally included a raised levee, sheetpile floodwall with a closeable gate-type opening, and San Andreas Drive Bridge headwalls. The proposed project changes would remove the San Andreas Drive Bridge headwalls element from the project. The headwalls are no longer needed as part of the project.

As evaluated in the Final EIR, the proposed project originally included sediment removal activities in Reaches 2, 3 and 4. However, the sediment removal activities have been withdrawn from the project as part of the proposed changes. No sediment removal activities would occur throughout the project site. The project footprint and construction techniques remain unchanged. No new staging areas and access routes are proposed.

4. Environmental Analysis

The following analysis discusses the potential impacts from changes to floodwall designs, addition of two floodwall segment, elimination of the sediment removal activities, and removal of San Andreas Drive Bridge headwalls activities to the project description relative to the impacts identified in the Final EIR. Only those resource areas that have the potential to be affected by the proposed changes are discussed below.

The proposed changes would not result in any new significant or substantially worse significant impacts to the following resource areas: Geology, Soils, and Seismicity; Hazards and Hazardous

Materials; Land Use and Planning; Recreation; Utilities and Service Systems; and Growth Inducement. The proposed changes are not anticipated to result in any significant or substantially worse impacts because the nature/extent of the proposed modifications would be similar to the activities evaluated in the Final EIR.

Resource areas analyzed include the following: Aesthetics, Air Quality; Biological Resources; Cultural Resources; Greenhouse Gas Emissions and Energy Use; Hydrology and Water Quality; Noise and Vibration; and Traffic and Transportation. As discussed below, potential environmental impacts to Noise and Vibration may occur from additional construction activities associated with the proposed project changes. The proposed project modifications would not result in any substantial changes to the Final EIR analysis for the listed resource areas.

Aesthetics

As described in Section 3, the project changes include floodwall design change in Reach 1 and two small floodwall segments in Reach 2. The proposed design changes would modify the sheetpile walls in Reaches 1 and 2 to be concrete floodwalls. The proposed floodwall design changes represent less than 4 percent of the entire project reach. The additional floodwall segments would be aesthetically matched in the form of height, color, and texture to the concrete segments. The proposed project modifications would not create a new substantial source of glare and visual impact.

Potential impacts to scenic vistas, visual character, light and glare remain consistent with the impacts evaluated in the Final EIR. In the Final EIR, on page 3.2-1 to 3.2-24, the impacts range from none to less than significant. No change in visual impacts from the original design is proposed. No additional mitigation is proposed. Therefore, the proposed project changes would not result in a new impact on aesthetic resources beyond those impacts discussed in the Final EIR.

Air Quality

In the Final EIR, page 3.3-11, air quality modeling efforts were considered to be conservative as it relied upon excavation and fill volumes presented in the Valley Water's 2016 Planning Study Report. In addition, the models reflect impacts for initial bridge modifications at Milmont Drive and concrete floodwalls throughout the entire project site. Since the publication of the Draft EIR, the project designed has been further refined. Therefore, the models described in the Final EIR provide a conservative overestimate on air quality impacts. In addition, the Final EIR includes Mitigation Measure AQ-1 (Implement Construction NOx Emissions Reduction) which requires Valley Water or it's contractor to develop a construction plan demonstrating that off-road equipment and material hauling vehicles will not result in average daily NOx emissions of more than 50 pounds per day during project construction. Implementation of this mitigation measure would ensure that emissions from individual construction phases for each reach and combined reach emissions would not exceed the Bay Area Air Quality Management District's (BAAQMD) significances threshold. This mitigation measure requires the contractor or Valley Water to not exceed more than 54 pounds per day of NOx emissions during project construction.

In Reach 2, the addition of two floodwall segments is relatively small in comparison with the original air quality projections, which were estimated in a conservative model in the EIR, so emissions generated would remain less than those disclosed in the EIR. Removal of the San Andreas Drive Bridge headwalls and sediment removal activities are not expected to contribute

or produce any new project emissions and could potentially reduce emissions to less than what was evaluated in the Final EIR. The Final EIR concluded air quality impacts to range from less than significant to less than significant with mitigation. No changes to air quality impacts expected because emissions associated with design modifications are within estimates already evaluated in the Final EIR and removal of certain design elements further reduces emissions for the overall project. Therefore, the proposed project changes would not result in any new impact on air quality beyond those impacts discussed in the Final EIR.

Cultural Resources

The overall project footprint remains unchanged, with minor changes to floodwall designs in Reaches 1 and 2. In the Final EIR, page 3.5-16 to 3.5-18, the project work area was evaluated for potential impacts to cultural resources. No archaeological, historical, or paleontological resources were identified during field studies. However, the project site is located in an area that is sensitive for the presence of Native American village sites, which often contain burials. Project construction has the potential to uncover human remains, although such remains were not identified during the field inventory. Implementation of Valley Water's Best Management Practices (BMPs) would require construction activities to halt immediately within 100 feet of buried human remains and that both the Santa Clara County Coroner and a qualified archeologist to be contacted.

The proposed project changes would not result in any new work footprint. The proposed changes are located within the project area evaluated in the Final EIR. Potential impacts to cultural resources remain consistent with the Final EIR with impacts ranging from none to less than significant. Therefore, the proposed project changes would not result in any new impact on cultural resources beyond those discussed in the Final EIR.

Greenhouse Gas Emissions and Energy Use

Valley Water determined that the Sacramento Metropolitan Air Quality Management District (SMAQMD) and BAAQMD established the "bright line" annual threshold of 1,100 MT CO2e for GHG emissions is an appropriate significance threshold against which to evaluate the project's construction related emissions. The "bright line" threshold is the proposed threshold for projects and represents the threshold under which they are not anticipated to result in a significant impact regarding global climate change.

The project would generate GHG emissions during construction of the various project elements. Construction-related GHG emission would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. These emissions were estimated for construction activities using CalEEMod version 2013.2.2 and using modified construction equipment and quantity assumptions from similar channel improvement projects. The project's total construction related GHG emissions are estimated at 901 MT CO2e. Project construction would be spread over two years and the annual GHG emissions would be less than 901 MT COe2. The project's total construction-related GHG emissions are less than the SMAQMD and BAAQMD bright line annual threshold of 1,110 MT CO2e.

The proposed changes would eliminate the San Andreas Drive Bridge headwalls and sediment removal activities from the project. Therefore, the truck trips associated with those activities would no longer occur. These proposed changes are expected to reduce the project's construction-related GHG emissions. In addition, implementation of the Valley Water BMP AQ-1 (Use Dust Control Measures) would further reduce greenhouse gas emissions generated by minimizing

idling and requiring proper maintenance of equipment. These measures would reduce overall emissions from vehicles and equipment, including GHG emissions. The impact remains less than significant as reported in the EIR.

Potential impacts to GHG emissions and energy use remain consistent with the Final EIR with impacts ranging from none to less than significant. Therefore, the proposed project would not result in any new impact on GHG emissions and energy use beyond those discussed in the Final EIR.

Traffic and Transportation

The proposed project changes are all within the project footprint evaluated in the Final EIR. Construction of additional floodwall segments would not result in additional traffic and transportation impacts other than those already evaluated in the Final EIR. Construction activities associated with the San Andreas Drive Bridge headwalls and sediment removal would no longer occur. Therefore, traffic and transportation impacts are expected to be less than the original proposed project.

Potential impacts to traffic and transportation remain consistent with the Final EIR with impacts ranging from none to less than significant. Therefore, the proposed project would not result in any new impact on traffic or transportation beyond those discussed in the Final EIR.

Biological Resources

Impacts to biological resources would not be substantially different from the biological resource impacts identified in the Final EIR. The impact area from ground disturbance would be similar to the project footprint area evaluated in the Final EIR. In addition, the same BMPs and mitigation measures described in Section 3.4 of the Final EIR would apply. Implementation of the floodwall design changes and construction of the two small floodwall segments would not create new significant impacts or substantially increase the severity of biological impacts beyond those discussed in the Final EIR.

In addition to the project modification, sediment removal activities and construction of the San Andreas Drive Bridge headwalls would no longer occur as part of the project. As a result, biological impacts identified in the Final EIR would remain unchanged or possibly reduced by elimination of certain design elements. Therefore, the proposed project would not result in any new impact on biological resources beyond those discussed in the Final EIR.

Hydrology and Water Quality

The Final EIR on pages 3.9-1 to 3.9-20 discusses the environmental impacts to Hydrology and Water Quality from the floodwalls. The proposed modifications include floodwall design changes, construction of two small floodwalls, and elimination of sediment removal activities and the San Andreas Drive headwalls construction. The Final EIR evaluated construction and operation for project activities including the construction of floodwalls. Hydrology and water quality impacts include increase in erosion, suspended sediment loads, turbidity, dissolved oxygen, and water temperature. However, BMPs AQ-1 (Use Dust Control Measures), BI-3 (Remove Temporary Fills), HM-7 (Restrict Vehicle Equipment Cleaning to Appropriate Conditions), HM-8 (Ensure Proper Vehicle and Equipment Fueling and Maintenance), HM-9 (Ensure Proper Hazardous Materials Management), HM-10 (Utilize Spill Prevention Measures), WQ-1 (Conduct Work from

Top of Bank), WQ-4 (Limit Impacts from Staging and Stockpiling Materials), WQ-6 (Limit Impact of Concrete Near Waterways), WQ-11 (Maintain Clean Conditions at Work Sites), WQ-15 (Prevent Water Pollution), and WQ-16 (Prevent Stormwater Pollution) would minimize adverse water quality effects. The proposed project changes would occur within the work footprint evaluated in the Final EIR. Construction of the additional floodwall segments would not result in additional hydrology and water quality impacts. In addition, hydrology and water quality impacts associated with the construction of San Andreas Drive Bridge headwalls and sediment removal activities would no longer occur. The revised floodwall designs would not result in any additional temporary impacts to jurisdictional waters.

Potential impacts to hydrology and water quality remain consistent with the Final EIR with impacts ranging from none to less than significant. Therefore, the proposed project change would not result in any new impact on hydrology and water quality beyond those discussed in the Final EIR.

Noise and Vibration

The proposed project modifications would use the same methods as those evaluated in the Final EIR. However, the construction of additional floodwall segments would require additional materials, workdays, and equipment. Additional equipment and workdays would not substantially increase project noise and vibration levels beyond those already evaluated in the Final EIR. Construction noise and vibration levels, at a given time, would be similar to the levels identified in the Final EIR.

The Final EIR on pages 3.11-13 to 3.11-17 discusses noise and vibration impacts associated with project construction and operation activities. Implementation of Mitigation Measure NO-1 (Implement Noise- and Vibration-reducing Measures) requires Valley Water or construction contractor to implement several strategies aimed to minimize noise and vibration levels experienced by nearby receptors. Mitigation Measure NO-1 (Implement Noise- and Vibration-reducing Measures) would reduce the construction related noise levels by 5 to 15 dB. Although construction noise would temporary and limited to work hours, project construction would result in a substantial increase in noise levels. Construction activities are expected to temporary generate up to 85+ dB, which is above the existing ambient noise levels of 70+ dB. Despite implementation of the mitigation measures, construction activities would result in substantial temporary increase in ambient noise levels.

Noise impacts associated with the design and construction changes would remain significant and unavoidable as identified in the Final EIR. Construction activities would result in temporary increase in ambient noise levels in the project vicinity above levels existing without the project. In addition to the significant and unavoidable impacts described above, the project would make a cumulatively considerable contribution to significant cumulative noise impacts during project construction. Implementation of applicable mitigation measures and BMPs of the proposed project changes noise impacts are consistent with those already evaluated in the Final EIR.

5. Conclusion

Based on the analysis above, none of the conditions described in CEQA Guidelines §15162 occur as a result of the proposed project modifications. The proposed project modifications include change of a sheetpile floodwall to a concrete floodwall and two additional small floodwall segments. Sediment removal activities and construction of the San Andreas Drive Bridge headwalls would no longer occur. Activities associated with the proposed minor changes would

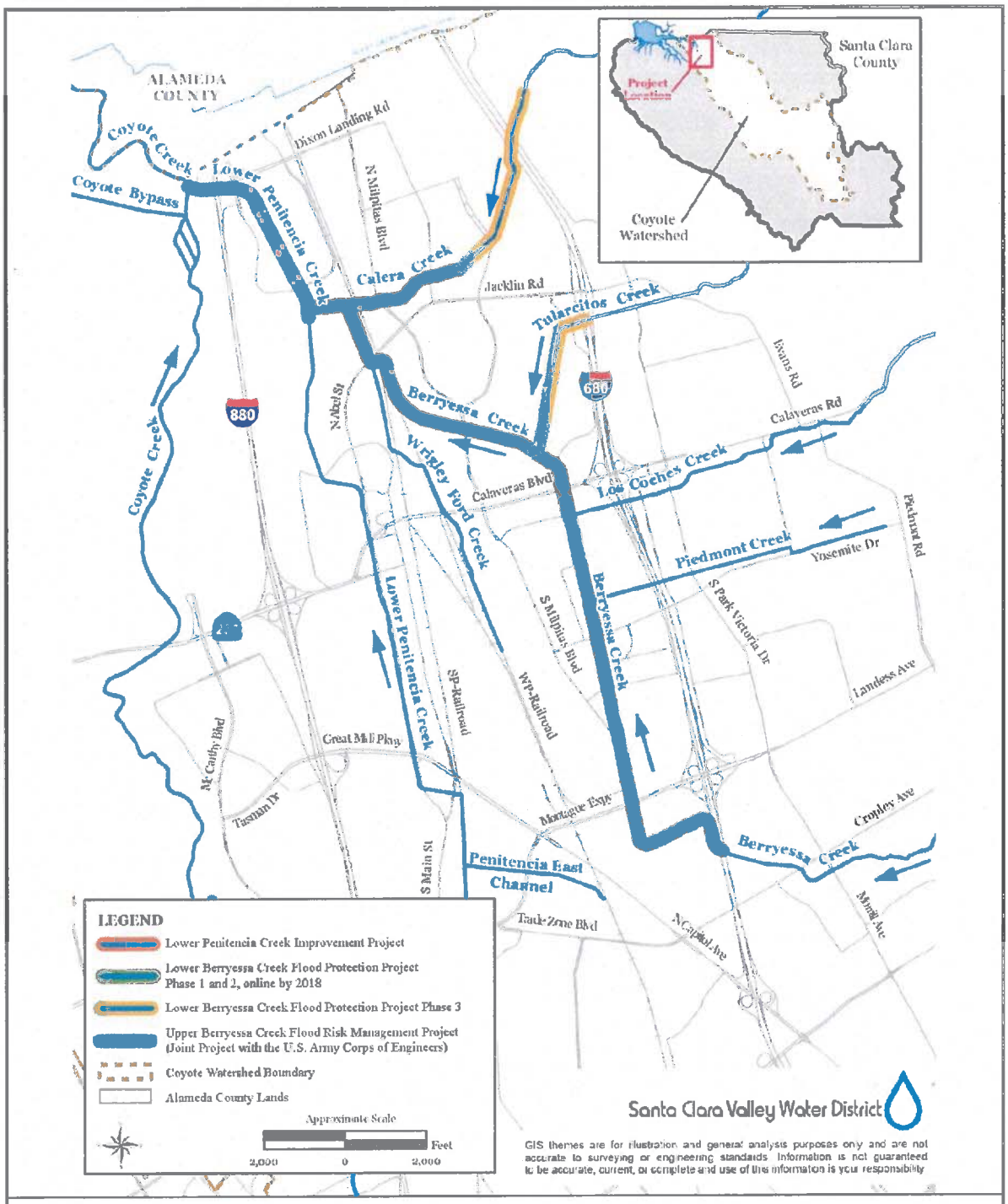
not create new significant environmental impacts or substantially increase the severity of previously identified significant impacts. There are no significant changes to the project circumstances, and there is no new information requiring revisions of the previous CEQA findings. Therefore, Valley Water, as Lead Agency has determined that the addendum to the Lower Penitencia Creek Improvements Project Final EIR is the appropriate level of review under CEQA Guidelines §15164.

6. References

City of Milpitas, 2015.
City of Milpitas General Plan. Adopted December 1994 and amended in April 2015.

Valley Water, 2017.
Lower Penitencia Creek Improvements Project. Adopted November 2017.

Appendix A



Source: SCVWD 2016

Figure 1
Location of Proposed Project and Upstream Flood Protection Projects
Lower Penitencia Creek Improvements Project

Prepared by Horizon

Figure 2
Proposed Project Elements

Lower Penitencia Creek
Improvements Project

Santa Clara Valley Water District

Santa Clara Valley Water District

CONFORMED COPY

File No.: 17-0714

Agenda Date: 11/28/2017
Item No.: 6.1.

BOARD AGENDA MEMORANDUM

SUBJECT:
Lower Penitencia Creek Improvements Project - Resolution Certifying the Final Environmental Impact Report, Adopting the Mitigation Monitoring and Reporting Program, Findings of Fact, and Statement of Overriding Considerations; and Approving the Project.

RECOMMENDATION:

A. Consider the Potential Environmental Effects of the Lower Penitencia Creek Improvements Project (Project) as presented in the Final Environmental Impact Report (EIR);
B. Adopt the Resolution CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT, ADOPTING THE MITIGATION MONITORING AND REPORTING PROGRAM, FINDINGS OF FACT, AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE LOWER PENITENCIA CREEK IMPROVEMENTS PROJECT; and
C. Approve the Project.

SUMMARY:

Background and Project Description

In December 2011, the District Board certified an EIR for the Lower Berryessa Creek Program which includes capital improvements to six program elements: (1) Lower Berryessa Creek; (2) Lower Calera Creek; (3) Upper Calera Creek element 1; (4) Upper Calera Creek element 2; (5) Tularcitos Creek; and (6) Lower Penitencia Creek. The 2011 EIR (State Clearinghouse Number 2007092084) evaluated environmental impacts of improvements to the Upper Calera Creek elements 1 and 2, Tularcitos Creek and Lower Penitencia Creek at a programmatic level because the specifics of their design and timing of implementation for these elements were not developed at the time. The District has now prepared a project specific Final EIR for the proposed improvements to the Lower Penitencia Creek element.

Lower Penitencia Creek is situated in the northeasterly portion of Santa Clara County within a developed area in the City of Milpitas. Two tributaries, Berryessa Creek and Penitencia East Channel, flow into Lower Penitencia Creek. Lower Penitencia Creek itself flows into Coyote Creek. The Project extends from the Lower Penitencia Creek/Coyote Creek confluence upstream to the San

ADOPTED
NOV 28 2017

Andreas Drive Bridge, located just upstream of Lower Penitencia Creek/Lower Berryessa Creek confluence.

In its current condition, Lower Penitencia Creek has capacity to accommodate the existing 1-percent flood flow without overtopping its levees. However, upstream capital improvements to the Lower Berryessa Creek, Lower Calera Creek, and Tularcitos Creek and Upper Berryessa Creek will increase the 1-percent flow in Lower Penitencia Creek. Construction of improvements to Lower Berryessa and Upper Berryessa Creeks are currently in progress. After the upstream projects are completed, the increased 1-percent flow from the Berryessa Creek delivered to Lower Penitencia Creek will exceed the existing flow conveyance capacity of Lower Penitencia Creek. The Project will be necessary to prevent flooding in the project vicinity during a future 1-percent event. The Project would also maintain the Federal Emergency Management Agency (FEMA) certification of the existing east levee between California Circle and Berryessa Creek.

The proposed project includes improvements to ensure the increased 1-percent flow is contained with required freeboard. Proposed project improvements include sheet pile floodwalls, raised levees, and an in-channel wetlands planting bench.

EIR Preparation and Public Review Process

Pursuant to the California Environmental Quality Act (CEQA), the District, as the lead agency for the Project, prepared a Draft EIR to evaluate environmental impacts of the proposed Project. The Draft EIR was made available for review and comment by the public, regulatory agencies, and other parties, agencies, and organizations for a 47-day period from May 18, 2017 to July 3, 2017.

During the public comment period, District received comment letters from Native American Heritage Commission, California Department of Fish and Wildlife (CDFW), San Francisco Bay Regional Water Quality Control Board (Regional Board), Citizens Committee to Complete the Refuge, and Santa Clara Valley Transportation Authority. Staff considered these comments and incorporated them if appropriate prior to preparing the Final EIR.

CDFW and the Regional Board have regulatory authority over the Project. CDFW commented mainly on issues relating to potential project impacts on wildlife and habitats and associated avoidance/mitigation measures, while the Regional Board commented on project design and alternatives as well as project impacts on wetlands, waters, and beneficial uses. In some comments the agencies requested additional information or clarifications on project elements or environmental analysis, and in others they suggested revisions to the analysis and some of the avoidance/mitigation measures included in the EIR. With respect to additional information or clarification, if such information is available, the District included them in its responses and the Final EIR text. With respect to suggested changes to EIR measures, to the extent possible and as appropriate, the District incorporated the agencies' recommendations; if the District disagreed with the recommendations, the responses explained why the changes would not be necessary.

The Final EIR includes comments on the Draft EIR, responses to those comments, minor revisions to the Draft EIR text made in response to comments and other information, and a Mitigation Monitoring

and Reporting Program.

Summary of Environmental Impacts

An executive summary of the Final EIR is included as Attachment 2.

The Final EIR identifies no impacts or less than significant impacts to the following resource areas: Aesthetics, Agriculture and Forestry Resources, Cultural Resources, Land Use, Greenhouse Gas Emissions and Energy, Hydrology and Water Quality, Mineral Resources, Population and Housing, Public Services, Recreation, Tribal Cultural Resources, and Utilities and Service Systems.

The Final EIR concludes that the Project would result in significant impacts relating to air quality, biological resources, geology, soils and seismicity, hazards and hazardous materials, and traffic and transportation. Most of these significant impacts are short term impacts relating to construction. Implementation of applicable District's best management practices (BMPs) along with proposed mitigation measures identified in the Final EIR would reduce these significant impacts to less-than-significant levels.

The Final EIR concludes that several impacts relating to noise and vibration would remain significant despite implementation of feasible mitigation measures. As described in the Project Description chapter, the District intends to construct the Project over the course of two years. While the Final EIR finds that construction noise and vibration would be temporary, the use of heavy equipment and construction vehicles during construction would result in noise levels above the city's established standards and would temporarily increase ambient noise levels at locations near residences and other sensitive receptors, and potentially expose them to groundborne vibration. The District would implement Mitigation Measure NOI-1 to reduce this impact. This mitigation measure requires that the District and/or its contractor to implement numerous noise- and vibration-reducing measures, where appropriate, during construction. Examples of these measures include equipping project equipment and vehicles with mufflers and silencers, shutting off mobile noise-generating equipment and machinery when not in use, utilizing vibration damping devices and noise/vibration shields. The District will also notify residences and other sensitive receptors within 500 feet of the Project site prior to initiation of construction, and if necessary, the District would consider modifying construction activities to minimize vibration when constructing near residences and other sensitive receptors. Mitigation Measure NOI-1 would reduce the severity of the Project's temporary noise and vibration impacts, but not to levels of less-than significant. Thus, this impact would be significant and unavoidable.

Statement of Overriding Considerations

CEQA requires the decision-making body to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. When a lead agency approves a project, which will result in significant effects which are identified in the Final EIR but are not avoided or substantially lessened, the agency must adopt a statement of overriding considerations (CEQA Guidelines, section 15093).

The Board's Ends Policy No. E-3, adopted December 21, 2004 and most recently revised July 22, 2013, state the District's mission to provide "… a healthy and safe environment for residents, businesses and visitors, as well as for future generations." Similarly, Sections 4(c)(1) and 4(c)(2) of the District Act cite flood protection within several of its objectives and purposes. Failure to provide flood protection proposed by this Project would put hundreds of homes and business at risk, with a large cost of recovery in the event of a flood. Other impacts of flooding may include close of essential transportation arteries, interruptions in emergency service, likely losses to instruction time at area public and private schools, loss of use of affected public facilities such as parks, and at the extreme, loss of human life. The Project would minimize these risks while reducing the need and associated impacts of channel maintenance (e.g., sediment removal).

FINANCIAL IMPACT:
The estimated cost for construction of the Project is $14.3 million (2017 dollars). The Project would be funded from California Department of Water Resources Proposition 1E, Round 2 Stormwater Flood Management Grant 4600010375 and District's Stream Stewardship funds.

CEQA:
A Final EIR has been prepared for the Project and is before the Board for certification. The Final EIR is available for the Board and public review at the Clerk of the Board's office and on the District's website (<http://valleywater.org/LowerPenitenciaReportsandDocuments.aspx>).

ATTACHMENTS:
Attachment 1: Resolution
Attachment 2: Final Environmental Impact Report Executive Summary

UNCLASSIFIED MANAGER:
Ngoc Nguyen, 408-630-2632

BOARD OF DIRECTORS
SANTA CLARA VALLEY WATER DISTRICT

RESOLUTION No. 17-74

CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT, ADOPTING THE MITIGATION MONITORING AND REPORTING PROGRAM, FINDINGS OF FACT, AND STATEMENT OF OVERRIDING CONSIDERATIONS FOR THE LOWER PENITENCIA CREEK IMPROVEMENTS PROJECT

WHEREAS, the Santa Clara Valley Water District ("SCVWD"), the lead agency under the California Environmental Quality Act ("CEQA") §21067, has prepared a Final Environmental Impact Report (EIR) for the Lower Penitencia Creek Improvements Project ("Project"). The SCVWD is hereby certifying said EIR, issuing written findings regarding the potential for the Project to result in significant environmental effects, adopting a statement of overriding considerations, and adopting a mitigation monitoring and reporting program in accordance with CEQA Guidelines §15090, 15091, and 15093.

NOW THEREFORE BE IT RESOLVED by the Board of Directors of Santa Clara Valley Water District that:

1. The Board certifies the Final EIR, certifying that:

   A. The Final EIR has been completed in compliance with CEQA and is adequate for Board consideration of the Project.

   B. The Board of Directors has reviewed and considered the information contained in the Final EIR and the record including, but not limited to, technical reports, oral written comments provided by the public and state and local agencies; responses to said comments contained in the Final EIR; and other matters deemed material and relevant prior to making a decision on the Project.

   C. The Final EIR reflects the independent judgement and analysis of the District.

2. Changes have been incorporated into the Project which avoid, and /or substantially lessen most of the significant environmental effects identified in the Final EIR. The District has responsibility for ensuring the implementation of such changes during implementation of the Project.

3. Specific economic, legal, social, technological, and other considerations make mitigation measure for certain significant environmental effects infeasible. The findings of fact contained in Exhibit 1 state the overriding considerations that support the Project described in the Final EIR.

4. The findings of fact and Statement of Overriding Considerations contained in Exhibit 1, attached hereto and incorporated by reference, are supported by substantial evidence in the record.

5. The Mitigation Monitoring and Reporting Program (MMRP), attached hereto as Appendix I in Volume 3 of the Final EIR, and incorporated herein by this reference, is hereby adopted. Implementation of the MMRP to avoid or substantially lessen significant environmental effects is required as a condition of approval of the Project.

6. The documents and materials which constitute the record of proceedings upon which this decision is based are available from the Clerk of the Board of the Santa Clara Valley Water District, 5750 Almaden Expressway, San Jose, CA 95118-3614.

7. The Chief Executive Officer is hereby authorized and directed, on behalf of the District's Board of Directors, to execute any such documents and to perform any such acts as may be deemed necessary or appropriate to accomplish the intent of this resolution.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District by the following vote on November 28, 2017:

AYES:	Directors	N. Hsueh, G. Kremen, B. Keegan, L. LeZotte, R. Santos
NOES:	Directors	None
ABSENT:	Directors	T. Estremera, J. Varela
ABSTAIN:	Directors	None

SANTA CLARA VALLEY WATER DISTRICT

By: Richard P. Santos
~~JOHN~~ L. VARELA
Chair/Board of Directors

ATTEST: MICHELE L. KING, CMC

Michele L. King
Clerk/Board of Directors

EXHIBIT 1 TO BOARD RESOLUTION 17-74

CEQA Findings of Fact and Statement of Overriding Considerations Approval of the Lower Penitencia Creek Improvements Project

Regarding the Final Environmental Impact Report for the
Lower Penitencia Creek Improvements Project
State Clearinghouse No. 2015062026

This document presents Findings of Fact and a Statement of Overriding Considerations by the Board of Directors of the Santa Clara Valley Water District (Board) regarding the Final Environmental Impact Report (Final EIR) for the Lower Penitencia Creek Improvements Project, for which Santa Clara Valley District (District) is acting as CEQA lead agency. The Findings and Statement presented herein were prepared in compliance with the California Environmental Quality Act (CEQA) and the State's CEQA Guidelines. Substantial evidence supporting all findings made herein is contained in the Environmental Impact Report (EIR) and/or record of proceedings.

1. Project Background

1.1 Project Description Summary

The Lower Penitencia Creek Improvements Project (proposed project) includes several flood management improvements along four reaches of Lower Penitencia Creek (approximately one mile total), to increase the flow conveyance capacity of the channel. Key improvements include: sheetpile floodwalls, earthen fill, a wetland bench, a relocated and raised levee, bridge headwalls, sediment removal, maintenance road improvements, and revegetation. The proposed project is located along Lower Penitencia Creek within a developed area in the City of Milpitas. The project improvements are necessary to avoid flooding in the project area during the future 1-percent (or 100-year) flow. This is the streamflow event that has a 1-percent likelihood of occurring in any given year and the proposed project is estimated to accommodate 6,900 cubic feet per second (cfs) at the Lower Penitencia Creek channel. The proposed project extends from just upstream of the confluence with Berryessa Creek downstream to the confluence with Coyote Creek. The land surrounding the proposed project is a mix of residential and office park/commercial land uses.

The Lower Penitencia Creek Improvements Project is one of six elements evaluated in the *Lower Berryessa Creek Program Environmental Impact* (Program EIR), prepared in 2011. The Lower Penitencia Creek Project reach was evaluated at a programmatic level of detail. At the time the Program EIR was prepared, future water surface elevations and flow rates during the 1-percent flow on Lower Penitencia Creek Project could only be estimated at a general level of detail. Upstream improvement projects including the

District's Lower Berryessa Creek and Lower Calera Creek Flood Protection Improvements Project and the USACE's Upper Berryessa Creek Flood Risk Management Project are currently under construction and will increase the future 1-percent flow of Lower Penitencia Creek. Now that detailed designs have been developed, the future 1-percent flow and resulting surface elevation can be estimated. The proposed project would accommodate the increased 1-percent flow without overtopping the Lower Penitencia Creek banks.

Table 1 below summarizes the project elements proposed for each reach.

Table 1. Proposed Project Elements

Reach or Bridge	Project Elements
Reach 1: Coyote Creek to I-880	Relocated and raised south bank levee with maintenance road on crest Wetland bench on south bank Approximately 50 feet of sheetpile floodwall to the north of channel
Reach 2: I-880 to California Circle	Sheetpile floodwall on top of existing south/west bank levee Approximately 25 feet of sheetpile floodwall on top of existing north/east bank levee near I-880 Removal of about 70 cy of sediment from the concrete-lined channel) Relocated access ramp to City's pump station Maintenance road improvements
Reach 3: California Circle to Milmont Drive	Sheetpile floodwalls on top of existing west and east bank levees Earthen fill to floodwall to allow the existing Penitencia Creek Trail to cross over the new floodwall Removal of about 1,500 cy of accumulated sediment from low-flow channel Maintenance road improvements
Reach 4: Milmont Drive to San Andreas Drive	Sheetpile floodwalls on top of existing west bank levee Raising of existing east bank levee by up to 6 ft Removal of about 730 cy of sediment from the concrete-lined channel Maintenance road improvements
San Andreas Drive Bridge	Headwalls on the downstream and upstream faces of San Andreas Drive bridge

Volume 2, Chapter 2 of the Final EIR (FEIR) provides a full description of the proposed project. Chapter 2 in Volume 2 also includes a table summarizing District Best Management Practices (BMPs) that would be applied during construction and operation of the project.

Santa Clara Valley Water District (District) is the lead agency for the proposed project. The District is a public agency and owns and maintains the flood control channel.

1.2 Type of EIR

The Lower Penitencia Creek Improvements Project EIR has been prepared in compliance with the California Environmental Quality Act (CEQA, Public Resources Code § 21000 et seq.). The proposed project has been evaluated in a project EIR as defined in CEQA Guidelines § 15161. The EIR focuses on potential changes to the environment that would result from the implementation of the proposed project, for both the nearer-term construction and longer-term operational phases.

1.3 Project Objectives

The proposed project would meet the following objectives:

- Convey the Lower Berryessa Creek 1-percent design flow (6,900 cfs) that is delivered to Lower Penitencia Creek;
- Meet required water surface elevations at the confluences of Lower Penitencia Creek with Coyote Creek and Berryessa Creek;
- Minimize the need for seasonal removal of sediment and non-woody vegetation;
- Maintain existing FEMA accreditation of the east levee located between California Circle and Berryessa Creek; and
- Ensure the project improvements meet FEMA certification requirements.

2. Environmental Review Process and the DEIR

A Notice of Preparation (NOP) for the Draft EIR (DEIR) was circulated to a project-specific mailing list and to the State Clearinghouse. The 30-day NOP comment period commenced on June 11, 2015 and ended on July 10, 2015. The NOP and written comments received are included in Volume 3, Appendix A of the FEIR. The District considered written comments received during the scoping period in preparing the DEIR. The District did not hold a public scoping meeting.

A public Notice of Availability of the DEIR was mailed to the State Clearinghouse; to federal, state, and local agencies; and to organizations and individuals that had expressed interest in receiving the DEIR. The DEIR public review period commenced on May 18, 2017 and ended on July 3, 2017. The District held a public hearing at Joseph Weller Elementary School in Milpitas to receive comments on the DEIR on May 22, 2017.

The District evaluated and considered all comments received from persons or agencies who reviewed the DEIR. The District has prepared written responses to all comments on the DEIR. In total, the District received five comment letters on the DEIR, containing 46 comments, from organizations and public agencies. The FEIR includes comments on the DEIR, responses to those comments, minor revisions to the DEIR text made in response to comments and other information, and a Mitigation Monitoring and Reporting Program (MMRP). The revisions shown in the FEIR include insertions shown as underlined text and deletions shown in strikeout format.

On November 28, 2017, the District's Board of Directors (Board), at a public meeting considered the information contained in the FEIR as well as public comments, if any, on the proposed project during the public meeting.

3. Environmental Impacts and Findings of Fact

Pursuant to Public Resources Code § 21081 and CEQA Guidelines § 15091, a public agency may not approve or carry out a project for which an EIR has been certified which identifies one or more significant effects on the environment unless the public agency makes one or more of the following findings with respect to each significant impact:

1. Changes or alterations have been required in, or incorporated into, the Project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the final EIR. "Feasible" means "capable of being accomplished in a reasonable period of time taking into account economic, environmental, legal, social, and technological factors" (CEQA Guidelines § 15364). The concept of feasibility also encompasses whether a particular alternative or mitigation measure promotes the Project's underlying goals and objectives, and whether an alternative or mitigation measure is impractical or undesirable from a policy standpoint. See *City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957.

The Board has made one or more of these specific written findings regarding each significant impact associated with the proposed project. Those findings are presented below, together with the facts and reasons in support of the findings. The Board certifies these findings are based on full appraisal of all viewpoints, including all comments received up to the date of adoption of these findings, concerning the environmental issues identified and discussed in the FEIR.

3.1 Environmental Impacts Found to have No Impact or be Less Than Significant

Public Resources Code § 21081 and CEQA Guidelines § 15091 do not require findings of fact for impacts that are less than significant. Nevertheless, for the sake of completeness, the Board hereby determines that the proposed project will have no impact or less than significant impacts for the impacts listed in Table 2. For each impact, Table 2 presents a brief rationale for the determination, and a reference to the FEIR section that presents facts and reasons supporting the determination.

Table 2. Effects Found to be Less than Significant or Have No Impact

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
Agriculture and Forestry Resources			
N/A (see Section 3.1.3 of FEIR)	N/A	The project area is not used or zoned for agricultural or forestry activities. The proposed project would not alter land use designations or farmland/timberland classifications designated at either the local or state level. No Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest lands, or lands under a Williamson Act contract would be converted by or conflict with the proposed project. Therefore, no impact on agriculture or forestry resources would result.	FEIR, Volume 2, page 3.1-2
Mineral Resources			
N/A (see Section 3.1.3 of FEIR)	N/A	The project area does not have any designated mineral resources zones, nor does it contain any significant oil or gas resource–producing areas. According to the California Department of Conservation's Division of Mines and Geology, the project area is classified as a mineral resource zone in which inadequate information indicates that no significant mineral deposits are present, or in which it is judged that little likelihood exists for their presence (Stinson et al. 1987). In addition, the proposed project would not involve any activities that could directly affect mineral production sites or prevent future availability of mineral resources. Therefore, no impact on mineral resources would result.	FEIR, Volume 2, page 3.1-3
Population and Housing			
N/A (see Section 3.1.3 of FEIR)	N/A	Throughout the construction phase, approximately 40 workers would be employed. It is anticipated that the regional or local labor force could meet the project's construction and workforce requirements. Some workers might temporarily relocate from other areas. Operation and maintenance activities of the proposed project would be conducted by the District's existing workforce. The proposed project does not include construction of new homes or businesses, would not remove obstacles to growth, and would not displace any housing units or people. The proposed project would not induce substantial population growth. As such, there would be no impact on population and housing.	FEIR, Volume 2, page 3.1-3
Public Services			
N/A (see Section 3.1.3 of FEIR)	N/A	The proposed would not increase the need for public services or government facilities. The project is located within an urbanized area of Milpitas and is currently served by existing public services (e.g., police and fire protection, schools, and parks). Operation and maintenance activities would not be substantially different from existing maintenance and operation activities; therefore, construction and	FEIR, Volume 2, page 3.1-3

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		operation of the proposed project would not substantially affect public services. No impact would occur.	
Aesthetics			
AES-1	Have a substantial adverse effect on a scenic vista	There are no scenic vistas in the project area and the proposed project would have no impact on scenic vistas.	FEIR, Volume 2, page 3.2-16
AES-2	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	There are no state-designated scenic highways in the project vicinity, therefore, no impact would occur.	FEIR, Volume 2, page 3.2-16
AES-3	Substantially degrade the existing visual character or quality of the site and its surroundings	Project construction could result in temporary impacts on the visual character and quality of the site and its immediate vicinity. Earth-moving activities and heavy equipment would be visible, and vehicles have potential to generate dust clouds, which could be distracting to nearby receptors. Implementation of District BMPs AQ-1 and WQ-11 would help reduce dust emitted from operating construction equipment and ensure work areas are kept tidy. Construction activities and construction traffic are common visual elements in urbanized areas, and would appear similar to existing construction activities and construction traffic from the nearby Waterstone and iStar development projects. Given the moderate visual sensitivity of pedestrians and low visual sensitivity from the perspective of motorists, the replacement levees would not have a substantial adverse effect on the site's visual character or visual quality. The relocated levee would be hydroseeded with native and naturalized grass seeds and mulch. Implementation of District BMP BI-8 would require that a qualified biologist or vegetation specialist select ecologically appropriate seed control mixes, which would ensure that newly planted vegetation appears consistent with vegetation seen in the project vicinity and includes local native plant species. Although an estimated 33 trees with diameter breast height (dbh) of 6 inches or more would require removal, the trees would be replaced in compliance with the City of Milpitas Tree Maintenance and Protection ordinance. Floodwalls would be consistent with the linear form of the channel and adjacent levees. The District would select a color coating that blends in with the surrounding environment. For these reasons, the floodwalls would not substantially degrade the project area's visual character and visual quality. The new concrete headwalls would be visible to motorists using North Abbott Avenue and San Andreas Drive, and to recreationists using the Penitencia	FEIR, Volume 2, page 3.2-16

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		Creek Trail/maintenance road. Given the low-to-moderate visual sensitivity of motorists, the short durations of views for motorists, and because recreationists would continue to have views of the creek channel, the headwalls would not result in a substantial adverse effect on the sites visual character or quality. This impact would be less than significant.	
AES-4	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	Project construction would generally occur between the hours of 7:00 A.M. and 7:00 P.M., Monday through Friday. Construction may occur infrequently on weekends. Because nighttime construction would occur infrequently and would be of short duration, adverse effects on nighttime views would be less than significant. No new lighting would be installed for the proposed project. The new headwalls at the San Andreas Drive bridge would be composed of concrete, which has a smooth finish and would not generate a substantial source of glare. The floodwalls would be composed of painted, smooth coated steel. Since the District would select neutral color and non-reflective coating for the sheet pile walls, the finish of the floodwalls would not generate a new substantial source of glare. This impact is less than significant.	FEIR, Volume 2, page 3.2-23
Air Quality			
AQ-1	Conflict with or obstruct implementation of the applicable air quality plan	The proposed project would involve temporary construction emissions, would not result in induced growth, and would not result in a permanent new source of emissions. In addition, the proposed project would not affect land uses anticipated in the City of Milpitas General Plan for long-range air quality planning, and would not facilitate further growth. Because construction would occur during two four-month periods, construction emissions generated by the project would not conflict with applicable air quality plans, and this impact would be less than significant.	FEIR, Volume 2, page 3.3-14
AQ-4	Expose sensitive receptors to substantial pollutant concentrations	The pollutants of concern and toxic air contaminants (TACs) that would affect sensitive receptors are particulates, specifically particulate matter of aerodynamic radius of 10 microns or less (PM_{10}) and particulate matter of aerodynamic radius of 2.5 microns or less ($PM_{2.5}$) contained in fugitive dust, and diesel particulate matter (DPM) from construction equipment. Because construction would occur during two four-month periods, construction (8 months total over a two-year timeframe), and that construction activities occurring within a specific reach near a specific sensitive receptor would take place during only a portion of that period, project construction would not emit substantial quantities of DPM. DPM exposure for short durations is generally not quantified, as cancer potency factors are based on lifetime exposure and there is considerable uncertainty in trying to evaluate the cancer risk from project activities that would last only a small fraction of a lifetime (California Governor's Office of Environmental Health Hazard Assessment 2015). With implementation of District BMP AQ-1, the	FEIR, Volume 2, page 3.3-19

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		proposed project would not pose long-term or substantial health risks to nearby residents and workers in the vicinity of the project's construction reaches. The impact on sensitive receptors from fugitive dust and other TACs would be less than significant.	
Biological Resources			
BIO-1b	Impacts on essential fish habitat	The proposed project contains essential fish habitat (EFH) associated with Pacific Coast Salmon, Pacific Groundfish, and Coastal Pelagics Fishery Management Plans. Proposed project activities would have limited effects on potential EFH, but such impacts may occur because of in-channel activities. Implementation of District BMPs HM-7, HM-10, WQ-1 through WQ-9, BI-2, BI-3, and BI-8 would reduce potential impacts to water quality and fish habitat. Due to the limited extent of impacts on tidal waters that could serve as EFH, the loss of EFH and associated effects on fish species regulated by FMPs would be very low. With implementation of these District BMPs, the proposed project would affect only a very small proportion of EFH and associated species in South San Francisco Bay. Therefore, project impacts on EFH are considered less than significant.	FEIR, Volume 2, page 3.4-39
BIO-1d	Impacts on burrowing owls	District levees do not provide important burrowing owl (*Athene cunicularia*) nesting or roosting habitat. Furthermore, no suitable breeding habitat (i.e., burrows) for the burrowing owl was detected within the project area during the reconnaissance survey, and previous surveys of the site have failed to find any burrowing owls at this location. Temporary impacts on potential foraging habitat are not expected to affect appreciably the regional populations of this species. Implementation of District BMP BI-11 would further reduce impacts on burrowing owls by removing trash from work areas and thereby reducing the attraction of burrowing owl predators to the area. For these reasons, this impact is considered less than significant.	FEIR, Volume 2, page 3.4-42
BIO-1f	Impacts on special-status birds	Special-status bird species including Bryant's savannah sparrow, tricolored blackbird, white-tailed kite, golden eagle, and American peregrine falcon occur in the project area as non-breeding migrants, transients, or foragers. However, these species are not known or expected to breed or occur in large numbers in the project area due to a lack of suitable breeding habitat. Project construction might result in a temporary direct impact through the alteration of foraging patterns but would not result in loss of individuals. Implementation of District BMP BI-11 would also further reduce impacts on non-nesting special-status birds by minimizing attraction of predators. This impact would be less than significant.	FEIR Volume 2, page 3.4-45
BIO-1h	Impacts on special-status bats	Only two special-status bats have potential to occur in the project area: the pallid bat (*Antrozous pallidus*) and western red bat (*Lasiurus blossevillii*), both of which are California species of special concern. Pallid bats are not expected to roost in the project area but may occasionally occur in the	FEIR, Volume 2, page 3.4-49

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		project area as nonbreeding migrants, transients, or foragers, but they are expected to occur in low numbers, if at all. Western red bats do not breed in the project area, so no maternity roosts would be affected. This species roosts solitarily in foliage. Due to the limited project impacts on trees, it is unlikely that any red bat roosting sites would be affected; in the event that such an impact does occur, any roosting red bat would be able to flee before the tree is removed. Project activities may result in a temporary impact on foraging individuals through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during project activities). However, due to the abundance of suitable foraging habitat in the project area and the mobility of these bats, as well as the relatively low proportion of potential foraging habitat that would be disturbed due to the project, habitat impacts on bats would not be substantial. In addition, implementation of District BMP BI-11 would minimize the attraction of predators and bats to construction work areas. Impacts would be less than significant.	
BIO-2	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Willow riparian woodland was mapped within the project area above the ordinary high water mark (OHWM), the majority of which occurs on a berm that stretches from California Circle to Milmont Drive between the main channel and secondary channel in Reach 3. This berm would be used as Staging Area B during project construction but the proposed project would not result in removal or pruning of woody riparian vegetation such as trees. Temporary impacts due to staging of equipment and materials on the central berm would occur on up to approximately 1.93 acres of willow riparian woodland due to trampling of herbaceous vegetation. However, herbaceous vegetation that is disturbed by proposed project activities is expected to begin to regrow within one growing season. Additionally, the recent disturbance of herbaceous vegetation on the berm due to sediment removal activities (conducted in 2015) associated with the District's Stream Maintenance Program further reduces its quality as habitat for wildlife. Compared to riparian vegetation dominated by trees and shrubs, herbaceous riparian vegetation provides relatively low functions and values for wildlife. The project would not result in result in removal or pruning of woody riparian vegetation, including trees, from the willow riparian woodland habitat on the berm. Implementation of District BMPs WQ-1, WQ-4, WQ-5, WQ-9, and BIO-8 would minimize the project's effects on riparian vegetation by limiting disturbance, preventing erosion and sedimentation, and minimizing the introduction or spread of invasive weeds within the understory. As a result, impacts of project activities on riparian vegetation would not have substantial ecological effects and thus would be less than significant.	FEIR, Volume 2, page 3.4-52

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
BIO-4	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	Lower Penitencia Creek is expected to function as a wildlife movement corridor, connecting primarily urban-associated habitats with San Francisco Bay–associated habitats to the north. In the areas upstream of I-880, the Lower Penitencia Creek channel likely does not function as a high-quality movement corridor for most species, particularly special-status species. Nevertheless, the ruderal habitats present may represent the most feasible means of dispersal through the surrounding urban matrix for common urban-dwelling species in the project area, such as raccoons (*Procyon lotor*) and California ground squirrels (*Otospermophilus beecheyi*). Installation of new floodwalls has the potential to impede wildlife movement across the channel. However, the frequency of wildlife movement across the channel in Reaches 2, 3, and 4 is expected to be low as habitat values on both sides of the channel are similarly low. For animals that can swim the channel and thus cross perpendicular to the channel in its current condition, floodwalls could obstruct wildlife dispersing perpendicular to the channels, which would need to travel around the floodwalls. However, some of these animals (such as raccoons) can likely scale the new floodwalls. In addition, many terrestrial species are unlikely to swim the channel even in its existing condition. Rather, these species are expected to cross the channel at existing crossings. In addition, in the area downstream of I-880, no floodwalls are proposed, thus allowing terrestrial animals that currently cross the channel to be able to continue crossing in this location. Therefore, impacts on wildlife movement are considered less than significant.	FEIR, Volume 2, page 3.4-57
BIO-5	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	The City of Milpitas general plan outlines goals and objectives in preserving and protecting biological resources, including trees that are protected under the City of Milpitas tree ordinance within the District's right-of-way (ROW). The project would conform with local policies to protect biological resources, which would be a less than significant impact. About 33 trees within the project area are of sufficient diameter to be protected by the City ordinance. However, no trees in the project area have been designated as heritage trees by the City of Milpitas. Implementation of District BMP WQ-4 would ensure staging and stockpiling areas are sited in disturbed areas away from vegetation and trees. Thus, many of the City-protected trees would be protected in place. The District would comply with the City Tree Protection Ordinance, including obtaining a permit from the City to remove protected trees, and planting replacement trees as required by the City permit. Because the District would comply with applicable city tree protection and the project would conform to city policies to protect biological resources, impacts related to conflicts with local policies or ordinances protecting biological resources would be less than significant.	FEIR, Volume 2, page 3.4-58

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
BIO-6	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project site is outside of the boundaries of the Santa Clara Valley Habitat Plan (VHP). There would be no impact.	FEIR, Volume 2, page 3.4-59
Cultural Resources			
CR-1	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5	No historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, were identified within the project site. As a result, the proposed project would not cause a substantial adverse change to a historical resource and there would be no impact.	FEIR, Volume 2, page 3.5-16
CR-2	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5	No archaeological resources were identified within the project site as a result of background research or the field survey. District BMP CU-1 requires that construction activities halt immediately within 100 feet of a find and that both the Santa Clara County Coroner and a qualified archaeologist be contacted to evaluate the discovery site and determine whether construction may resume. Implementation of BMP CU-1 and compliance with Health and Safety Code Section 7050.5 and Public Resources Code 5097.98 would ensure that construction-related impacts on archaeological resources are less than significant.	FEIR, Volume 2, page 3.5-16
CR-3	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Research indicates that the geological matrix of the project site has a low sensitivity for the presence of paleontological resources. The proposed project would not be anticipated to directly or indirectly destroy a unique paleontological resource or site or unique geological feature. Therefore, no impacts on paleontological resources or unique geologic features would result from the proposed project.	FEIR, Volume 2, page 3.5-17
CR-4	Disturb any human remains, including those interred outside of formal cemeteries	The project site is located in an area that is sensitive for the presence of Native American village sites, which often contain burials. As a result, disturbance of native ground during project construction has the potential to uncover human remains, although such remains were not identified during the field inventory. District BMP CU-1 requires that construction activities halt immediately within 100 feet of any buried human remains and that both the Santa Clara County Coroner and a qualified archaeologist	FEIR, Volume 2, page 3.5-17

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		be contacted. Implementation of BMP CU-1 would ensure that disturbance to human remains is less than significant.	
CR-5	Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074	No Tribal Cultural Resources (TCRs), as defined in PRC Section 21074, were identified within the project site. In the event of an accidental discovery of a TCR that is also a historical or unique archaeological artifact, BMP CU-1 would be implemented to ensure that construction activities halt and that a qualified archaeologist is contacted. If a tribal cultural resource cannot be avoided, an Action Plan will include notification of the appropriate Native American tribe, and consultation with the tribe regarding acceptable recovery options. With implementation of BMP CU-1, the proposed project would not cause a substantial adverse change to a TCR and be considered less than significant.	FEIR, Volume 2, page 3.5-17
Geology, Soils, and Seismicity			
GEO-1:	Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: rupture of a known earthquake fault or strong seismic ground shaking	The proposed project is not located within an Alquist–Priolo zone and the possibility of ground rupture in the project area is considered low. The probability of strong seismic ground shaking in the project area is high and seismic ground shaking is an existing hazard for existing structures, roads, levees, and other related facilities. The proposed project incorporates recommendations from a project-specific geotechnical report and would be designed to withstand expected ground shaking during a major seismic event. Therefore, this impact would be less than significant.	FEIR, Volume 2, page 3.6-9
GEO-3:	Result in substantial soil erosion or the loss of topsoil	The proposed project would involve substantial earthwork activities that include ground disturbance, and the initial phases of construction, particularly site grading and soil stockpiling, as well as in-channel dewatering and sediment removal, could result in loose soil being exposed to erosive forces such as rainfall and high winds. Implementation of District BMPs AQ-1, BI-3, HM-7, WQ-1, WQ-2, WQ-4, WQ-5, WQ-7, WQ-9, WQ-10, and WQ-16 would reduce surface erosion and mitigate any loss of topsoil during construction-related activities. The District would implement a Stormwater Pollution Prevention Plan (SWPPP) to control stormwater runoff from the project area, which would minimize soil erosion and transport. Implementation of the above-mentioned BMPs and SWPPP would ensure that soil erosion and transport effects would be less than significant during construction.	FEIR, Volume 2, page 3.6-11
GEO-5:	Be located on expansive soil, as defined in Table 18-	A site-specific geotechnical investigation identified soils with expansive potential as occurring on site (Kleinfelder 2016). Proposed floodwalls would be composed of sheetpiles extending below the	FEIR, Volume 2, page 3.6-14

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
	1-B of the Uniform Building Code (1994), creating substantial risks to life or property	relatively shallow layer of expansive soils and would not be susceptible to damage caused by soil expansion. Levee fill material and other fill placed as part of the project would be low-plasticity material not subject to potentially harmful shrink-swell behavior. In addition, expansive soils would be removed and the ground surface compacted prior to placement of fills, substantially reducing the potential for expansive soils to damage project improvements. This impact is less than significant.	
GEO-6:	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	The project would not involve removal, relocation, or construction of sewer, septic, or wastewater disposal systems. The project would have no impact.	FEIR, Volume 2, page 3.6-14
Greenhouse Gas Emissions and Energy Use			
GHG-1	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	Construction-related greenhouse gas (GHG) emissions would result from the combustion of fossil-fueled construction equipment, material hauling, and worker trips. The proposed project's anticipated combined annual emissions of 901 metric tons (MT) carbon dioxide equivalents (CO_2e) would be less than the Sacramento Metropolitan Air Quality Management District's (SMAQMD's) and Bay Area Air Quality Management District's (BAAQMD's) annual threshold of 1,100 MT CO_2e. Implementation of District BMP AQ-1 would further reduce GHG emissions generated by minimizing idling construction equipment, requiring proper maintenance and tuning of vehicles and equipment, and requiring proper inflation of tires. In addition, maintenance activities following project completion would be similar to current practice. Minor new maintenance activities involving periodic visual inspections along the floodwalls and repair of the floodwalls/headwalls if necessary would result in only minor amount of GHG emissions well below the operational threshold of 1,100 MT CO_2e. This impact would be less than significant.	FEIR, Volume 2, page 3.7-8
GHG-2	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	The proposed project would be consistent with the measures outlined in local general plans and climate action plans. The proposed project does not conflict with the most recent list of California Air Resources Board's early action strategies. The proposed project would minimize construction waste and implement other energy-reducing measures with consideration of other AB 32 target sectors such as natural resources, transportation, and land use. The project's operational and maintenance activities would be similar to that of other existing and ongoing activities. No impact would occur.	FEIR, Volume 2, page 3.7-9

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
GHG-3	Cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and increase the need for energy resources	The proposed project's construction activities would require the consumption of energy (fossil fuels) for construction equipment, worker vehicles, and truck trips. However, the consumption of energy for the project's equipment and vehicles would be minimized by the reuse on site of excavated soils, minimization of vehicle idling, and short construction period duration. The proposed project's effects on energy resources would be less than significant. Although no District BMPs are necessary to reduce this impact to a less-than-significant level, implementation of District BMP AQ-1 would reduce the project's effect by requiring minimization of idling times and requiring that all equipment be maintained and tuned properly.	FEIR, Volume 2, page 3.7-10
Hazards and Hazardous Materials			
HAZ-2	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Construction of the proposed project would require the use of heavy equipment that require hazardous materials, such as oils, grease, or fuels, could accidentally spill during project construction. The handling, storage, and disposal of hazardous materials is subject to numerous regulations. Construction equipment and vehicles would be stored at designated staging areas throughout for the duration of construction activities. In addition, the proposed project would prepare and implement a SWPPP. Implementation of SWPPP measures and adherence to local, state, and federal hazardous materials regulations and implementation of District BMPs HM-7, HM-8, HM-9, and HM-10 would minimize the potential for impacts related to accidental release of hazardous materials associated with transport, use, or disposal of hazardous materials. This impact would be less than significant.	FEIR, Volume 2, page 3.8-10
HAZ-3	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school	Construction activities would be temporary and would involve the use of construction trucks and equipment. Hazardous materials used during construction would be limited to fuel associated with the equipment and would generally not involve substantial hazardous emissions of toxics that would be considered an acute health hazard. Health risks associated with construction air pollutant emissions would be less than significant. The handling, storage, and disposal of hazardous materials would be subject to local, state, and federal regulations pertaining to hazardous materials. While small quantities of hazardous materials could be released into the environment during project construction, implementation of District BMPs HM-7, HM-8, HM-9, and HM-10 would ensure that the potential for exposing individuals at nearby schools to hazardous materials used during construction would be less than significant. Maintenance activities would be similar to those that currently take place and could involve use of small quantities of hazardous materials. Similar to the construction phase, implementation of District BMPs HM-7. HM-8, HM-9, and HM-10 would ensure that the potential for exposing individuals at nearby schools to hazardous materials used during project operation would be less than significant.	FEIR, Volume 2, page 3.8-11

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
HAZ-4	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	There are no hazardous waste sites listed pursuant to California Government Code Section 65962.5 identified and the proposed project is not located on a Cortese list site. Therefore, there would be no impact.	FEIR, Volume 2, page 3.8-11
HAZ-5	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, such that the project could result in a safety hazard for people residing or working in the project area	The project area is located more than 2 miles from an airport and would not involve construction of aboveground structures that could interfere with air traffic; therefore, impacts related to safety hazards in the vicinity of an airport are not applicable and there would be no impact.	FEIR, Volume 2, page 3.8-12
HAZ-6	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	The Santa Clara County Operational Area Operations Plan does not include an adopted emergency response plan or emergency evacuation plan that specifies a specific emergency response or evacuation route within the project area. Therefore, this topic is not applicable to the proposed project and there would be no impact.	FEIR, Volume 2, page 3.8-12
HAZ-7	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	The use of construction and maintenance equipment and possible fuel storage could pose a potential wildfire risk. This risk is especially high when vegetation is being cleared and workers and machines are operating among vegetative fuels that can be flammable. Any piling of cleared vegetation could also become a fire fuel, which is considered a fire risk. Implementation of District BMP HM-12 would ensure that construction and maintenance equipment is equipped with spark arrestors and that work crews have appropriate fire suppression equipment available when construction takes place during the high fire danger period. In addition, compliance with regulations within the Public Resources Codes (PRC) would further minimize the risk of wildfire hazards during project construction. Therefore, this impact would be less than significant.	FEIR, Volume 2, page 3.8-12

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
Hydrology and Water Quality			
HYD-1	Violate any water quality standards or waste discharge requirements; or otherwise substantially degrade water quality	The District would implement BMPs AQ-1, BI-3, WQ-1, WQ-4, WQ-5, WQ-6, WQ-7, WQ-9, WQ-10, WQ-11, WQ-15, WQ-16, HM-7, HM-8, HM-9, and HM-10 to meet water quality standards and not degrade water quality or substantially increase turbidity of the downstream receiving waters. The proposed project would be required to comply with applicable water quality permits such as the National Pollutant Discharge Elimination System (NPDES) Construction General Permit which requires that a stormwater pollution prevention plan (SWPPP) is prepared. The SWPPP would include appropriate erosion control, spill prevention, and other construction BMPs intended to prevent polluted dewatered surface water or groundwater from being discharged into waterbodies. Construction activities would be phased and only a portion of the channel would be dewatered at a given time within the four-month summer construction period of each construction year. All creek water in the dewatered areas would be removed and creek flows and runoff would be diverted around the work areas using water-tight coffer dams located at the upstream and downstream ends of the construction areas. Diversion of creek and runoff water would only occur during the summer dry season (June 15 through October 15). By limiting in-water construction work to the dry season, implementing appropriate BMPs, and adhering to the SWPPP and NPDES Construction General permit conditions, the project would minimize the potential for soil erosion at construction areas, and promote stabilization and revegetation of disturbed areas after construction is complete. Therefore, impacts to water quality associated with temporary soil discharges and increases in turbidity would be less than significant.	FEIR, Volume 2, page 3.9-12
HYD-2	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level	Construction activities that involve excavation would likely encounter groundwater resources, and dewatering would be required. Given that dewatering activities would be temporary in nature, occur in a phased manner by channel reach, and would occur only during dry-season months (mid-June to mid-October), and that the zone of groundwater to be potentially affected is relatively shallow; adverse effects on groundwater levels would be less than significant.	FEIR, Volume 2, page 3.9-14
HYD-3	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which	Project construction activities are not expected to substantially alter existing drainage patterns. During the construction phase, on-site drainage would continue to flow towards Lower Penitencia Creek. Instream dewatering would occur in portions of the project area; however, diversions would be temporary and during the summer dry season, when creek flows are at their minimum. All material associated with dewatering activities would be removed upon completion of instream work. In addition, implementation of District BMPs, such as BMP BI-3, WQ-4, WQ-5, WQ-6, and WQ-8, would	FEIR, Volume 2, page 3.9-15

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
	would result in substantial erosion, or siltation on- or off-site	limit temporary changes to existing drainage patterns and surface runoff. The project would not substantially alter drainage patterns such that substantial changes in on- or off-site erosion and siltation would occur. This impact would be less than significant.	
HYD-4	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site	During construction activities, temporary instream dewatering would occur in portions of the project area. Implementation of District BMPs, such as BMP BI-3, WQ-4, and WQ-5, would limit temporary changes to existing drainage patterns and surface runoff. These BMPs would minimize effects on drainage patterns by ensuring proper removal of temporary diversion structures or cofferdams after work is complete, and staging equipment and construction materials away from the channels. As such, impacts on existing drainage patterns during project construction would be less than significant. After construction of the proposed project, the creek would continue to have capacity to convey the 100-year flow without overtopping of the creek banks at the two Caltrans bridges across Lower Penitencia Creek (I-880 and I-880 southbound ramps) and would not increase flood hazards to areas downstream of the Lower Penitencia Creek/Coyote Creek confluence. The proposed project would be beneficial by providing flood protection for Milpitas residents and businesses adjacent to the creek. Therefore, this impact would be less than significant.	FEIR, Volume 2, page 3.9-16
HYD-5	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	. In Reaches 1 through 3, a total of 7,742 square feet of impervious surfaces would be created through widening of maintenance roads/trails paved with asphaltic concrete. In Reach 4, a total of 1,112 square feet of existing road/trails paved with asphaltic concrete would be replaced with aggregate base. As a result, the project would result in a net increase of 6,630 square feet of new impervious surfaces. Due to the small amount of new impervious surface, the project is not subject to the source control, site design, and stormwater requirements specified in the San Francisco Bay RWQCB's Municipal Regional Permit (Order R2-2015-0049, NPDES Permit No. CAS612008). However, the project design would be consistent with the policies of the Municipal Regional Permit by minimizing runoff generation, promoting infiltration of storm water, and using vegetated areas to filter pollutants from the stormwater before it enters the creek. The project also includes landscaping consistent with the guidelines contained in Section C.3.a.i(8) of the Municipal Regional Permit. Native plants would be installed throughout the project site. This impact would be less than significant.	FEIR, Volume 2, page 3.9-17
HYD-6	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard	The proposed project would not include the construction or modification of any homes in a flood hazard area. During construction, coffer dams would be temporarily installed within the channel to divert flows around the construction work areas. However, because construction activities would take place during the summer months when flood hazards are essentially non-existent, temporary use of cofferdams and staging of equipment and materials in Staging Area B are not anticipated to impede or redirect flood flows. In the long-term, the project would involve placement of new structures within	FEIR, Volume 2, page 3.9-18

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
	delineation map; or place structures within a 100-year flood hazard area structures which would impede or redirect flood flows	the 100-year flood hazard area (e.g., new levee, wetland bench, and floodwalls). However, because the purpose of the proposed project is to improve flood protection and because the new structures would be designed to accommodate 100-year flood flows, the proposed project would not be expected to impede or redirect those flows.	
HYD-7	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	The proposed project would not increase the flood risks due to failure of any levee or upstream dams. The proposed project addresses issues of inadequate flood protection provided by the existing levees and would increase the conveyance and floodwater storage capacity of Lower Penitencia Creek, thereby reducing potential flood damage resulting from failure of the Coyote Creek levees. The potential effects of sea-level rise were taken into consideration as the proposed project was designed to accommodate an expected increase of 55 inches (2.59 feet) in sea level over the proposed project's 50-year design life. As such, the project's impact of reducing potential flooding would be beneficial.	FEIR, Volume 2, page 3.9-19
HYD-8	Inundation by seiche, tsunami, or mudflow	The project site is not located along the ocean coastline, adjacent to any large waterbodies, or within a tsunami hazard area. The project site is not adjacent to any steep slopes and would not be at risk for damage by mudflows. Inundation by seiche, tsunami, or mudflow would not occur; there would be no impact.	FEIR, Volume 2, page 3.9-19
Land Use			
LU-1	Physically divide an established community	Project construction and staging would generally occur within existing District ROW and easements along the channel. Following project construction, use of the trails and maintenance roads along both sides of the creek would be similar to existing conditions and project components would not preclude use or future development of trails. Project construction would not result in adverse effects related to physical division of an established community. This impact would be less than significant.	FEIR, Volume 2, page 3.10-3
LU-2	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect	The proposed project would not permanently alter existing land uses or introduce new land uses into the area. Additionally, the proposed project would not preclude future use and development of trails along Lower Penitencia Creek or prevent or substantially inhibit recreational use of the creek. The proposed project has been designed to retain existing recreational trails within the project site. Since existing and proposed recreational trails would be retained and there would be no conflicts with existing land use plans or policies, this impact would be less than significant.	FEIR, Volume 2, page 3.10-4

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
LU-3	Conflict with any applicable habitat conservation plan or natural community conservation plan	No habitat conservation plans or natural community conservation plans apply in the project area. Therefore, no impact related to conflicts with habitat conservation plans or natural community conservation plans would occur.	FEIR, Volume 2, page 3.10-5
Noise			
NOI-3	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	The proposed project would reduce the need for periodic sediment removal, while other maintenance activities in the project area would continue to be similar to current activities. I-880 would continue to be the dominant source of noise in the area and, given their placement, the floodwalls along Reaches 3 and 4 may help reduce highway-related noise levels for residences east of the project area. Thus, there would be no permanent increase in ambient noise levels. This impact would be less than significant.	FEIR, Volume 2, page 3.11-16
NOI-5	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	The Mineta San Jose International Airport is the closest public airport to the project site and the noise contours from its master plan do not overlap the project area. Therefore, there would be no impact.	FEIR, Volume 2, page 3.11-17
NOI-6:	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels	No private airports are located within 19 miles of the project site. Thus, the proposed project would not affect people residing or working within the vicinity of a private airstrip and there would be no impact.	FEIR, Volume 2, page 3.11-17
Recreation			
REC-1	Increase the use of existing neighborhood and regional parks or other recreational	Impacts related to increased use of other nearby recreational facilities would not be substantial and would not result in physical deterioration of these other recreational facilities. Once project	FEIR, Volume 2, page 3.12-4

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
	facilities such that substantial physical deterioration of the facility would occur or be accelerated	construction is complete, the Penitencia Creek Trail would be re-open for public use. Therefore, the impact would be less than significant.	
REC-2	Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	The proposed project involves construction of a pedestrian crossing over the Reach 3 floodwall to allow for continued use of the existing Penitencia Creek Trail. In most resource sections, the environmental effects of the pedestrian crossing are described collectively with other project components; based on that approach, the proposed project was found to result in significant impacts in the area of air quality, biological resources, geology, hydrology, noise, transportation, utilities, and hazardous materials. However, construction of the pedestrian crossing would not result in significant impact to these resources areas due to its small size and the limited scale of potential effects. There are no sensitive resources at the pedestrian crossing work area and construction associated with this facility would be short in duration and thus generate minimal air pollutant emissions, greenhouse gas emissions, and noise and vibration. Implementation of District BMPs AQ-1, BI-3, WQ-4, WQ-5, WQ-9, WQ-10, and WQ-16 would minimize the potential for soil erosion at construction areas, and promote stabilization and revegetation of disturbed areas after construction is complete. This impact would be considered less than significant.	FEIR, Volume 2, page 3.12-5
Traffic			
TRA-2	Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	The number of construction trips that the proposed project would add to the I-880 freeway would be less than 1 percent of its capacity in both directions in both the AM and PM peak hours. Based on this comparison, the proposed project would not result in a substantial impact on freeway segments, and no additional analysis is required. All signalized study intersections are projected to operate at an acceptable level of service (LOS) D or better during the AM and PM peak hours under both “Existing plus Project Conditions” and “Existing Conditions plus Approved and Pending Developments and Project” scenarios. Once construction is complete, maintenance activities would be similar to current practice with the exception of occasional repair and maintenance of the new floodwalls and headwalls, and thus only minimal truck trips would be generated for project’s maintenance. Therefore, the proposed project would not result in a substantial adverse effect at the study intersections. Conflicts with the Santa Clara Valley Transit Authority’s (VTA’s) Congestion Management Program or the City of Milpitas LOS standards would be less than significant.	FEIR, Volume 2, page 3.13-20

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TRA-3	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	There are no airports in the project vicinity. As such, the proposed project would not affect existing air traffic patterns during construction or operation. There would be no impact.	FEIR, Volume 2, page 3.13-24
Utilities and Service Systems			
UTL-1	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	The proposed project would not generate wastewater during operation of the project and therefore would not require construction of any new wastewater treatment facilities. During the construction phase, the use of portable restrooms would generate a minimal volume of wastewater to be off-hauled by the contractor for disposal at the San Jose–Santa Clara Regional Wastewater Facility. This impact would be less than significant.	FEIR, Volume 2, page 3.14-6
UTL-2	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	The proposed project would not require any new water supply or water treatment facilities. Project construction would require some amount of water for dust control purposes, but this amount of water would not be anticipated to be substantial and would be supplied by a water truck rather than the City of Milpitas' municipal system. Therefore, no impact related to construction of new water treatment facilities or insufficient existing entitlements would occur.	FEIR, Volume 2, page 3.14-6
UTL-3	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	The proposed project would involve improvements to Lower Penitencia Creek, which collects and conveys flow from several local storm drain facilities and tributaries. Throughout construction, all local stormwater facilities would remain in operation. Portions of the creek would be dewatered during construction by diverting creek flow into pipes that would convey the flow around the construction area and back into the creek downstream from the construction area. Dewatering would only occur during summer dry season when flows in the storm drains would be minimal. In general, effects on any existing stormwater drainage facilities in or near the project area would not be substantial, and the proposed project would not require or result in the construction of additional stormwater drainage facilities. Finally, the proposed project would not substantially increase impervious areas or otherwise increase the generation of stormwater. This impact would be less than significant.	FEIR, Volume 2, page 3.14-7
UTL-4	Have sufficient water supplies available to serve	Project construction would use recycled water for dust control and street cleaning. The wetlands plantings in Reach 1 would be flooded during high tides on a daily basis and would not require	FEIR, Volume 2, page 3.14-8

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
	the project from existing entitlements and resources, or are new or expanded entitlements needed	irrigation. Once project is complete, water may be used to clean graffiti from structures, but that use would be infrequent and amount of water used would be negligible. Mitigation planting in upland areas would require watering to establish. To the extent possible, recycled water would be used for irrigation. Water use associated with the proposed project would be minimal. This impact would be less than significant.	
UTL-5	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	The proposed project would not generate substantial volumes of wastewater that during construction or operation. Short-term increases in wastewater generated by construction workers would not substantially increase the volume of wastewater in the system such that treatment capacity would be an issue at the San Jose–Santa Clara Regional Wastewater Facility. Therefore, impacts regarding wastewater treatment capacity would be less than significant.	FEIR, Volume 2, page 3.14-8
UTL-6	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	The total volume of excess soil or sediment requiring off-site disposal or re-use is estimated at 2,300 cubic yards with about 90 percent of the excavated soil and sediment to be reused on-site. Excess spoils would be sent to local landfills in Santa Clara County and Alameda County and would not result in a significant impact on existing capacity. This impact would be less than significant.	FEIR, Volume 2, page 3.14-8
UTL-7	Comply with federal, state, and local statutes and regulations related to solid waste	The proposed project would involve excavation and demolition of existing structures, which could generate relatively large volumes of construction waste. Excavated material would be reused when feasible. By using sheetpiles to construct the floodwalls instead of cast-in-place concrete piles, which are commonly used, the proposed project would generate substantially less construction waste. The proposed project would generate modest amounts of typical construction wastes, such as lumber, wire, metals, and plastics. All project-related waste would be handled, classified, temporarily stored, transported, and disposed of in conformance with applicable federal and state solid waste regulations. Once project is complete, maintenance activities such as trash removal, vegetation management, and maintenance road grading would continue as before, and new maintenance activities would involve periodic repair and maintenance of floodwalls and headwalls. However, these activities would only generate small amounts of solid waste. This impact would be less than significant.	FEIR, Volume 2, page 3.14-9

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
UTL-8	Potential disruption and/or relocation of existing utilities	Buried underground utilities may be encountered during project construction Use of tall equipment under existing electric transmission lines would be a potential hazard as a contact between the equipment and power lines could disrupt operation of the powerlines. To avoid that hazard, the project design avoids locating floodwalls directly under the PG&E transmission lines. A number of underground utility lines are present within the project area, including water supply, wastewater, natural gas, and power lines. The District will require the contractor to notify Underground Service Alert North prior to start of excavation or demolition activities and will coordinate with line utility owners and operators to ensure that project construction does not damage the lines or disrupt service. During project operation, the proposed project would not be anticipated to affect, or have the potential to affect, existing utilities. This impact would be less than significant.	FEIR, Volume 2, page 3.14-10
Cumulative Impacts			
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Aesthetics (cumulative)	The geographic scope of the cumulative aesthetics evaluation is the project site and the nearby areas within visual sight lines. Because the topography of the project vicinity is relatively level and the area is mostly urbanized, proposed improvements would only be visible from nearby viewpoints. Nearby development would be similar to existing urban development in the area and would be guided by the City of Milpitas General Plan as to allowable uses and size and bulk of structures. Based on the above and given the existing urbanized appearance of the area, there would be no significant cumulative impact to aesthetics when considering the proposed project and other projects in the area. The proposed project and other projects would not result in adverse effects on scenic resources, or substantially alter the visual character of the area. When considering the proposed project along with other projects, there would not be a significant cumulative impact on aesthetics.	FEIR, Volume 2, page 4-4
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Cultural Resources (cumulative)	The geographic scope of cumulative cultural resources evaluation includes the project area and immediate surroundings. Construction of the proposed project and other development projects in Milpitas could lead to cumulative loss of significant historic, archaeological, or paleontological resources. There are no historical resources and no known archaeological resources within the project site. The District would implement BMPs to ensure that archaeological resources, including Native American human remains are protected from damage and properly studied, recovered, and curated in the event that they are found during project construction. State law requires other development projects to similarly protect archaeological resources and human remains uncovered during construction of those projects. When considering the proposed project along with other projects, there would not be a significant cumulative impact on cultural resources.	FEIR, Volume 2, page 4-4

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Geology, Soils, and Seismicity (cumulative)	The geographic scope of geology, soils, and seismicity evaluation includes the project area and immediate surroundings. Other projects in Milpitas would be required to comply with California Building Code requirements. The proposed project and other developments would be designed to withstand seismic hazards (e.g., liquefaction) and expansive and corrosive soils. When considering the proposed project along with other projects, there would not be a significant cumulative impact to geology, soils, or seismicity.	FEIR, Volume 2, page 4-4
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Hazards and Hazardous Materials (cumulative)	With the exception of activities conducted by the District's SMP, there are no other cumulative projects that would be located within the same footprint as the proposed project. No known hazardous waste sites are located at the project site; however due to the urbanized nature of the area, potential exists for project excavations to encounter contaminated soil or groundwater. District BMPs would be implemented to ensure that contaminated media, if encountered, are handled in compliance with federal and state laws regarding hazardous wastes. Other nearby cumulative construction projects would also be required to follow federal and state laws regarding contaminated soil or groundwater. Based on the lack of the known contamination in the project area, and legal requirements for handling of contaminated media if encountered in the future, the potential for other nearby projects to contribute to cumulative impacts regarding hazardous materials is low. There would not be a significant cumulative impact to hazards or hazardous materials.	FEIR, Volume 2, page 4-4
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Land Use (cumulative)	The proposed project would not divide an established community or change land use at the project site or vicinity. The proposed project would also not conflict with local plans such as the City of Milpitas General Plan, Milpitas Trails Master Plan or the City of Milpitas' Bikeway Master Plan. Similar to the proposed project, other projects are subject to planning, environmental review, and permitting processes. Through those processes, inconsistencies with relevant plans and policies would be resolved before project implementation. There would not be a significant cumulative impact to land use.	FEIR, Volume 2, page 4-5
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Recreation (cumulative)	Similar to the proposed project, other nearby projects including the Upper Berryessa Creek Flood Protection Project and the Upper Penitencia Creek Project have the potential to affect recreational trails in their respective project areas during construction. However, because these projects and the proposed project are in different stages of development, it is unlikely that they would be under construction simultaneously. The District's Lower Berryessa Creek Flood Protection Improvement Project adjoins the proposed project area and would temporarily affect recreational trails during construction. However, construction of Phase 1 of the Lower Berryessa Creek project, which is closest to the Lower Penitencia Creek Improvements Project area, has been completed and will not occur concurrently with construction of the proposed project. Construction of Phase 2 of the Lower Berryessa Creek project may overlap construction of the proposed project, but would be over 0.5 mile	FEIR, Volume 2, page 4-5

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		from the Lower Penitencia Creek project area. When considering the proposed project along with other projects, there would not be a significant cumulative impact to recreation.	
N/A (topic dismissed in Section 4.3.1, Table 4-1 of FEIR)	Utilities and Service Systems (cumulative)	For aboveground and belowground utilities, the geographic scope for evaluating cumulative impacts includes the project area and immediate surrounding areas. With regards to solid waste management, the geographic scope includes Santa Clara County. The Lower and Upper Berryessa Creek projects are under construction and include plans to relocate aboveground and underground utilities lines as necessary. Buried underground utilities may be encountered during project construction activities. To prevent significant disruption of service, affected parties will be notified in advance of possible service disruptions and safety protocols would be implemented to avoid damage, or potentially hazardous accident conditions (e.g., explosion from striking a natural gas pipeline). Other development projects would conform to the City of Milpitas General Plan and would not result in increased demand on utility and service systems beyond that which can be accommodated by existing and planned infrastructure. Milpitas is served by the San Jose/Santa Clara Water Pollution Control Plant, which has prepared a Master Plan to accommodate expected future increases in wastewater treatment growth in the plant's service area. Population growth within Santa Clara County would result in increased generation of solid waste; however, this would be offset by the requirements for increased re-use and diversion of solid waste included in the CIWMA. Existing solid waste facilities in the County have many years of estimated capacity to accommodate solid wastes, and overall capacity would be increased by the Newby Island Sanitary Landfill Rezoning and Recyclery Project. That project would provide 15.12 million cubic yards of additional landfill capacity. When considering the proposed project along with other projects, there would not be a significant cumulative impact to utilities and services systems.	FEIR, Volume 2, page 4-5
CUM-1	Cumulative Impacts on Air Quality	The impact analysis in FEIR Section 3.3.4 concluded that the project's NOx emissions would be reduced to a level of less-than-significant with the implementation of BMP AQ-1 and Mitigation Measure AQ-1. As a result, these measures would reduce the project's emissions to a level such that the project would not make a considerable contribution to cumulative air quality impacts even when considering the other projects occurring in the area.	FEIR Volume 2, page 4-15
CUM-2	Cumulative Impact on Biological Resources	As discussed in FEIR Section 3.4, *Biological Resources,* the proposed project could adversely affect special-status species or habitat used by special-status species including longfin smelt, Central California Coast steelhead, western pond turtles, burrowing owls, Alameda song sparrow and San Francisco common yellowthroat, salt marsh harvest mouse, special-status bats, and Congdon's tarplant. Implementation of various District BMPs (including HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, WQ-16, BI-2, BI-3, BI-8, BI-10, BI-11) related	FEIR Volume 2, page 4-16

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		to water quality and biological resources would minimize the project's potential impacts on those species. Other projects in close proximity could also result in impacts on western pond turtles and special-status birds and bats, resulting in a significant cumulative impact. Implementation of the District BMPs and Mitigation Measures BIO-1 through BIO-12 would ensure the project's contribution to cumulative impacts on special-status species would not be cumulatively considerable. Similar to the proposed project, other projects such as the Lower Berryessa Creek Flood Protection Project and Upper Berryessa Creek Flood Protection Project would impact waters of the U.S./state. Collectively, these projects could result in significant cumulative impacts on waters of the U.S./state. Implementation of Mitigation Measure BIO-13 would ensure that the wetland bench supports ecological functions of wetland vegetation and the project's contribution to cumulative impacts to jurisdictional wetlands and waters of the U.S./state would not be cumulatively considerable.	
CUM-3	Cumulative Impacts on Hydrology and Water Quality	As discussed in FEIR Volume 2, Section 3.8, *Hydrology and Water Quality,* the created wetland bench would provide storage for flood waters and increased areas of tidal wetlands that would benefit water quality. The project would continue existing drainage patterns while reducing flood risks. During in-water construction work, the District would divert creek water around work areas. A SWPPP would also be implemented to prevent discharge of pollutants from construction activities. A number of BMPs would also be implemented to prevent release of pollutants into the creek. Without the proposed project, the Lower Penitencia Creek would not have the capacity to convey the 1-percent flood event and flood hazards would increase once the Lower and Upper Berryessa flood protection projects are completed. The proposed project would increase the capacity of Lower Penitencia Creek to convey increased 1-percent flows from the improved Upper and Lower Berryessa Creek without overtopping of the Lower Penitencia Creek banks. Therefore, the proposed project would not increase downstream flood hazards and its contribution to cumulative hydrologic impacts would not be cumulatively considerable.	FEIR Volume 2, Section 4.3.3, page 4-15
CUM-5	Cumulative Impacts on Traffic Patterns and Safety Hazards	There is a possibility that the presence of slow-moving vehicles and equipment associated with both the proposed project and other projects could result in temporary safety hazards on local roads. This would be a significant cumulative impact. Implementation of District BMP TR-1 and	FEIR Volume 2, pages 4-18 to 4-19

Impact Number	Impact Title	Rationale for No Impact or Less than Significant Impacts	Reference
		Mitigation Measure TRA-1 (Traffic Control Plan), would minimize traffic safety hazards on local roads, including San Andreas Drive, where capacity would be temporarily reduced during construction of the San Andreas Drive bridge headwall. With implementation of these measures, the proposed project's contribution to this cumulative impact would not be cumulatively considerable.	

3.2 Significant Environmental Impacts That Have Been Reduced to a Less than Significant Level

The District hereby finds that the following significant environmental impacts can and will be mitigated to a less-than-significant level based upon the implementation of the mitigation measures in the FEIR. These findings are based on the discussion of impacts in the detailed resource area impact analyses in Volume 2, Chapter 3 of the FEIR and the cumulative impacts discussed in Volume 2, Chapter 4 of the FEIR, as well as relevant responses to comments and revisions in the FEIR. For each impact, the following information is presented: the CEQA finding, the applicable mitigation measure(s), the rationale for the finding, and a reference to the FEIR section providing further facts and reasoning supporting the finding.

3.2.1 Air Quality

Impact AQ-2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The proposed project would emit criteria pollutants through the combustion of fossil fuels by construction equipment, worker vehicles, and material hauling trucks. In addition, the proposed project's grading and excavation activities would disturb soils and generate fugitive dust (particulate matter emissions). The proposed project would result in construction emissions of nitrogen oxides (NO_X) that exceed the BAAQMD thresholds for grading activities, if project construction activities were performed concurrently. The emissions would contribute to existing air quality impairments during the construction period. Implementation of District BMP AQ-1 would reduce NOx and other criteria pollutant emissions by minimizing idling times of construction equipment and requiring equipment to be properly maintained and tuned in accordance with manufacturer's specifications. In addition, BMP AQ-1 would also minimize fugitive dust emissions during construction. However, the proposed project's NO_X emissions would still exceed the BAAQMD NO_X significance criteria even with implementation of District BMP AQ-1, and thus this impact is significant. As discussed in Volume 2, Section 3.3 of the FEIR, implementation of Mitigation Measure AQ-1 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure AQ-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure AQ-1: Implement Construction NO_x Emission Reductions. *The District or its contractor(s) will develop a construction plan demonstrating that off-road equipment (greater than 50 horsepower) and material hauling vehicles used during project construction (i.e., owned, leased, and subcontracted vehicles) will not result in average daily NO_x emissions of more than 54 pounds per day, which will require achieving a project-wide fleet-average of at least 22 percent NO_x reduction compared to unmitigated emissions. As part of developing this construction plan, the District or its contractor(s) will conduct additional air quality modeling to confirm that the NO_x emissions threshold will be met. This limit of 54 pounds per day of NOx emissions shall be achieved through a combination of approaches, including phasing of construction activities in a manner that reduces the daily emissions generated from the proposed project; the use of late model engines (e.g., Tier 3 or 4 engines), low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or add-on devices such as particulate filters; and/or other options as such become available.*

Rationale for Finding. Implementation of Mitigation Measure AQ-1 would ensure that emissions from individual construction phases for each reach and combined reach emissions would not exceed the BAAQMD's significance thresholds, particularly for NO_X. Use of Tier 3 engines would be sufficient to reduce NO_X emissions by at least 22 percent such that the average daily emissions were less than the BAAQMD threshold of 54 pounds per day. The proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, this impact would be less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.3.4, page 3.3-14.

Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

As discussed in Volume 2, Section 3.3.2 of the FEIR, the BAAQMD has established significance thresholds that also apply to cumulative impacts; specifically, a project that does not exceed the significance thresholds established for any criteria pollutant would not considerably contribute to cumulative air quality impact. As discussed in Impact AQ-2 above, during construction of the proposed project, NO_X emissions would exceed the BAAQMD threshold, even with implementation of District BMP AQ-1. This would be a significant impact. As discussed in Volume 2, Section 3.3 of the FEIR, implementation of Mitigation Measure AQ-1 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure AQ-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure AQ-1: Implement Construction NOx Emission Reductions. See Impact AQ-2 above for full text.

Rationale for Finding. Implementation of Mitigation Measure AQ-1 would ensure the proposed project's emissions are reduced to a level such that it would not make a considerable contribution to cumulative air quality impacts even when considering the other projects occurring in the area. This impact would be less than cumulatively considerable with mitigation.

Reference. FEIR Volume 2, Section 3.3.4, page 3.3-18.

Impact AQ-5: Create objectionable odors affecting a substantial number of people.

Construction activities could generate odors related to excavated material and the operation of gasoline- or diesel-powered equipment. Odors may also be associated with decaying organic material contained in excavated or dredged material. The proposed project might cause odor impacts to nearby sensitive receptors if some excavated or dredged material is not immediately removed from the project site and is located in close proximity to sensitive receptors. Implementation of District BMP AQ-2 would reduce odor impact by requiring that potentially odorous materials be removed as soon as possible. However, it is possible that some excavated or dredged material could not be immediately removed from the project site and if such material is located near sensitive receptors, the impact would be significant. As discussed in Volume 2, Section 3.3 of the FEIR, implementation of Mitigation Measure AQ-2 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, the Mitigation Measure AQ-2 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure AQ-2: Locate Stockpiles of Odorous Materials at a Distance from Sensitive Receptors. *The District will require that contractors handle stockpiles of potentially odorous excavated or dredged material, or other potentially odorous materials, in a manner that avoids affecting residential areas or other sensitive receptors to the extent feasible. Stockpiles will be placed as far as possible from these receptors and will be covered if immediate off-site disposal is not feasible.*

Rationale for Finding. Implementation of Mitigation Measure AQ-2 would ensure that any stockpiled material remaining on the project site would be placed at a distance as far as possible from sensitive receptors until they could be removed. Potential odors generated from operation of construction equipment would be temporary. Therefore, the potential for the proposed project to create objectionable odors that would affect a substantial number of people would be less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.3.4, page 3.3-19.

3.2.2 Biological Resources

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

The project has the potential for adverse effects on special-status species. The analysis is organized by sub-topics and species type (described below). Species listed in FEIR Table 3.2-4 as absent from the project area are not described herein as they would not be affected by the proposed project. All species listed in FEIR Table 3.2-4 as present, may be present, or absent as breeders could potentially be affected by the project and are analyzed in this section, except three bird species which have special status only when nesting and would not be expected to nest at the project site. The three bird species that have special status only when nesting are the Northern harrier, loggerhead shrike, and yellow warbler.

Impact BIO-1a: Impacts on longfin smelt and steelhead.

In-channel construction activities, including channel dewatering, would be limited to dry season to reduce the potential for longfin smelt and steelhead to be present in the project area. During project construction, longfin smelt (*Spirinchus thaleichthys*) (state listed as threatened) and Central California Coast steelhead (*Oncorhynchus mykiss*) (federally listed as threatened) could potentially occur, albeit infrequently and in low numbers, in the reach of Lower Penitencia Creek within the project boundary. Neither of these species is expected to spawn in the project area; however, small numbers of these species may occasionally stray into the project area.

The proposed project would not result in the permanent loss of aquatic habitat for fish. However, temporary dewatering of portions of the project area would occur. The loss of instream cover, such as vegetation, due to dewatering may adversely affect fish. Removal of vegetation could also result in loss of substrate used by fish for foraging. However, Lower Penitencia Creek provides relatively low-quality habitat for fish species due to its channelized nature, lack of high-quality habitat complexity, and regular disturbance of habitats due to frequent maintenance. Furthermore, the habitat is expected to reestablish

rapidly following completion of construction. The project activities are not expected to result in a substantial long term change in the amount or suitability of aquatic habitat available to steelhead and longfin smelt.

Potential increases in erosion and sedimentation and other water quality impacts may result from the project construction activities. The construction of floodwalls would require the installation of sheet piles. Sounds generated by pile driving have the potential to adversely affect fish. However, the proposed project's use of a Giken silent piler would reduce effects of pile driving to levels that are not expected to cause injury or mortality of fish. Additionally, minor spills of petrochemicals, hydraulic fluids, and solvents may occur during vehicle and equipment refueling.

Implementation of District BMPs BI-3, BI-8, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize adverse effects in water quality. These BMPs include numerous preventive measures to reduce erosion, control sediment, prevent spills, and protect water quality. By implementing these BMPs, impacts on longfin smelt and steelhead would be minimized. Nevertheless, the proposed project could result in residual impacts on these species because complete avoidance of individuals may not be accomplished while still meeting the proposed project goals. As a result, impacts on special-status fish are conservatively considered significant. As discussed in Volume 2, Section 3.4 of the FEIR, implementation of Mitigation Measure BIO-1 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure BIO-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-1: Exclude Fish Prior to Dewatering Activities. *Prior to conducting dewatering activities, a qualified biologist will use nets to exclude fish from the construction area. During a falling tide, a block net will be placed at the upper end of the reach to be dewatered. Subsequently, qualified biologists will walk from the upper to lower end of the reach with a seine stretched across the channel to encourage fish to move out of the construction area. When the lower end of the construction area is reached, a second block net will be installed to isolate the construction reach. This procedure will be repeated a minimum of three times on each dewatered reach to ensure that no longfin smelt or steelhead remain in the construction area. Mesh size will not exceed 9.5 millimeters to ensure that longfin smelt are adequately excluded from this area.*

Rationale for Finding. Implementation of this mitigation measure would reduce significant impacts on longfin smelt or steelhead by excluding fish from the project area prior to dewatering activities.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-35.

Impact BIO-1c: Impacts on western pond turtles.

Suitable habitat for western pond turtle is present in the proposed project. Project construction may affect aquatic habitat used by western pond turtles for foraging or dispersal, upland habitat used for nesting, and/or individuals. Implementation of District BMPs BI-3, BI-8, BI-10, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize temporary impacts on western pond turtles during project construction by minimizing the potential for water quality degradation that could impact the species and minimizing the potential for entrapment of individuals. However, should construction activities occur when turtles are present, injury or mortality of individuals could result. Construction-

related impacts on individual western pond turtles could have a significant impact on the local population and are considered significant. As discussed in Volume 2, Section 3.4 of the FEIR, implementation of Mitigation Measure BIO-2 would reduce impacts on western pond turtle to a less-than-significant level.

The proposed project would not result in the permanent loss of aquatic habitat for turtles. Temporary impacts on aquatic and brackish marsh habitat that provides potential foraging habitat for turtles would be temporarily affected during levee relocation, bench excavation, and dewatering activities. In addition, grassland and willow riparian woodland habitat that could be used by small numbers of western pond turtles for dispersal and nesting would be temporarily disturbed during project construction. Some ruderal grassland would be converted to coastal brackish marsh which would provide greater habitat value for western pond turtle. The temporary loss of aquatic, brackish marsh, willow riparian woodland, and upland dispersal habitat during construction is not expected to result in a substantial adverse effect as this habitat is infrequently used by a small number of turtles. Dewatering activities would temporarily restrict in-channel movement by western pond turtles but given that the affected area is relatively small and limited to turtle movement, this impact would be less than significant.

Lastly, the floodwalls could create barriers to dispersal of turtles, which may increase their vulnerability to predation as they traverse the floodwalls. However, upstream from California Circle, western pond turtles are not currently able to disperse overland between the creek and other water bodies due to existing urban development along both side of the channel. And, along Reach 2, the floodwalls would not substantially affect overland movement due to the presence of an existing chain-link fence surrounding the adjacent California Circle stormwater pond and pump station. Thus, for these reasons, the floodwalls would not substantially affect overland movement by western pond turtles; this impact would be less than significant.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure BIO-2 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-2: Conduct Preconstruction Surveys for Western Pond Turtles and Relocate if Necessary. *A qualified biologist will conduct pre-construction surveys for western pond turtles and their nests. If an adult or juvenile western pond turtle is found, project activities near the turtle will not commence until the individual has left the area, or captured and relocated to suitable habitat outside of the activity area by a qualified biologist. If an active western pond turtle nest is detected within the construction area, a 25-foot buffer zone around the nest will be established and maintained during the nesting season (April 1 through August 31). The buffer zone will remain in place until the young have left the nest, as determined by a qualified biologist.*

Rationale for Finding. Implementation of Mitigation Measure BIO-2 would identify and relocate any western pond turtles present in the project area before the start of construction. This measure would minimize the potential for harm to or loss of individual western pond turtles and their nests and would reduce this impact to less than significant.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-40.

Impact BIO-1e: Impacts on the Alameda song sparrow and San Francisco common yellowthroat.

The Alameda song sparrow (*Melospiza melodia pusillula*) and San Francisco common yellowthroat

(*Geothlypis trichas sinuosa*) (both California species of special concern) are associated with marsh habitats, and both are known to nest in the project area. The project is expected to result in temporary impacts on 0.87 acre of coastal brackish marsh, the highest quality habitat for the species in the project area. Heavy ground disturbance, noise, and vibrations caused construction activities in the project area could disturb foraging or roosting individual Alameda song sparrows and San Francisco common yellowthroats, cause them to move away from work areas, or otherwise affect their behavior.

Implementation of District BMPs BI-5, BI-6, and BI-11 would identify active nests prior to the start of construction, reduce construction-related disturbances to nests, and minimize the attraction of nest predators. However, if preconstruction surveys are conducted too far in advance of the onset of construction activities, active nests may be established and subsequently disturbed when construction activities are initiated. Similarly, if there is an extended break in construction activities at a site, active nests may become established in the project work area and subsequently be disturbed when project activities resume. The loss of active nests of Alameda song sparrows or San Francisco common yellowthroats would be a significant impact because a relatively large number of breeding birds could be affected. This could result in a substantial effect on local and regional populations, which would be a significant impact. As discussed in Volume 2, Section 3.4 of the FEIR, implementation of Mitigation Measures BIO-3 and BIO-4 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, the Mitigation Measures BIO-3 and BIO-4 are feasible and are hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-3: Conduct Preconstruction Surveys for Nesting Birds. *A qualified biologist will conduct preconstruction surveys for nesting birds. Surveys will be conducted no more than 7 days prior to the initiation of construction activities during the bird nesting season (January 15 through August 31) in any given area. The survey will cover the portions of the project work area where construction activities will occur as well as a 250-foot buffer for raptors and a 50-foot buffer for non-raptors. During each survey, the biologist will inspect all trees and other potential nesting habitats (e.g., shrubs, ruderal grasslands, wetlands, and buildings) in and immediately adjacent to the impact areas for nests. If a lapse in project-related work of 1 week or longer occurs, another focused survey will be conducted before project work can be reinitiated.*

Mitigation Measure BIO-4: Implement Buffer Zones for Nesting Birds. *If an active nest is found sufficiently close to the project work area (i.e., within 250 feet for raptors or 50 feet for non-raptors), a qualified biologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 50 feet for non-raptors and 250 feet for raptors). No construction activities will be performed within the buffer until the young have fledged or the nest has been determined to be inactive by a qualified biologist.*

If the qualified biologist determines that a reduced buffer size is appropriate given conditions in the vicinity of the nest, type of construction activity that would occur near the nest, and the species of the nesting bird, the biologist will monitor bird behavior in relation to work activities. If the birds do not indicate that they are habituated to project activities during the initial 2 days of attempting work within a reduced buffer, the standard buffer will be implemented. Project activities within the reduced buffers will not resume until the District has consulted with CDFW and both the qualified biologist and CDFW confirm that the birds' behavior has normalized, or until the nest is no longer active.

Rationale for Finding. With the implementation of Mitigation Measures BIO-3 and BIO-4, disturbance of the nests of Alameda song sparrows and San Francisco common yellowthroats would be avoided to the extent feasible, and this impact would be reduced to less than significant.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-43.

Impact BIO-1g: Impacts on salt marsh harvest mouse.

Small areas of suitable habitat for salt marsh harvest mouse (R*eithrodontomys raviventris*), a federally listed and state-listed endangered species and a state-designated fully protected species exists in the project area. Suitable habitat for the salt marsh harvest mouse is present in the form of a small patch of pickleweed and alkali bulrush located between North McCarthy Boulevard and I-880 and a small patch of brackish marsh between I-880 and Coyote Creek. This habitat is, however, located at the margins of the species' known occupied habitat around the Bay, the low quality of habitat (i.e., small patch of pickleweed and alkali bulrush vegetation), and the species is unlikely to occur in the project area due to the limited extent of suitable habitat within the project area and the isolation of these small patches of suitable habitat from larger expanses of more suitable habitat. For these reasons, the project site does not provide sufficient habitat to support a sustained salt marsh harvest mouse population. If salt marsh harvest mice are present during construction of the replacement levee and use of Staging Area A, they may be crushed or injured by personnel or equipment. Individuals that vacate the area because of increased levels of noise and disturbance might be exposed to increased competition from conspecifics already occupying the area to which they are displaced and to increased levels of predation because of unfamiliarity with the new area or lack of sufficient cover. Removal of vegetation might expose individual mice to predation. During construction, implementation of District BMPs BI-10 and BI-11 would reduce impacts on this species by avoiding entrapment of mice and minimizing predation. Project construction activities would result in temporary impacts to vegetated wetland habitat, which is considered salt marsh harvest mouse habitat. As discussed under Impact BIO-1a, temporarily impacted vegetated wetland habitat is expected to re-establish within 1 to 2 years after construction is completed. In addition, the proposed wetland bench would provide approximately 0.29 acre of additional tidal habitat for the species. Despite implementation of BMPs BI-10 and BI-11 and the proposed creation of additional habitat through the wetland bench, if a transient mouse evades the mouse exclusion fence and is seriously harmed or injured, or if the wetland bench does not successfully establish suitable salt marsh harvest mouse habitat, the impact would be significant. As discussed in Volume 2, Section 3.4 of the FEIR, implementation of Mitigation Measures BIO-5, BIO-6, BIO-7, and BIO-8 would reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measures BIO-5, BIO-6, BIO-7, and BIO-8 are feasible and are hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-5: Develop and Conduct Worker Environmental Awareness Program. *Before any construction activities begin, the District will conduct a training session for all construction personnel. At a minimum, the training will include descriptions of the salt marsh harvest mouse, its habitats, the importance of the species, the general measures that are being implemented to conserve this species as they relate to the proposed project, and the boundaries within which project activities may be accomplished.*

Mitigation Measure BIO-6: Implement Hand Removal of Vegetation in Reach 1 and Staging Area A. *Prior*

to the start of project activities within Reach 1 and Staging Area A, herbaceous vegetation will be removed from work areas to eliminate cover for salt marsh harvest mice, thereby discouraging them from occurring in work areas. A qualified biologist familiar with salt marsh harvest mouse biology will conduct a preconstruction survey prior to vegetation removal and will monitor the vegetation removal process. Vegetation will be removed using hand-held equipment (e.g., weed-whackers). This will allow any small mammals, including salt marsh harvest mice, to escape the project area under the cover of vegetation, and will encourage movement of such small mammals toward available vegetated habitat outside the project area. All herbaceous vegetation that could potentially conceal a salt marsh harvest mouse within the work area will be removed. All vegetation that is removed will be hauled off site and will not be left on the site, as it could provide potential cover for small mammal species. The area of vegetation removal will extend approximately 2-3 feet beyond (downstream from) the boundary of the work area, to create an open area that discourages salt marsh harvest mice from approaching the exclusion barrier described in the Mitigation Measure BIO-7.

Mitigation Measure BIO-7: Install Exclusion Barrier and Conduct Salt Marsh Harvest Mouse Preconstruction Survey. *The District will install a barrier at the downstream-most limits of the work area to exclude salt marsh harvest mice from the work area. The barrier will be installed after vegetation clearing and prior to the start of earth movement. Barriers will be installed, perpendicular to the creek channel under the guidance of a qualified biologist. The barrier will consist of a 3-foot-tall fence of tight cloth, smooth plastic, or sheet-metal (or similar material approved by USFWS) toed into the soil at least 3 inches deep and supported with stakes placed on the inside of the barrier.*

A qualified biologist will conduct a preconstruction survey of the area from which vegetation was removed prior to construction access. The biologist will monitor installation of the barrier.

If a salt marsh harvest mouse, or an animal that could be a harvest mouse (e.g., a similar species of mouse), is observed within the exclusion barrier during project activities, all work that could result in the injury or death of the individual will stop immediately and the qualified biologist will be notified immediately. The animal will be allowed to leave the area on its own and will not be handled.

Mitigation Measure BIO-8: Salt Marsh Harvest Mouse Habitat Monitoring Plan. *To ensure that habitat created at the wetland bench on the south bank of Reach 1 will be suitable for the salt marsh harvest mouse, the District will hire a restoration ecologist and qualified salt marsh harvest mouse biologist to develop a Salt Marsh Harvest Mouse Habitat Monitoring Plan, which will contain the following components:*

- *summary of habitat impacts and proposed acres of habitat creation*
- *location of habitat creation site(s) and description of existing site conditions*
- *habitat design, including the following:*
  - *existing and proposed site hydrology*
  - *grading plan if appropriate, including bank stabilization or other site stabilization features*
  - *soil amendments and other site preparation elements as appropriate*

- *planting plan*
- *irrigation and maintenance plan*
- *remedial measures/adaptive management, etc.*

- *monitoring plan (including performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.). At a minimum, success criteria will include quantifiable measurements of wetland vegetation type (e.g., dominance by native hydrophytes).*

The District will implement the Salt Marsh Harvest Mouse Habitat Monitoring Plan. This mitigation measure will ensure the creation of tidal marsh and non-tidal wetland habitat suitable for the salt marsh harvest mouse, which will compensate for any permanent loss of habitat due to project implementation.

Rationale for Finding. Implementation of Mitigation Measures BIO-5, BIO-6, and BIO-7 would reduce impacts associated with loss of salt marsh harvest mouse individuals due to project-related construction activities, through worker training, hand removal of vegetation, and exclusion of known individuals, and implementation of Mitigation Measure BIO-8 would ensure that the project wetland bench results in suitable habitat for the salt marsh harvest mouse. Due to the low quality of salt marsh harvest mouse habitat within the project area, the low potential for (and magnitude of) project impacts to this species, and the predominantly temporary nature of the impacts, the creation of up to 0.29 acre of additional habitat would adequately compensate for impacts to this species and its habitats. Therefore, with these measures implemented, project-related impacts would be reduced to a less than significant level.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-46.

Impact BIO-1i: Impacts on Congdon's tarplant.

Ruderal grasslands in the project area provide marginally suitable habitat for Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), a California Rare Plant Rank (CRPR) 1B.1 species, and two populations of Congdon's tarplant have been documented by the California Natural Diversity Database (CNDDB) in the project vicinity (CNDDB 2016). If Congdon's tarplant is present within the project work area, construction activities, such as grading, bench excavation, and floodwall construction could affect the plants through direct or indirect disturbance of populations and disturbance, modification, or destruction of suitable habitat. Implementation of District BMPs BI-7, BI-8, and WQ-4 would minimize impacts on Congdon's tarplant from survey work, erosion and non-native competition, and staging and stockpiling. Since publication of the DEIR, a focused survey for Congdon's tarplant was completed for the project on August 7, 2017 during the species' blooming period. No individuals of Congdon's tarplant were detected during the survey. Typically these survey results are valid for a 3-year timeframe, meaning that once Congdon's tarplant has been determined to be absent from a project site, it is unlikely for the plant to be established within the next three years. It is likely the proposed project would not result in impacts on Congdon's tarplant if construction would occur before August 2020. However, in the event construction commences after August 2020, there is a possibility that Congdon's tarplant could establish within the project site and damage to the species from construction would be significant. As discussed in Volume 2, Section 3.4 of the FEIR, Mitigation Measures BIO-9 and BIO-10 would be implemented to address this significant impact if construction commences after August 2020.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project

which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measures BIO-9 and BIO-10 are feasible and are hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-9: Conduct Focused Preconstruction Survey for Congdon's Tarplant. *In the event that project construction starts after August 2020, a qualified biologist will conduct a focused survey for Congdon's tarplant in the ruderal grassland habitat within the project area. The survey will be conducted during the species' blooming period (May-November). If a population of Congdon's tarplant is identified in the project area, the District will implement Mitigation Measure BIO-10 (Compensate for Congdon's Tarplant Impacts).*

Mitigation Measure BIO-10: Compensate for Congdon's Tarplant Impacts. *If a population of Congdon's tarplant is identified in the project work area during the preconstruction survey (per Mitigation Measure BIO-9), a qualified biologist will conduct an impact assessment to determine if project impacts would be expected to cause the loss of the occurrence. The entire occurrence, will be mapped and individuals counted.*

Mitigation will be achieved either by preserving an existing, similarly sized occurrence of Congdon's tarplant of similar quality under a conservation easement, or through collection of seed and establishment of a new population on suitable habitat. Congdon's tarplant is a species that tolerates both non-native plant associates and disturbance, and has shown success in transplant activities.

If a new population is to be established, seed from the population to be affected will be collected, cleaned of extraneous plant material, and stratified by storage over the winter in cool temperatures. A qualified plant ecologist will identify a suitable relocation site that is mesic and underlain by alkaline soils, preferably as similar as possible to the soils where the seed was collected. The seed will be applied to the new habitat. A Congdon's Tarplant Management and Monitoring Plan will be prepared and approved by the District. The plan will provide monitoring and include the following information:

- *Clear statement of population and management goals for the newly established population and surrounding habitat;*
- *Population success criteria for interim monitoring years;*
- *Final success criteria*

Rationale for Finding. Implementation of Mitigation Measures BIO-9 and BIO-10 would identify and compensate for the loss of any occurrences of Congdon's tarplant present in the project area and would thereby reduce the significant impact on the species to less than significant.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-49.

Impact BIO-1j: Introduction of invasive species.

The project area contains several invasive plant species. Project construction activities, such as grading and soil disturbance, may create conditions suitable for additional spreading of invasive plant species, and weed propagules may be spread on ground-disturbing equipment to the project area or from the project area to other sites. Furthermore, bare upland soils left after construction of temporary access roads and relocation of the levee may encourage growth of weedy species, and mulching or erosion control mixes

may include and thus introduce invasive, non-native species. In addition to the introduction of invasive plant species, without proper procedures, mitten crabs (*Eriocheir sinensis*) and other aquatic invasive invertebrates, such as the New Zealand mud snail (*Potamopyrgus antipodarum*), Quagga mussel (*Dreissena bugensis*), or zebra mussel (*Dreissena polymorpha*), could inadvertently be introduced into or spread within the project area. The spread of these and other non-native invasive species into areas formerly unoccupied could result in a significant impact on special-status species, native habitats, and communities. Implementation of District BMPs BI-1, BI-8, HM-7, and WQ-9 would reduce the potential for infestation of natural areas by invasive species by protecting local ecotypes and avoiding the spread of non-native species. However, District BMPs may not be sufficient to avoid new invasions or the spread of invasive species. Because of the potential for degradation of a wide variety of natural communities and effects on native populations and special-status species that could occur because of such invasions, this impact would be significant. As discussed in Volume 2, Section 3.4 of the FEIR, Mitigation Measures BIO-11 and BIO-12 would be implemented to address this significant impact.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, the Mitigation Measures BIO-11 and BIO-12 are feasible and are hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-11: Clean Construction Equipment. *The District will require that equipment used during project construction be cleaned of any visible sediment or vegetation clumps before being used in the project area, or before being used in a different watershed after use in the project area, to avoid spreading pathogens or exotic/invasive species.*

Mitigation Measure BIO-12: Dispose of Invasive Plants. *The District will require that any invasive plants found within the project area d be removed and disposed of in a sanitary landfill, incinerated off site, or disposed of in a high-temperature composting facility that can compost using methods known to kill weed seeds.*

Rationale for Finding. Implementation of Mitigation Measures BIO-11 and BIO-12 would minimize the potential for introduction or spread of non-native species and would thereby reduce this impact to less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-51.

Impact BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), waters of the U.S., and waters of the state through direct removal, filling, hydrological interruption, or other means.

Construction activities associated with the proposed project would result in both temporary and permanent disturbance of wetland and aquatic communities representing jurisdictional wetlands and other waters of the U.S./state. During project construction, implementation of District BMPs BI-2, BI-3, BI-8, BI-10, BI-11, HM-7, HM-8, HM-10, WQ-1 through WQ-9, WQ-11, WQ-15, and WQ-16 would minimize impacts on wetlands functions during project construction by minimizing the potential for water quality degradation.

Construction activities could result in hydrologic interruption (e.g., dewatering or diversion), vegetation removal, degradation of water quality (e.g., increased sedimentation and turbidity), and other temporary

direct impacts on wetlands and other waters. In addition, direct impacts would occur due to the conversion of wetlands and other waters to upland habitat. FEIR Table 3.4-5 summarizes the project's estimated temporary and permanent impacts on waters and wetlands of the U.S. and waters of the State. The project would result in 0.14 acre of permanent impacts to wetlands of the U.S. and State, and 0.90 acre of temporary impacts to wetlands of the U.S. and State. Since the created wetland bench would convert 0.08 acre of non-tidal saline wetland to coastal brackish marsh habitat, the net permanent impact on wetlands would be 0.06 acre. The project's estimated temporary and permanent impacts on waters of the State take into consideration effects within the channel's riparian zone. After construction is complete, the newly created bench is expected to create up to 0.29 acre of tidal marsh habitat. The new tidal and non-tidal wetlands habitat would be below the OHWM and would be considered water of the U.S. and State. Nevertheless, the proposed project would result in temporary loss of habitat functions and values, particularly those provided by vegetated wetlands, such as sediment stabilization, sediment/toxicant retention, nutrient removal/transformation, and aquatic and terrestrial wildlife species habitat. Thus, the project would result in temporary loss of ecologically valuable wetlands.

Impacts to other waters of the U.S. and State are considered less than significant because there would be no permanent loss of this habitat; the habitat would re-establish similar functions and values to existing immediately after construction; BMPs will prevent deleterious water quality impacts.

The 0.29 acre of habitat to be created by the wetland bench would offset the proposed project's permanent (0.06 acre) and temporary (0.90 acre) removal of wetland habitat as well as the conversion of 0.08 acre due to conversion of non-tidal seasonal saline wetland to coastal brackish marsh. Among the 0.29-acre wetland habitat to be established, 0.12 acre would offset the net permanent removal of 0.06 acre of wetland habitat at a 2:1 ratio (created wetland: permanently removed wetland), which would be appropriate for addressing permanent impacts. In addition, the created wetland would provide higher quality habitat than the permanently removed wetlands. Regarding the project's temporary impact on wetlands, temporarily impacted wetland habitat is expected to return to pre-construction conditions within one to two years; nevertheless, the remaining 0.17 acre of the overall 0.29-acre wetland bench would offset the 0.98-acre temporary impact at a roughly 2:1 ratio (created/restored wetland: temporarily impacted wetland). However, if the wetland bench does not successfully establish a vegetated wetland as expected, the impact on wetland is considered significant. As discussed in Volume 2, Section 3.4 of the FEIR, Mitigation Measure BIO-13 would be implemented to address this impact and reduce it to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, the Mitigation Measure BIO-13 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure BIO-13: Wetlands Mitigation and Monitoring Plan. *As described in Section 2.6.1, the proposed project includes the creation of a wetland bench on the south bank of Reach 1.*

To ensure that vegetated wetlands successfully establish on the bench, the District will develop a Wetlands Mitigation and Monitoring Plan, which will contain the following components:

- *Summary of habitat impacts and acreage of wetland creation*
- *Location of wetland creation site(s) and description of existing site conditions*

- *Mitigation design, including the following:*
  - *Existing and proposed site hydrology*
  - *Grading plan if appropriate, including bank stabilization or other site stabilization features*
  - *Soil amendments and other site preparation elements as appropriate*
  - *Planting plan to establish the target coastal brackish marsh habitat. Species composition will be determined by hydrology and soils but is anticipated to be similar to adjacent wetlands. Dominant species may include: alkali bulrush, hardstem bulrush, California bulrush, and broadfruit bur reed. Temporarily impacted non-tidal seasonal saline wetlands will be replanted. Dominant species may include: creeping wild-rye, alkali heath, California gray rush, and pickleweed.*
  - *Maintenance plan*
  - *Remedial measures/adaptive management, etc.*
- *Monitoring plan (including performance criteria, monitoring methods, data analysis, reporting requirements, monitoring schedule, etc.).*

The District will implement the Wetlands Mitigation and Monitoring Plan.

Rationale for Finding. Implementation of Mitigation Measure BIO-13 would ensure that the created bench supports vegetated wetlands following the completion of the project. Due to the low quality of the wetlands that would be impacted, the predominately temporary nature of the impacts, and the relative speed at which temporarily impacted wetlands are expected to regenerate, the creation of up to 0.29 acre of additional wetland habitat on the bench in Reach 1 would adequately compensate for impacts to this habitat. Therefore, project-related impacts would be less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.4.4, page 3.4-53.

3.2.3 Geology, Soils, and Seismicity

Impact GEO-2: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction; or landslides.

A project-specific geotechnical investigation identified subsurface layers of clay and alluvium occurring throughout the project area; soil conditions and the high groundwater table increase the potential for seismically induced liquefaction to occur at the project site. Therefore, this impact is considered significant. As discussed in Volume 2, Section 3.6 of the FEIR, Mitigation Measure GEO-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure GEO-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure GEO-1: Incorporate the 2017 Geotechnical Design Report Recommendations into the Final Design and Construction of the Proposed Project. *Based on the draft Geotechnical Design Report (Kleinfelder 2017), the District will incorporate the following recommendations (or substantially similar recommendations) in the design plans and specifications:*

- *The sheet pile floodwalls will be designed to resist active lateral pressures based on an equivalent fluid weight of 45 pounds per cubic foot (pcf) above the groundwater table and 25 pcf for submerged conditions. If full drainage is not provided in the floodwalls, the sheet pile design would include hydrostatic pressure.*

- *The sheet pile floodwalls will be able to tolerate the total and differential seismic settlements, as estimated by reach in the final Geotechnical Design Report.*

- *Levee fill materials will not contain organic material and meet the gradation and plasticity specifications as defined in the final Geotechnical Design Report.*

- *Prior to general site grading, existing vegetation, organic topsoil, and any debris will be stripped and disposed of outside the construction limits. Stripping depths w be on the order of 3 to 6 inches (or as approved onsite by the geotechnical engineer). Topsoil or any other organic laden materials will not be incorporated into any levee embankment. Where applicable, the gravelly material of the levee maintenance road w be removed prior to placing levee embankment fill.*

- *All areas to receive engineered fill will be scarified to a depth of 8 inches, uniformly moisture conditioned to a range between one and four percent above optimum moisture content, and compacted to at least 90 percent of the maximum dry density as determined by ASTM Test Method D1557 (Modified Proctor).*

- *Existing abandoned utility lines, wells and/or foundations (including backfill material) encountered during project activities will be removed and disposed of offsite.*

- *New levee embankment fill slopes will be constructed at a slope no steeper than 2:1 (H:V). New embankment fill placed on top of the existing levee may require a key into the existing levee slope, or benched into existing levee material after scarification and recompaction of existing fill occurs.*

Rationale for Finding. To meet or exceed safety standards, the proposed project would be designed and constructed in accordance with Mitigation Measure GEO-1. The mitigation measure requires implementation of design and/or construction measures to ensure that new levees and structures minimize the potential risk of structural failure resulting from seismically induced liquefaction or ground failure. Implementation of Mitigation Measure GEO-1 would reduce potential hazards from on-site ground failure, liquefaction, or landslide during construction and operation to a level that is less than significant.

Reference. FEIR Volume 2, Section 3.6.4, page 3.6-10.

Impact GEO-4: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Within the project area, underlying soils and levee material have been augmented with fill of mixed

composition with alluvium layers below. Given the shallow groundwater table within the project area, some soils may be subject to liquefaction, which could pose a significant impact on the structural stability and strength of the project components. Smaller scale slumps or lateral spreading may occur on more gradually sloped topographic features, such as channel banks, if underlain by liquefiable or inadequately compacted soils. During construction, ground-disturbing and excavation activities and placement of new soils would temporarily create potentially unstable slopes. Therefore, the potential for unstable soils as a result of the project are significant. As discussed in Volume 2, Section 3.6 of the FEIR, Mitigation Measure GEO-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure GEO-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure GEO-1: Incorporate 2017 Geotechnical Design Report Recommendations into the Final Design and Construction of the Proposed Project. *See Impact GEO-1 above for full text.*

Rationale for Finding. Any areas at risk of liquefaction and slope instability would be identified and the risk would be abated by implementing design criteria and recommendations provided in the Geotechnical Report, as required by Mitigation Measure GEO-1. The geotechnical report provides detailed recommendations for site preparation, removal of deleterious materials, the degree of compaction and stability for slopes, design loads for floodwalls, physical characteristics of fill material, and methods for placement of fills. Implementation of Mitigation Measure GEO-1 would reduce potential liquefaction and slope instability risks to a level that is less than significant.

Reference. FEIR Volume 2, Section 3.6.4, page 3.6-12.

3.2.4 Hazards and Hazardous Materials

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The potential exists for encountering contaminated soil during excavation of the levees along Lower Penitencia Creek and contaminated groundwater during dewatering work. The District would implement BMP HM-9 which requires all field personnel to follow appropriate procedures regarding containment and storage of chemicals, and references applicable legal requirements relating to discharge of hazardous materials/wastes. This BMP would minimize the potential for release of hazardous materials during construction. If hazardous materials were present in excavated soil or groundwater during excavation and sediment removal activities, a release to the environment could occur and construction workers and the public could be exposed to hazardous materials in soil and groundwater during construction. This impact is considered significant. As discussed in Volume 2, Section 3.8 of the FEIR, Mitigation Measure HAZ-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure HAZ-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure HAZ-1: Develop and Implement Soil and Groundwater Management Plan. *Prior to initiating ground-disturbing construction activities, the District will develop a Soil and Groundwater Management Plan, prepared by state registered hazardous waste investigation and remediation professionals. The plan will include a health and safety plan; emergency notification protocols; and handling and sampling procedures for site workers in accordance with OSHA and Santa Clara County Hazardous Materials Compliance Division requirements. The plan will describe protocols for offsite disposal of contaminated soils and disposal and/or treatment of contaminated groundwater. In addition, the plan will include coordination and notification protocols and requirements for any inadvertent releases of hazardous materials within the vicinity of any schools. Once complete and approved by the Santa Clara County Hazardous Materials Compliance Division, the plan will be incorporated in the construction specifications for the proposed project.*

Rationale for Finding. With implementation of Mitigation Measure HAZ-1, the District would be required to prepare and implement a soil and groundwater management plan. The plan would include a health and safety plan and protocols for appropriate disposal of contaminated soil or groundwater if encountered. Implementation of Mitigation Measure HAZ-1 would reduce this impact to a less-than-significant level.

Reference. FEIR Volume 2, Section 3.8.4, page 3.8-8.

3.2.5 Traffic and Transportation

Impact TRA-1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Traffic generated by construction vehicles could result in a substantial traffic increases due to the relatively small traffic volume on Milmont Drive and San Andreas Drive and would constitute a significant impact. In addition, the Penitencia Creek Trail runs along the east side of the channel from the California Circle bridge and ends on the north side of the Milmont Drive bridge. Temporary closure of this trail during construction activities would result in temporary conflicts with the City of Milpitas Trail Master Plan and City of Milpitas Bikeway Master Plan. Implementation of BMP TR-1, which requires that fences, barriers, lights, flagging, guards, and signs be installed around the work areas, would help increase public awareness and minimize traffic safety impacts on pedestrians and bicyclists but would not effectively avoid that conflict. The effects on pedestrian and bicycle mobility, and temporary conflicts with goals and objectives established in the City of Milpitas General Plan, Trail Master Plan, and Bikeway Master Plan are considered significant. As discussed in Volume 2, Section 3.13 of the FEIR, Mitigation Measure TRA-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, the Mitigation Measure TRA-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure TRA-1: Traffic Control Plan. *The District will develop a traffic control plan in accordance with professional traffic engineering standards to reduce the effects of project construction activities and traffic on surrounding local roads, bicycle and pedestrian facilities, and emergency access.*

The District and/or its contractor will coordinate development and implementation of this plan with the City of Milpitas. Components of the Traffic Control Plan will include, but not be limited to, the following:

- *Restrict truck access to truck routes designated by the City.*
- *Confine heavy truck traffic such as material hauling to California Circle.*
- *Prohibit work-site access via residential streets (e.g., Milmont Drive and San Andreas Drive) to the extent feasible. Should construction staging require use of Milmont Drive and San Andreas Drive by heavy vehicles for brief periods, the District and/or its contractor will coordinate with the City of Milpitas to obtain approval.*
- *Provide advance construction warning signage for lane reduction at San Andreas Drive during headwall construction at the bridge.*
- *Provide advance notification of necessary closures of sidewalks on San Andreas Drive and maintain pedestrian access during construction of the headwalls where safe to do so. For the San Andreas Drive sidewalk closures, detour pedestrians away from construction activity to the sidewalk on the opposite side of the street. For the Penitencia Creek Trail closure, route pedestrians along the existing sidewalks on California Circle and Milmont Drive, where appropriate.*
- *To accommodate the temporary closure of the Penitencia Creek Trail along Reach 3 and the narrowing of travel lanes on the San Andreas Drive bridge, provide signage that indicates where bicycles and motor vehicles should share the roadway, and detour bikes to Milmont Drive and California Circle, where appropriate.*
- *Traffic handling plans for San Andreas Drive shall be prepared and implemented in accordance with Caltrans and California Manual on Uniform Traffic Control Devices (MUTCD) standards. The traffic handling plans shall demonstrate how two-way traffic operations can be maintained during work hours (e.g., use of flaggers) and when construction activity ends each day.*
- *Notify and consult with emergency service providers such as police and fire stations, hospitals, and schools prior to the start of construction. The District will maintain emergency access at all times, by whatever means necessary, to expedite and facilitate the passage of emergency vehicles.*

Rationale for Finding. Implementation of Mitigation Measure TRA-1 would ensure that a traffic control plan is developed and implemented to minimize effects related to truck traffic on residential streets and minimize pedestrian and bicycle safety impacts during construction. This measure would reduce temporary conflicts with goals and objectives, including measures of effectiveness, outlined in the City of Milpitas General Plan, City of Milpitas Trail Master Plan, City of Milpitas Bikeway Master Plan, and VTA's Transportation Impact Analysis Guidelines. This impact would be less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.13.4, page 3.13-18.

Impact TRA-4: Substantially increase hazards due to a design feature or incompatible uses.

The presence of large, slow-moving construction-related vehicles and equipment among the general-purpose traffic on roadways in the project area could result in substantial safety hazards, especially on nearby residential streets. In addition, construction of the proposed headwalls at the San Andreas Drive

bridge may require temporary lane closures or narrowing of travel lanes creating potential traffic safety hazards near the corner of San Andreas Drive and North Abbott Avenue (approximately 50 feet west of the bridge) as there would be limited space at this sharp turn and driver visibility may be somewhat limited. As a result, construction at this location may temporarily increase vehicular safety hazards and pose a significant impact related to traffic safety. Implementation of BMP TR-1, which requires that fences, barriers, lights, flagging, guards, and signs by installed around work areas, would help increase public awareness and minimize traffic safety impacts on pedestrians and bicyclists. However, the presence of construction vehicles and equipment would still pose a significant impact related to traffic safety. As discussed in Volume 2, Section 3.13 of the FEIR, Mitigation Measure TRA-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure TRA-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure TRA-1: Traffic Control Plan. *See Impact TRA-1 above for full text.*

Rationale for Finding. The presence of slow-moving construction vehicles and equipment would pose a significant impact related to traffic safety. Implementation of Mitigation Measure TRA-1 would reduce this impact by requiring development of a traffic control plan that would account for movement of construction vehicles and equipment and recommend warnings devices, signage, and traffic controls to prevent hazards to other road users. The District would require the contractor to implement the traffic control plan during construction, which would reduce this impact to less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.13.4, page 3.13-24.

Impact TRA-5: Result in inadequate emergency access.

The presence of slow-moving construction trucks and vehicles could delay or obstruct the movement of emergency vehicles on local roads in the project vicinity. Additionally, the temporary lane reduction at the San Andreas Drive bridge crossing would reduce roadway capacity and could substantially increase the response time for emergency vehicles traveling through the work area. This impact is considered significant. As discussed in Volume 2, Section 3.13 of the FEIR, Mitigation Measure TRA-1 would be implemented to reduce this impact to a less-than-significant level.

Finding. The District finds that changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment from the above stated Impact. Specifically, Mitigation Measure TRA-1 is feasible and is hereby adopted to mitigate significant effects from the above stated Impact to a less-than-significant level.

Mitigation Measure TRA-1: Traffic Control Plan. *See Impact TRA-1 above for full text.*

Rationale for Finding. Mitigation Measure TRA-1 requires the preparation an implementation of a construction-period traffic control plan. The plan would identify effects on traffic flow from construction activities and traffic, and specify measures to ensure that affected roadways remain open for use by emergency responders at all times. The District would require the construction contractor to adhere to the plan throughout construction. This measure would reduce this impact to less than significant with mitigation.

Reference. FEIR Volume 2, Section 3.13.4, page 3.13-25.

3.3 Significant Environmental Impacts That Cannot Be Avoided or Reduced to a Less than Significant Level

3.3.1 Introduction

The Board hereby finds that the following significant environmental impacts cannot feasibly be mitigated to a less-than-significant level. These findings are based on the discussion of impacts in the detailed resource area impact analyses in Volume 2, Chapter 3 of the FEIR and cumulative impacts discussed in Volume 2, Chapter 4 of the FEIR. For each impact, the following information is presented: the CEQA finding, feasible mitigation measure(s) that would reduce the severity of the impact (but not to a level that is less-than significant), the rationale for the finding, and a reference to the FEIR section providing further facts and reasoning supporting the finding.

3.3.2 Noise and Vibration

Impact NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or, in the applicable standards of other agencies.

During project construction, heavy equipment would be operating in the project area and could generate noise levels affecting residences and other sensitive receptors near the construction work areas. The noises associated with construction activities would be temporary and would cease once construction is complete. If scrapers and trucks were operated together in close proximity, this equipment would generate combined noise levels of 106 A-weighted decibels (dBA) at the nearest sensitive receptor (residences) at a distance of 10 feet from Reach 3 of the project site. If operated simultaneously, residences located within 50 feet could experience noise levels at 91.5 dBA. These levels would exceed the Federal Transit Authority's (FTA) significance threshold of 90 dBA. Construction activities temporarily exposing nearby residences to noise levels exceeding the FTA standards would be a significant impact.

When averaged over 24 hours, construction noise would likely result in a 3 decibel (dB) increase in community noise levels. Because the existing community noise levels in the project vicinity already exceed the residential community noise threshold in General Plan Policy G-I-1, additional noise generated by project construction would be inconsistent with Policy G-I-1. Although this impact would be temporary, occurring only during the two four-month construction periods, it would be significant.

As discussed in Section 3.11 of the FEIR, Mitigation Measure NOI-1 would reduce this Impact, but not to a less-than-significant level.

Finding. The Board finds that changes or alterations have been required in, or incorporated into, the Project to reduce this Impact. Specifically, the following mitigation measure is feasible and is hereby adopted to reduce this Impact. However, the application of this mitigation measure does not reduce this impact to a less-than-significant level. No other feasible mitigation is available to reduce this Impact to a less-than-significant level.

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures. *The District and construction contractor will implement the following noise- and vibration-reducing measures during all construction activities, unless as specified below, to minimize impacts on nearby sensitive receptors:*

- *All noise-producing project equipment and vehicles using internal combustion engines will be equipped with mufflers; air-inlet silencers, where appropriate; and any other shrouds, shields, or noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) will be equipped with shrouds and noise control features that are readily available for those types of equipment.*
- *Mobile noise-generating equipment and machinery will be shut off when not in use.*
- *Ensure proper tuning of vibration-causing equipment.*
- *Vibration damping devices will be used to the extent feasible.*
- *Use of vibratory equipment will be limited to the extent feasible.*
- *Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction will be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust will be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used, such as drills rather than impact equipment, whenever feasible.*
- *Electric stationary equipment (e.g., generators) will be used where feasible.*
- *Noise and/or vibration shields, such as sound aprons or temporary enclosures with sound-absorbing material, will be used on or around construction equipment, particularly if construction activities are conducted after 7:00 pm. For all construction activities occurring within 60 feet of residences at any time of day temporary noise and vibration barrier will be installed between the project site and the nearest sensitive receptors. Following the completion of construction activities within that distance, the barrier will be removed.*

The District will notify all residences and other sensitive receptors within 500 feet of the project site prior to the initiation of the proposed construction activities. The notification will provide the name and contact information, including a phone number, of a District representative for use before and during construction activities to address any questions or concerns regarding the project's construction activities or anticipated noise and vibration levels. If any occupants or other sensitive receptors report sensitive operations that could be affected, construction activities will be modified to minimize vibration near those buildings. Potential modifications include limiting the hours of operation for pieces of equipment that are major vibration sources and maximizing the distance between these pieces of equipment and sensitive buildings.

Rationale for Finding. Mitigation Measure NOI-1 requires the District and its construction contractor to implement several strategies aimed at minimizing the noise and vibration levels experienced by nearby sensitive receptors. This mitigation measure also requires installation of temporary noise barriers, which

would be anticipated to attenuate noise levels at the receptor by 5 to 15 dB (FTA 2006). Despite implementation of these strategies, there would still be a potential for construction activities near sensitive receptors to result in noise levels that exceed the 90 dBA FTA threshold. Residences located within 50 feet of construction activities may experience noise levels that exceed the FTA threshold. In addition, even after implementation of Mitigation Measure NOI-1, construction noise could temporarily cause a 3 dB day-night average sound level (L_{dn}) or more increase in ambient noise levels at the property lines of nearby residential parcels. Based on this information, this noise impact would be significant and unavoidable during the construction phase.

Conclusion. For the above reasons, the construction noise impacts associated with the Project would remain significant and unavoidable. This impact would be a short-term significant unavoidable impact for nearby residential parcels.

Reference. FEIR Volume 2, Section 3.11, page 3.11-11.

Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

During construction, heavy machinery operating in the project area would generate ground-borne vibration. Table 3.11-5 in the FEIR presents distances at which vibration levels would reach damage thresholds (based on Caltrans guideline) and annoyance levels (based on FTA guidelines).

The Waterstone and iStar residential developments would be sufficiently close to the project site that residents would perceive vibrations caused by project construction and would be annoyed by those vibrations. The annoyance thresholds would be temporarily exceeded for the short period of time when heavy construction equipment operates near the buildings and residents.

Based on its distance from the project area, the BAPS Shri Swaminarayan Mandir religious institution would experience vibration levels of 69 vibration decibels (VdB), which is above the perception threshold, but below the annoyance level threshold of 75 VdB for institutional uses. Some commercial buildings located on California Circle or Fairview Way may experience vibrations above the 65 VdB level threshold, which could affect sensitive equipment such as electron microscopes, lithographic equipment, and optical microscopes (if present). Vibrations-produced by construction equipment operating near buildings containing equipment sensitive to vibrations could temporarily interfere with operation of the sensitive equipment. Based on this information, construction-related vibration impacts would have a significant impact. As discussed in Section 3.11 of the FEIR, Mitigation Measure NOI-1 would reduce this impact, but not to a less-than-significant level.

Finding. The Board finds that changes or alterations have been required in, or incorporated into, the Project to reduce this Impact. Specifically, the following mitigation measure is feasible and is hereby adopted to reduce the severity of this Impact. However, the application of this mitigation measure does not reduce this impact to a less-than-significant level. but not to a less-than-significant level. No other feasible mitigation is available to reduce this Impact to a less-than-significant level.

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures*. See full text of measure in Impact NOI-1 analysis above.*

Rationale for Finding. Implementation of Mitigation Measure NOI-1 would ensure that occupants of

nearby residences and buildings are contacted prior to the initiation of construction activities. This measure also contains several measures that would reduce the amount of ground-borne vibration that occurs. However, due to the proximity of nearby institutional uses and the limits on how much vibration dampening can be achieved, Mitigation Measure NOI-1 would not reduce all construction-related vibration to below the annoyance level for institutional uses or below levels that could temporarily interfere with operation of sensitive equipment in nearby buildings. Even after implementation of these measures, vibration impacts may still exceed the vibration annoyance thresholds for sensitive receptors or interference thresholds for sensitive equipment. Even with implementation of Mitigation Measure NOI-1, this vibration impact would be significant and unavoidable during project construction.

Conclusion. For the above reasons, the construction groundborne vibration and groundborne noise impacts associated with the Project would remain significant and unavoidable. This impact would be a short-term significant unavoidable impact for nearby residential parcels, an institution, and commercial buildings.

Reference. FEIR Volume 2, Section 3.11, page 3.11-14.

Impact NOI-4: Substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

As discussed in Section 3.11.3 of the FEIR, there are multiple existing residences within 10-120 feet of the project area and other sensitive receptors, including a daycare, hotel, and religious institution, within 550 feet. Residences at the Waterstone and iStar developments would be located within 10 feet of the project area. According to noise contours in the City of Milpitas General Plan Noise Element, the project area currently experiences ambient noise levels of 65+ to 70+ dB, mainly due to the proximity of transportation infrastructure, including I-880 and an active railroad corridor. Construction activities would temporarily and intermittently generate noise levels above 70 dB, the ambient noise level in the vicinity of I-880 and the maximum noise level considered conditionally acceptable (see Table 3.11-2 of the FEIR) for sensitive receptors near the project area and above 100 dB for the nearest residences. Because project construction would temporarily generate noise levels up to 100+ dBA, which would be substantially above existing ambient noise levels in the vicinity, this impact would be significant.

Finding. The Board finds that changes or alterations have been required in, or incorporated into, the Project to reduce this Impact. Specifically, the following mitigation measure is feasible and is hereby adopted to reduce the severity of this Impact. However, the application of this mitigation measure does not reduce this impact to a less-than-significant level. No other feasible mitigation is available to reduce this Impact to a less-than-significant level.

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures. *See full text of measure in Impact NOI-1 analysis above.*

Rationale for Finding. Implementation of Mitigation Measure NOI-1 would ensure that several noise-reduction measures are implemented. Although construction noise would be temporary and would be limited to daytime hours, it would still represent a substantial increase over ambient noise levels. Mitigation Measure NOI-1 would reduce the level of construction-generated noise by 5 to 15 dB (FTA 2006). However, construction activities would still result in temporary construction-period noise up to 85+ dB, which is substantially above existing ambient noise levels of 70+ dB. Despite implementation of these strategies, construction activities would still result in substantial temporary increase in ambient noise

levels experienced by nearby residences. This noise impact would be significant and unavoidable during the construction phase.

Conclusion. For the above reasons, the construction noise impacts associated with the proposed project would remain significant and unavoidable.

Reference. FEIR Volume 2, Section 3.11, page 3.11-16.

3.3.3 Cumulative Impacts

Impact CUM-4: Cumulative Impacts on Noise and Vibration

As described in FEIR Volume 2, Section 3.11, *Noise,* project construction activities would generate noise that would exceed FTA noise exposure thresholds and the City's General Plan Policy (6-I-1) which calls for avoiding noise level increases of 3dB or more than 65 dB L_{dn} at residential property lines. Construction would also cause vibration exceeding annoyance levels at nearby residences. The following projects would be located within 0.25 mile of the project site and could be under construction simultaneously with the proposed project: the Waterstone Residential Project, iStar Residential Project, Springhill Marriott, and Holiday Inn/ 1100 Cadillac Court. Construction of these projects would generate noise exceeding FTA thresholds and the City's thresholds for residential noise exposure and would result in significant temporary increases in ambient noise. Cumulative noise impacts would be significant. Implementation of Mitigation Measure NOI-1 (Implement Noise- and Vibration-reducing Measures) would minimize noise and vibration impacts associated with construction of the proposed project but would not reduce construction noise to a level below the FTA threshold for exposure of residential uses and the project would still likely result in a 3 dB L_{dn} or more increase in ambient noise levels at the property lines of nearby residential properties. The project would temporarily result in a substantial increase in ambient noise levels above existing noise levels, construction of the proposed project would result in a temporary but cumulatively considerable contribution to significant cumulative noise impacts.

Finding. The Board finds that changes or alterations have been required in, or incorporated into, the Project to reduce the severity of this Impact. Specifically, the following mitigation measure is feasible and is hereby adopted to reduce this Impact. However, the application of this mitigation measure does not reduce this impact to a less-than-significant level. No other feasible mitigation is available to reduce this Impact to a less-than-significant level.

Mitigation Measure NOI-1: Implement Noise- and Vibration-reducing Measures. *See Impact NOI-1 above for text.*

Rationale for Finding. Mitigation Measure NOI-1 would minimize noise and vibration impacts associated with construction of the proposed project through various measures such as equipping equipment engines with mufflers or other noise-reducing features, shutting off equipment and machinery when not in use, tuning vibration-causing equipment, using noise and/or vibration shields, and notifying residences and other sensitive receptors within 500 feet of the project site prior to construction activities. However, as described in FEIR Volume 2, Section 3.11, this mitigation measure would not minimize such levels below the FTA threshold for exposure of residences. Given the number of other development projects planned in close proximity to the proposed project, the proposed project's contribution to significant cumulative noise impacts would be cumulatively considerable.

Reference. FEIR Volume 2, Section 4.3.3, page 4-17.

4. Finding on Growth-Inducing Impacts

According to State CEQA Guidelines § 15126.2(d), an EIR must discuss the growth-inducing impacts of a project. Specifically, an EIR must discuss ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This discussion is presented in Volume 2, Section 4.2 of the FEIR.

Finding. The Board finds that the Project would not induce substantial unplanned population growth in the city of Milpitas, Santa Clara County, or other nearby cities, would not generate a substantial demand for new housing, and would not remove an obstacle to growth. Therefore, the proposed project would not be growth-inducing.

Rationale for Finding. A project may induce growth by creating jobs that attract economic or population growth to the area, promoting the construction of homes that would bring new residents to the area, or removing an existing obstacle that impedes growth in the area.

The proposed project would not involve new development or infrastructure that could directly induce substantial population growth in the project area. Construction-related jobs would increase in the Bay Area in the short term and would be anticipated to draw from the existing work force. The proposed project would not displace any existing housing units or persons, or create any housing units. Minimal, if any, job growth would be associated with operation of the proposed project, and would not generate sufficient economic activity to result in substantial population growth.

Adequate flood protection is one type of public service, though not the only, that is needed to support additional growth in the city of Milpitas. Other factors that influence residential, commercial or industrial growth in the region include the general plans and other policies of Milpitas, Santa Clara County, and other nearby cities, as well as the availability of water supply, wastewater treatment and disposal capacity, public schools, and transportation services. Economic factors also affect development rates and locations of development.

The proposed project would provide improved flood protection for existing residents and businesses and new residential developments that are currently being constructed near the Lower Penitencia Creek flood zone. Increased flood protection is necessary since future flows within Penitencia Creek are expected to increase as a result of upstream land use changes. The city of Milpitas is highly built out and the proposed project would not change current land uses in the project vicinity. Future and ongoing development in the city of Milpitas has been addressed in the City's general plan and other land use planning documents. As previously stated, the proposed project would not increase future density of local housing development or significantly increase economic activity.

Reference: FEIR Volume 2, Section 4.2, page 4-1.

5. Findings on Rejected Mitigation Measures Suggested in DEIR Comments

Comments on the DEIR suggested two additional mitigation measures should be provided in addition to those described in the DEIR. The Native American Heritage Commission (NAHC) (Comment A-1) suggested

that a mitigation measure for inadvertent finds of Tribal Cultural Resources (TCRs) should be added to Section 3.5, *Cultural Resources,* of the DEIR. The NAHC (Comment A-2) also suggested that a mitigation measure for inadvertent finds of human remains should be added to the Cultural Resources section.

Finding/Rationale. The Board finds that changes or alterations have been required in, or incorporated into, the Project to adequately reduce this Impact. Specifically, District BMP CU-1 was revised in the FEIR to address inadvertent impacts to unknown TCRs and inadvertent finds of human remains. In addition, the text under Impact CR-2 has been revised to acknowledge that the District will comply with the processes outlined in Health and Safety Code Section 7050.5 and Public Resources Code 5097.98 as requested by NAHC.

Reference: FEIR Volume 1, pages 3-9 to 3-12.

6. Findings on Project Alternatives

Public Resources Code § 21002 provides that "public agencies should not approve projects as proposed if there are feasible alternatives…which would substantially lessen the significant environmental effects of such projects." As described in Section III, "feasible" means "capable of being accomplished in a reasonable period of time taking into account economic, environmental, legal, social, and technological factors" (CEQA Guidelines § 15364). The concept of feasibility also encompasses whether a particular alternative promotes the Project's underlying goals and objectives, and whether an alternative is impractical or undesirable from a policy standpoint. See *City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957.

The issue of alternatives feasibility arises twice in the CEQA process, once when the EIR is prepared, and again when CEQA findings are adopted. When assessing feasibility in an EIR, the EIR preparer evaluates whether an alternative is "potentially" feasible. Potentially feasible alternatives are suggestions by the EIR preparers which may or may not be adopted by lead agency decision makers. When CEQA findings are made after EIR certification, the lead agency decision making body independently evaluates whether the alternatives are actually feasible, including whether an alternative is impractical or undesirable from a policy standpoint. See *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957.

If a significant impact can be substantially lessened (i.e., mitigated to a less than significant level) by adoption of mitigation measures, lead agency findings need not consider the feasibility of alternatives to reduce that same impact. See *Laurel Hills Homeowners Association v. City Council* (1978) 83 Cal.App.3d 515. Nevertheless, Chapter 6 of the Project EIR and these Findings of Fact do consider the ability of potentially feasible alternatives to substantially reduce all of the Project's significant impacts, even those impacts reduced to less-than-significant levels through adoption of mitigation measures.

6.1 Alternatives Considered in Detail in the EIR

6.1.1 No Project Alternative

Description. CEQA Guidelines § 15126.6(e)(1) requires that the no project alternative be described and analyzed "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The no project analysis is required to discuss "the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and

consistent with available infrastructure and community services" (CEQA Guidelines § 15126.6[e][2]).

Under the No Project Alternative, no new construction activities would occur. In Reach 1, the south levee would not be relocated or raised and no wetland bench would be constructed. Floodwalls would not be constructed and headwalls would not be added to the San Andreas Drive bridge. Ongoing maintenance activities, including sediment removal and vegetation management currently ongoing under the District's SMP, would continue in the future. This alternative would not meet the proposed project's primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would not meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would not maintain certification of the east levee or meet FEMA certification standards. Additionally, the alternative would not minimize the need for removal of sediment and non-woody vegetation.

Comparative Impacts. The No Project Alternative would avoid all of the impacts associated with construction of the proposed project because no construction or ground disturbing activities would occur. Impacts that would be avoided include temporary noise and ground-borne vibrations in proximity to sensitive receptors (considered significant and unavoidable), air pollutant emissions from construction equipment and vehicles, temporary impacts on water quality, traffic delays, and effects on biological resources. Future maintenance of the channel would continue under the District's SMP and sediment removal would occur more frequently than under the proposed project, resulting in greater periodic disturbance of aquatic and riparian habitat.

The existing flood management infrastructure within Lower Penitencia Creek would continue to function and convey the current 1-percent (or 100-year) design discharge of 4,830 cfs. However, because USACE's Upper Berryessa Creek Flood Risk Management Project and the District's Lower Berryessa Creek Flood Protection Improvements Project will increase upstream conveyance capacity, greater flows will be conveyed to Lower Penitencia Creek after construction of those two projects is completed. Lower Penitencia Creek's 1-percent flow is projected to increase to an estimated 6,900 cfs after completion of the Lower and Upper Berryessa Creek projects. Lower Penitencia Creek would lack capacity to convey those increased flows during the 100-year discharge event under this alternative. In the event of a 100-year flood event, the No Project Alternative would likely result in substantial flood damage to nearby land uses, including residential, office space, the District's maintenance roads, nearby public roads, I-880, and the Penitencia Creek Trail. Flood damage and subsequent clean-up efforts could result in significant environmental effects, including erosion; adverse water quality effects; and impacts on biological resources, cultural resources, traffic and circulation, noise, air quality, recreational resources, and utilities and service systems.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible because it would not meet the following basic Project objective of conveying Lower Penitencia Creek's 1-percent design flow, would not meet the required water surface elevations at the confluences of Coyote and Lower Berryessa creeks, and would not maintain certification of the east levee or meet FEMA certification standards. Additionally, in the event of a 100-year flood event, the No Project Alternative could result in severe flood damage affecting nearby residential and commercial uses, and could threaten the safety of human lives.

Reference: FEIR Volume 2, Section 5.3.1, page 5-6.

6.1.2 Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal

Description. Under this alternative, the south bank levee in Reach 1 would be raised by about 4 feet but would not be relocated and would not involve creation of a wetland bench in Reach 1. Like the proposed project, floodwalls would be constructed in Reaches 2, 3, and 4, and headwalls would be constructed on the downstream and upstream sides of the existing San Andreas Drive bridge. Maintenance for Alternative 1 would involve periodic sediment removal in Reaches 2 and 4, which would be more frequent than under the proposed project. As with the proposed project, other routine maintenance activities would involve vegetation management along the channel and periodic maintenance and repair for the floodwalls and San Andreas Drive bridge headwalls.

The primary difference between this alternative and the proposed project is that the Reach 1 replacement levee would not be setback from the creek and a wetlands bench would not be created in Reach 1. Alternative 1 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. However, this alternative would not minimize the need for removal of sediment and non-woody vegetation.

Comparative Impacts. Alternative 1 would have less severe construction impacts associated with relocating the replacement levee and constructing the wetland bench in Reach 1 than the proposed project. Alternative 1 would have less potential to disturb special-status species and habitat used by special-status species in this area. Temporary impacts on aquatic resources would also be reduced because Reach 1 construction would mostly or completely avoid disturbance of the seasonal wetlands on the south bank.

Alternative 1 would result in similar construction-related impacts as the proposed project, including temporary transportation and traffic impacts, use of hazardous materials, air emissions, noise and vibration, and impacts on hydrology and water quality. Alternative 1 also would increase operational impacts associated with increased sediment removal in Reaches 2 and 4 compared to the proposed project. These would include emissions from operation of excavation equipment and impacts on biological resources and water quality. Future maintenance of the channel would continue under the District's SMP and sediment removal would occur more frequently than under the proposed project because the project is designed to accommodate greater accumulation of sediment before removal is required. More frequent sediment removal would result in periodic disturbance of aquatic and riparian habitat that would be greater than if the proposed project were implemented. Additionally, the enhancements to Reach 1 tidal wetlands included in the proposed project would not be achieved, and the current degraded and isolated conditions of Reach 1 wetlands, which provide marginal habitat value, would continue indefinitely.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for the following separate and independent reasons:

- Compared to the proposed project, this alternative would not fully meet the project objectives as it would not minimize the need for removal of sediment and non-woody vegetation.

- This alternative is undesirable from a policy standpoint because it would require more frequent sediment removal work in Reaches 2 and 4, and therefore result in somewhat greater operational impacts on air quality, traffic, noise, biological resources, and water quality. It would also not avoid or reduce any other significant impacts associated with the Project.

Reference: FEIR Volume 2, Section 5.3.3, page 5-7.

6.1.3 Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls

Description. Under Alternative 2, the south bank levee in Reach 1 would be relocated and raised by about 4 feet and a 50-foot-wide wetland bench would be established immediately south of the existing channel. Floodwalls would be constructed in Reaches 2, 3, and 4. In Reach 3, the west bank floodwall would have a total height of 18.5 feet when viewed from inside the channel, but it would be partially below grade and extend about 4 feet above the existing levee. In Reach 3, the west bank levee would be removed and a new depressed maintenance road would be required within the creek channel and be surfaced with articulated concrete blocks, adding about 1.2 acres of new hardscape to the channel. In Reach 3, a 25- to 45-foot-wide wetland bench would be constructed within the west side of the channel adjacent to the new depressed maintenance road. Wetland vegetation would be planted in the bench. The channel access road would be located between the floodwall and the wetland bench.

The primary differences between Alternative 2 and the proposed project are as follows: (1) the west bank floodwall in Reach 3 for Alternative 2 would be substantially taller (when viewed from inside the channel) than the floodwall proposed as part of the project; (2) Alternative 2 would include a wetland bench in Reach 3, which is not part of the proposed project; and (3) an in-channel maintenance road would be built at the base of the west bank floodwall in Reach 3.

Comparative Impacts. Compared to the proposed project, Alternative 2 may result in similar or greater impacts to aesthetic resources due to the taller floodwall on the west bank of Reach 3. Although the Reach 3 floodwall would only be 4 feet tall when viewed from areas outside the channel, due to construction of the wetland bench and depressed access road, it would be about 18.5 feet tall when viewed from within the channel or from the Penitencia Creek Trail on the east bank of the creek. This could result in greater visual impacts compared to the proposed project. Recreationists using the Penitencia Creek Trail would have unobstructed views of the taller floodwall and armored maintenance road at its base. The vegetation in the Reach 3 wetland bench would contribute to the aesthetic enjoyment for recreationists using the Penitencia Creek Trail.

The increased hardscape in the channel due to the taller Reach 3 floodwall and depressed maintenance road of Alternative 2 could result in increased pollutant flows to the creek, adversely affecting water quality. This would be partially offset by the wetland bench between the road and the creek channel, which would help to filter pollutants from storm runoff before they reach the creek.

Alternative 2 also would have greater construction-related impacts than the proposed project due to construction of the depressed maintenance road and wetland bench in Reach 3 (due to greater excavation required). Because the Reach 3 floodwall would be much taller than the floodwall proposed as part of the project, it may require a pile foundation, which would increase the amount of construction noise and

vibration affecting residences to the west of Reach 3. Alternative 2 would exacerbate the significant and unavoidable construction-related noise and vibration impacts resulting from the proposed project. Construction of the taller floodwall and depressed maintenance road components would result in increased haul truck trips (due to greater excavation and importing of construction materials) and therefore greater traffic impacts during construction. The excess soil generated by this alternative would be greater than for the proposed project; therefore, this alternative would exacerbate project-related impacts with regard to solid waste disposal. This alternative would also result in greater air emissions and noise impacts from operating equipment and vehicles.

The increased hardscape of Alternative 2 would replace existing aquatic and riparian habitat located on the side slope and base of the existing earthen levee which would be removed. Once construction is complete, Alternative 2 would create more wetland habitat than the proposed project, though Alternative 2 would also result in more impacts to riparian habitat than the proposed project. The wetland bench in Reach 3 would be planted with native species adapted to tidal conditions and may provide habitat for common and special-status species. Up to 3 acres of wetland vegetation would be established in this reach. This would be partially offset by the elimination of the Reach 3 central berm, which provides existing riparian habitat and would be retained by the proposed project.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that although this alternative would create more wetland habitat than the proposed project, this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- This alternative is undesirable from a policy standpoint because it would result in greater impacts on existing riparian habitat and would create more in-stream hardscape through development of the depressed maintenance road.

- This alternative would also result in more adverse construction-related impacts associated with traffic, noise, vibration, hazards and hazardous materials, utilities and services systems, and air quality.

Reference: FEIR Volume 2, Section 5.3.4, page 5-8.

6.1.4 Alternative 3: Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls

Description. Under Alternative 3, the south levee in Reach 1 would be raised by up to 4 feet but would not be relocated. Floodwalls would be constructed in Reaches 2, 3, and 4; the floodwall in Reaches 3 and 4 would be substantially shorter than the proposed project floodwalls. In Reach 3, the central berm would be excavated and removed. Throughout the entire length of this reach, the channel would be lined with concrete (trapezoidal shape, 1:1 side slopes). Maintenance of activities such as graffiti removal would likely be greater due to the amount of concrete that would be exposed in Reach 3. However, this alternative would reduce vegetation management activities compared to the proposed project and existing conditions. Like the proposed project, headwalls would be constructed on the downstream and upstream sides of the existing San Andreas Drive bridge.

The primary differences between Alternative 3 and the proposed project are as follows: (1) the Reach 1

levee would not be relocated and a wetland bench would not be constructed for Alternative 3; (2) the central berm in Reach 3 would be removed and replaced by a concrete-lined channel. Alternative 3 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. This alternative would only partially meet objective to minimize the need for removal of sediment and non-woody vegetation. Alternative 2 would minimize vegetation removal because about 8 acres of vegetation would be permanently replaced with concrete lining, but the need for future sediment removal would not be minimized.

Comparative Impacts. This alternative would reduce project impacts associated with relocation of the replacement levee and construction of a wetland bench in Reach 1. Because Alternative 3 would not include these features, which would involve substantial excavation and ground disturbance, it would avoid impacts on buried cultural resources and biological resources, including aquatic habitats and special-status species. However, it also would not realize the beneficial biological resources impacts from creating wetland habitat within the Reach 1 wetland bench. Additionally, concrete lining of Reach 3 would replace about 8 acres of existing aquatic and riparian habitat with concrete ling. The 8-acre increase in hardscape within the channel would have adverse effects on water quality as the pollutant-filtering properties of a natural vegetated channel bottom would be eliminated. Increased concrete lining would tend to raise water temperatures, which would diminish the channel's habitat value for aquatic special-status species.

Alternative 3 would result in greater construction-related traffic, noise, vibration, and air quality impacts due to excavation and removal of the Reach 3 berm and installing concrete lining in the Reach 3 channel. These activities would require substantially more haul truck trips in comparison to the proposed project. Lining the channel with concrete also would result in loss of about 8 acres riparian and aquatic habitat throughout Reach 3, most of which occurs on the berm and some of which is used by special-status species; this would adversely affect the ecological functions the existing creek channel may provide.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following reason:

- This alternative is undesirable from a policy standpoint because it would not reduce any significant impacts associated with the project including those on air quality, traffic, noise, and biological resources. In comparison to the proposed project, concrete lining of the channel would require substantially more haul truck trips and would likely have greater impacts on air quality, traffic, hazards and hazardous materials, and noise and vibration impact. This alternative could also result in greater impacts on water quality such as increased water temperature due to concrete lining of the channel.

Reference: FEIR Volume 2, Section 5.3.4, page 5-9.

6.2 Alternatives Rejected as Infeasible in the EIR

In addition to the alternatives described above, the DEIR considered but dismissed the following alternatives: Off-stream Detention Basin alternative, Bypass Channel to Coyote Creek alternative, an annual sediment removal alternative, and a Geomorphic Channel Planted with Woody Riparian Trees and Reduced Channel Access Roads Alternative.

6.2.1 Off-Stream Detention Basin Alternative

Description. This alternative was considered in the District's Planning Study Report (2016) and would involve constructing an off-stream detention basin. Based on the future 1-percent design flow of approximately 6,900 cfs on Lower Penitencia Creek at the Lower Berryessa Creek confluence, approximately 650 acre-feet of water would need to be detained. The RWQCB suggested considering off-stream detention as a flood management strategy in comment 5 of its EIR scoping comment letter dated July 28, 2015 (see Volume 3, Appendix A of the FEIR).

This alternative would require 43-65 acres of land near the creek to create a detention basin with a depth of 10-15 feet that would contain 650 acre-feet of flood water. In addition, this alternative would require acquisition of substantial amount of land, demolition of large numbers of existing structures, and possibly relocation of residents and/or businesses.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- This alternative would require far more earth movement than the proposed project and would result in greater construction noise impacts than the proposed project. For both the proposed project and this alternative, construction noise impacts would be significant and unavoidable, but the impact would be more severe for this alternative. Similarly, this alternative would result in more significant impacts to air quality, and traffic that would be more severe than for the proposed project.

- Given the high housing demands in Milpitas and greater Silicon Valley, it would be highly unlikely for the District to successfully acquire areas adjacent to the creek channel in urbanized Milpitas at a reasonable cost, which possibly includes costs to relocate nearby residential uses and businesses..

Reference: FEIR Volume 2, Section 5.4, page 5-10.

6.2.2 Bypass Channel to Coyote Creek Alternative

Description. This alternative was considered in the planning phase of the project and is described in the District's Planning Study Report (2016). Under this alternative, a 2,500-foot-long bypass channel would be constructed across McCarthy Ranch Boulevard, I-880, and Cadillac Court. This bypass channel would also cross four privately owned parcels, three of which have been developed with commercial buildings and parking lots. While a feasibility analysis has not been completed for this alternative, it would require breaching of the Coyote Creek and Lower Penitencia Creek levees. It would also require easements to tunnel below existing residential and industrial developments, as well as I-880, and design of this alternative may be constrained due to the presence of critical underground utility lines.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- Based on preliminary evaluation, this alternative could result in adverse thermal effects on fish habitat as water is discharged from a bypass to Coyote Creek (which has been designated as critical habitat for California Central Coast steelhead).

- This alternative would be very costly as it would require the District to successfully acquire private parcels affected, which could possibly include relocating existing businesses.

- This alternative would entail substantial excavation and would likely result in greater construction impacts than the proposed project related to traffic, noise, air pollutant emissions, and greenhouse gas emissions and potentially greater impacts on residential and commercial uses.

Reference: FEIR Volume 2, Section 5.4, page 5-11.

6.2.3 Annual Sediment Removal Alternative

Description. Under this alternative, an increased volume of sediment would be removed from the channel on an annual basis, which is more frequent than existing conditions.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- This alternative would not meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would not meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would not maintain certification of the east levee, and would not meet FEMA certification standards. This alternative would also not meet the objective to minimize the need for removal of sediment and non-woody vegetation.

- This alternative is also undesirable from a policy standpoint. Dewatering of the creek during the dry season is required to remove sediment, and would dry out the creek for several months. The disruption and drying of the creek would stress the ecosystem. Full regrowth of vegetation generally takes more than one year, thus annual sediment removal would prevent full revegetation of the creek channel. By conducting such work on an annual basis, only poor-quality habitat would develop.

Reference: FEIR Volume 2, Section 5.4, page 5-11.

6.2.4 Geomorphic Channel Alternative - Planted with Woody Riparian Trees and Reduced Channel Access Roads

Description. The RWQCB suggested this approach in comment 6 of its EIR scoping comment letter of July 28, 2015 (see FEIR Volume 3, Appendix A). This alternative would result in a wooded stream channel with higher roughness coefficients than the existing channel or the channel that would be constructed by the proposed project. To accommodate the design 1-percent flow, this alternative would require either enlarging the channel or constructing substantially higher floodwalls to convey the design flow.

Finding/Rationale: The Board hereby finds that specific economic, legal, social, or other considerations make this alternative infeasible. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- It is uncertain if the channel could be enlarged sufficiently (due to limited space on either side of the channel) or if floodwalls could be constructed of sufficient height to meet the project objectives of conveying Lower Penitencia Creek's 1-percent design flow and meeting the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks.
- If the design flow cannot be met, this alternative would not fully meet project objectives as it would not maintain certification of the east levee, and would not meet FEMA certification standards. It is unlikely that this alternative would meet the project objective of minimizing the need for removal of sediment and non-woody vegetation, as the entire project reach is tidal and even a geomorphic channel would be subject to ongoing deposition of tidal sediment.
- Enlarging the channel in Reaches 2, 3, and 4 would require the acquisition of substantial amounts of existing developed real estate and would be cost-prohibitive.
- Enlarging the channel option would require substantially more earth movement than the proposed project and would result in greater construction noise impacts than the proposed project. Construction noise impacts would be more severe under this alternative. Similarly, this alternative would result in significant impacts to air quality, and traffic that would be more severe than for the proposed project.
- If taller floodwalls were constructed, the floodwalls would result in substantially greater impacts than the project with respect to aesthetics, air quality, construction noise and vibration, and hazards and hazardous materials.
- The floodwall option would cost more to implement than the proposed project because floodwalls are relatively expensive to construct and construction costs increase significantly with increased wall height.

Reference: FEIR Volume 2, Section 5.4, page 5-12.

6.3 Rejection of Alternative Proposed in Comments on the Draft EIR

Comments on the DEIR suggested one alternative in addition to those described in the DEIR. The RWQCB (Comment C-17) suggested that the EIR evaluate an alternative that provides incremental flood control benefits aside from the offsite storage for 650-acre-feet of water.

Finding/Rationale. The Board finds that specific economic, legal, social, technological, or other considerations make hydroelectric plants infeasible, and hereby rejects this alternative. Specifically, the Board hereby finds that this alternative is infeasible and rejects this alternative for each of the following independent reasons:

- Based on the limited availability of floodplain area to provide such incremental flood control benefits, the District determined that such an alternative was not feasible. The Milpitas area is in extremely short supply of housing, including affordable housing. As there are no vacant

properties available for conversion to flood control purposes, this alternative was not considered.

- Such an alternative would also not meet the basic project objectives including the ability to convey the future 1-percent design flow from Lower Berryessa Creek.

Reference: FEIR Volume 1, Response to Comment C-17, page 3-55.

7. Absence of Significant New Information

The FEIR consists of the following: Responses to Comments on the DEIR (Volume 1), Main Body of the EIR (Volume 2), and Appendices (Volume 3). The Responses to Comments include comments made on the DEIR, responses to those comments, and minor revisions to the DEIR text in response to comments and other staff-initiated changes.

In addition, the Board was provided with and considered the proposed project's Mitigation Monitoring and Reporting Program (also Appendix I in the FEIR).

The comments, responses, and minor revisions to the DEIR text do not amount to significant new information, because they do not include identification of new or worsened significant impacts associated with the proposed project or mitigation measures, or new potentially feasible Project alternatives or mitigation measures considerably different from others previously analyzed that warrant consideration.

The Board hereby finds that responses to comments made on the DEIR, and the minor revisions to the DEIR text, merely clarify, amplify, or make insignificant modifications in an adequate EIR, and that this information is not "significant" within the meaning of CEQA Guidelines §15088.5. The Board further finds that incorporating the responses to comments and the minor revisions to the DEIR text does not deprive the public of a meaningful opportunity to comment on the Project or its effects, and that no information has been added to the DEIR that would warrant recirculation of the DEIR pursuant to CEQA Guidelines §15088.5. This finding is based upon all the information presented in the FEIR and the record of proceedings.

8. Statement of Overriding Considerations

8.1 Introduction

Section 15093 of the CEQA Guidelines states:

(a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable.

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the Final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reason to support its actions based on the final EIR

and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

This Statement of Overriding Considerations describes the anticipated economic, social, and other benefits or other considerations of the Project to support the decision to proceed with the Project even though not all of the identified impacts are mitigated to a less-than-significant level.

8.2 Impacts that Remain Significant

After implementation of the mitigation measures adopted above, most of the adverse effects associated with the Project would be reduced to a less-than-significant level. However, some impacts would remain significant and unavoidable following the implementation of identified mitigation measures. Unavoidable adverse impacts are listed below. Section 3.3 describes in detail each significant unavoidable impact, feasible mitigation measures, and why it cannot be reduced to less-than-significant levels.

Impact NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels

Impact NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

Impact CUM-4: Cumulative Impacts on Noise and Vibration

8.3 Overriding Considerations Justifying Project Approval

Having adopted all feasible mitigation measures, rejected as infeasible alternatives to the Project discussed above, and identified all significant and unavoidable impacts, the Board hereby balances the benefits of the Project against its significant and unavoidable impacts, and hereby finds that the Project's benefits outweigh and override its significant and unavoidable impacts. The Board finds that the following Project benefits set forth below outweighs the Project's significant and unavoidable impacts.

8.3.1 Increased Flood Protection

Implementation of the proposed project would prevent unacceptable flood risks in the communities surrounding Lower Penitencia Creek. The District Act, which establishes the District, cites flood protection within several of its objectives and purposes (see Sections 4(c)(1) and 4(c)(2) of the Act). Similarly, the District's Ends Policy No. E-3 discusses a healthy and safe environment for residents, businesses and visitors, and establishes goals of providing flood protection and reducing potential for flood damage. Failure to provide this flood protection would put hundreds of homes and business at risk, with a large cost of recovery in the event of a flood. Other impacts of flooding may include closure of essential transportation arteries, interruptions in emergency service, likely losses of instruction time at area public

and private schools, loss of use of affected public facilities such as parks, and at the extreme, loss of human life. The proposed project would minimize these risks while also reducing the impacts of channel maintenance (e.g., sediment removal).

In consideration of flood protection needs, and the analysis of proposed project outcomes presented in the FEIR, the Board finds that the economic, social, and environmental benefits of meeting the proposed project's goals and objectives outweigh the significant and unavoidable noise and cumulative noise impacts associated with the proposed project.

9. Custodian of Records

The documents and other materials that constitute the record of proceedings on which the Project findings are based are available from the Clerk of the Board at the Santa Clara Valley Water District, 5750 Almaden Expressway, San Jose, CA 95118. This information is provided in compliance with Public Resources Code § 21081.6(a)(2) and CEQA Guidelines § 15091(e).

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District website link to EIR:
http://valleywater.org/LowerPenitenciaReportsandDocuments.aspx

Lower Penitencia Creek Improvements Project

Final Environmental Impact Report

State Clearinghouse No. 2015062026

VOLUME 2: MAIN BODY

October 2017

Horizon WATER and ENVIRONMENT

Santa Clara Valley Water District

SANTA CLARA VALLEY WATER DISTRICT

Lower Penitencia Creek Improvements Project
Milpitas, California

Final Environmental Impact Report

Volume 2 – Main Body

State Clearinghouse No. 2015062026

Prepared for:

Santa Clara Valley Water District
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(510) 986-1851

October 2017

EXECUTIVE SUMMARY

Introduction

The Santa Clara Valley Water District (District) prepared this ~~Draft~~ Environmental Impact Report (~~D~~EIR) to provide the public, responsible agencies, and trustee agencies with information about the environmental effects of the proposed Lower Penitencia Creek Improvements Project (proposed project). This ~~D~~EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

Project Objectives

The proposed project is necessary to avoid flooding in the project area during the projected future 1-percent (or 100-year) flow. The proposed project would meet the following objectives:

- Convey the Lower Berryessa Creek 1-percent design flow that is delivered to Lower Penitencia Creek;
- Meet required water surface elevations at the confluences of Lower Penitencia Creek with Coyote Creek and Berryessa Creek;
- Minimize the need for seasonal removal of sediment and non-woody vegetation;
- Maintain existing FEMA accreditation of the east levee located between California Circle and Berryessa Creek; and
- Ensure the project improvements meet FEMA certification requirements.

Project Location

The proposed project is located on Lower Penitencia Creek within a developed area in the City of Milpitas. **Figure ES–1 and Figure ES–2** show the project location. The proposed project area extends from just upstream of the confluence with Berryessa Creek downstream to the confluence with Coyote Creek. The land surrounding the proposed project is a mix of residential and office park/commercial land uses.

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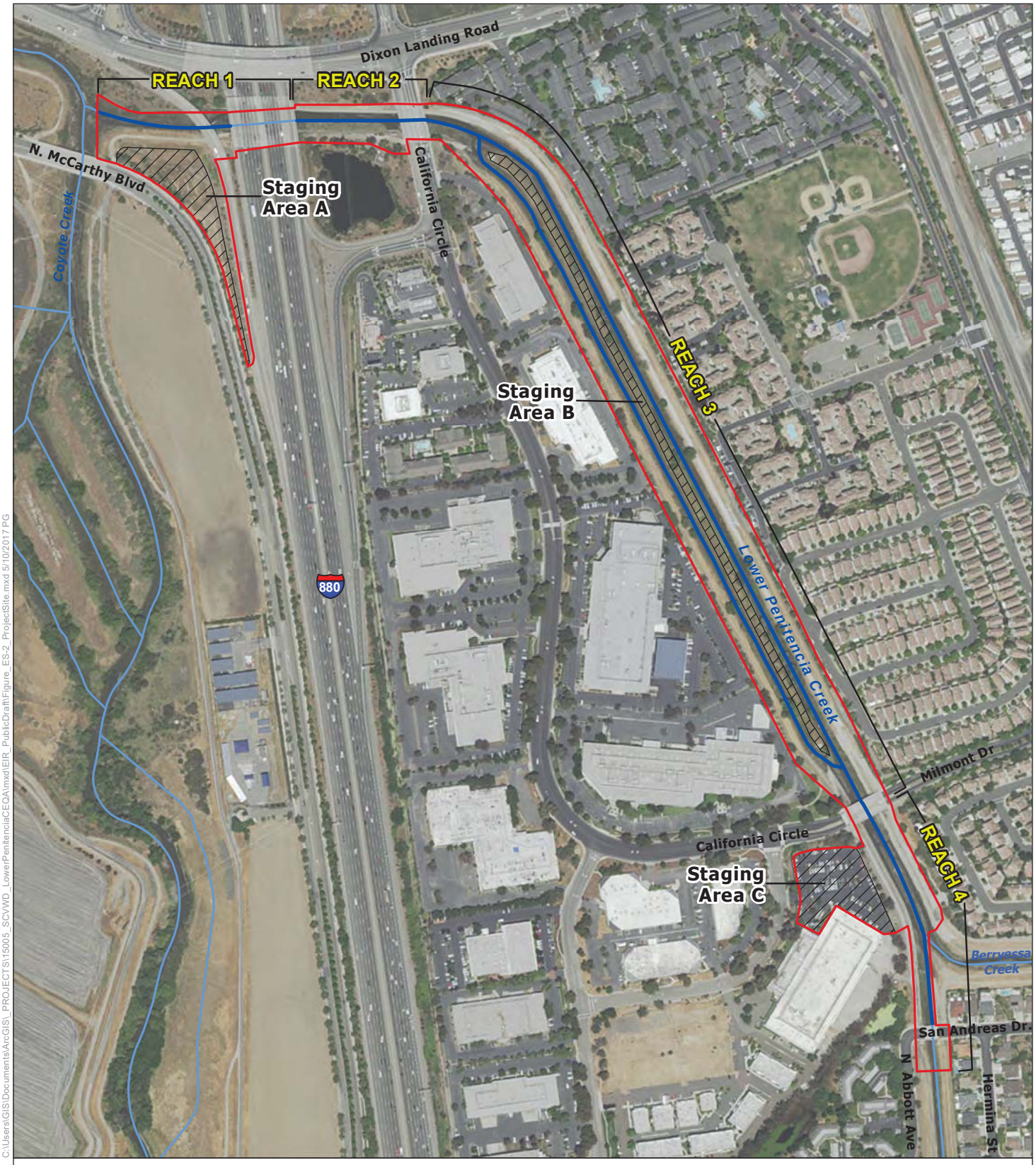
Figure ES-1
Project Location

Prepared by:
Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project



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N

0 200 400 800
Feet

Project Boundary

Staging Area

Figure ES-2
Project Site

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Horizon WATER and ENVIRONMENT

Lower Penitencia Creek Improvements Project

Project Planning and Development

Lower Penitencia Creek Improvements Project is one of six elements evaluated in the *Lower* Berryessa Creek Program Environmental Impact Report (Program EIR). The District prepared this Program EIR in 2011, and evaluated the Lower Penitencia Creek Project reach at a a programmatic level of detail.

At the time the Program EIR was prepared, future water surface elevations and flow rates during the 1% flow (i.e., the streamflow rate with a 1-percent estimated likelihood to be equaled or exceeded in any given year) on Lower Penitencia Creek Project could only be estimated at a general level of detail. Upstream improvement projects (i.e., the District's Lower Berryessa Creek and Lower Calera Creek Flood Protection Improvements Project and the USACE's Upper Berryessa Creek Flood Risk Management Project) are currently under construction and will increase the future 1% flow of Lower Penitenica Creek. Now that the detailed designs of the upstream projects are known, the future 1% flow and resulting water surface elevations can be estimated with precision. The proposed project would accomodate the increased future 1% flow without overtopping of the Lower Penitencia Creek banks.

The District developed and analyzed various conceptual design alternatives to achieve the project objectives. These conceptual design alternatives included different combinations of infrastructure upgrades, which were refined through the District's Natural Flood Protection (NFP) evaluation processto develop four potentially feasible design alternatives:

- Design Alternative 1: widen the California Circle crossing, construct floodwalls, raise a levee, and construct wetland bench in Reach 2;
- Design Alternative 2A: widen the California Circle and Milmont Drive crossings, construct floodwalls, relocate and raise the Reach 1 levee, and construct wetland benches in Reaches 1 and 2;
- Design Alternative 4: widen the California Circle and Milmont Drive crossings, construct floodwalls, relocate and raise the Reach 1 levee, and construct wetland benches in Reaches 1 and 3; and
- Design Alternative 6: widen the California Circle crossing, construct floodwalls, raise the Reach 1 levee, remove the central berm in Reach 3, and line the channel with concrete.

Based on the NFP evaluation process, District staff initially determined that Design Alternative 2A would best meet the project objectives. As part of the design process, the District modeled the 1-percent flow that would occur under "interim" and "ultimate" conditions. The interim condition is defined as the future flow that would result after construction of the District's Lower Berryessa Creek Flood Protection Project and the USACE's Upper Berryessa Flood Risk Management Project had been completed. These two projects are currently under construction and will be completed in 2018, at which time the 1-percent (or 100-year) interim flow at the confluence of Lower Penitencia Creek with Coyote Creekwill increase from 4,830 cubic feet per second (cfs) to 6,900 cfs. The ultimate condition is the future flow that would result after the channel improvements to Upper Berryessa Creek upstream of I-680 are completed. The 1 percent ultimate flow is 8,720 cfs, which is 26 percent greater than the interim flow. Construction of channel improvements to Upper Berryessa Creek upstream of I-680 are not expected to occur for at least 10 years or longer. Due to the uncertainty as to when the ultimate flow condition would be achieved, Alternative 2A was

refined such that the proposed project would convey the 1-percent interim flows of 6,900 cfs without overtopping of the Lower Penitencia Creek banks.

For all of the project design alternatives, interim flows could be conveyed without modifying the existing bridges at California Circle and Milmont Drive. Thus, modifications of those two bridges, which were originally considered as part of Design Alternative 2A, are not proposed as part of the proposed project or project alternatives (described further in Chapter 5, *Alternatives*). As described above, throughout the initial planning phase, the District refined Alternative 2A to develop the proposed project. Proposed project elements are described in more detail in the following sections.

Proposed Project

The proposed project would include various improvements along the four reaches included in the project area, including: sheetpile floodwalls, earthen fill, a wetland bench, a relocated and raised levee, bridge headwalls, sediment removal, maintenance road improvments, and revegetation. **Table ES–1** summarizes the project elements proposed for each reach.

Table ES–1. Proposed Project Elements

Reach or Bridge	Project Elements
Reach 1 Coyote Creek to I-880	Relocated and raised south bank levee with maintenance road on crest Wetland bench on south bank Approximately 50 feet of sheetpile floodwall to the north of channel
Reach 2 I-880 to California Circle	Sheetpile floodwall on top of existing south/west bank levee Approximately 25 feet of sheetpile floodwall on top of existing north/east bank levee near I-880 Removal of about 70 cy of sediment from the concrete-lined channel) Relocated access ramp to City's pump station Maintenance road improvements
Reach 3 California Circle to Milmont Drive	Sheetpile floodwalls on top of existing west and east bank levees Earthen fill to floodwall to allow the existing Penitencia Creek Trail to cross over the new floodwall Removal of about 1,500 cy of accumulated sediment from low-flow channel Maintenance road improvements
Reach 4 Milmont Drive to San Andreas Drive	Sheetpile floodwalls on top of existing west bank levee Raising of existing east bank levee by up to 6 ft Removal of about 730 cy of sediment from the concrete-lined channel Maintenance road improvements
San Andreas Drive Bridge	Headwalls on the downstream and upstream faces of San Andreas Drive bridge

Project Construction

Construction Activities

Construction activities and processes would differ based on the type of improvement. Construction of floodwalls would generally entail shallow excavation and fill to create a working platform for installation of sheetpiles. A specialized piece of equipment called a Giken silent piler would be used to install the sheetpile walls. Construction of the wetland bench would involve excavation in the existing south bank of Reach 1 to lower the ground surface elevation to below mean high tide level. Excavated soil would either be used to create the replacement levee in Reach 1 and raise Reach 4 east bank levee or disposed of at an offsite location. Construction of the new south bank levee in Reach 1 would entail removal of the existing levee down to grade level and preparation of the ground surface to receive new fill.

In-channel work would occur between mid-June and mid-October when channel flow is lowest. Dewatering would be temporary and would be necessary throughout the project area. In total, about 5,100 linear feet of channel would be dewatered. During in-channel work, water would be diverted into pipes and routed around the work areas by a temporary cofferdam. Diverted water would be returned to the creek downstream of the project area. At the end of each dry-period construction season, disturbed areas would be hydroseeded to provide erosion protection and prevent eroded sediment being washed into the creek.

Construction Staging Areas and Access

Construction would generally occur within existing District right-of-way (ROW) and easements along the channel. Three staging areas adjacent to the project site may be used during project construction for staging of equipment and construction materials.

I-880, Dixon Landing Road, and California Circle would be the primary construction access routes to the project area.

Construction Workers and On-haul and Off-haul Estimates

The proposed project would require up to 40 construction workers on site, although less than 20 workers would likely be on site on a typical workday. It is expected that all excavated soil would be reused on site, and approximately 3,430~~3,500~~ cubic yards (cy) of fill~~concrete~~ would be delivered and placed on site. About 2,300 cy of sediment would be removed from the low-flow channel for disposal off-site.

Construction Schedule

Project construction is anticipated to occur over 2 years, during 2018 and 2019. In-channel construction activities, as described above, would occur between June 15 and October 15 each year, while activities on the levee crests or outside the channel may occur outside the June 15 to October 15 dry season. Project construction would primarily occur on weekdays between the hours of 7:00 a.m. and 7:00 p.m. Less frequently, construction may also occur on weekend days between the hours of 7:00 a.m. and 7:00 p.m, which is allowed by the Milpitas Noise Abatement Ordinance. On rare occasions, construction may be necessary before 7:00 a.m. or after 7:00 p.m; construction during those hours would be very infrequent and would occur only with advance approval from the City of Milpitas. No construction activities would

occur on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

Project Operations

Following project construction and similar to current practice, routine maintenance activities would be conducted within the project area as needed. These activities include trash and debris removal, vegetation management (e.g., mowing the channel banks, removing vegetation along maintenance roads), maintenance road grading, management of wildlife conflicts, graffiti removal, and fence repair. These routine maintenance activities would continue to occur under the District's Stream Maintenance Program (SMP), an ongoing countywide program that provides maintenance standards and guides maintenance activities for the District to meet its designated flood protection mandates throughout Santa Clara County. In addition, the newly installed floodwalls and San Andreas Drive bridge headwalls would be visually inspected on a periodic basis (one to two times per year) and would be repaired as-needed. Once constructed, the proposed project would reduce the need for routine sediment removal in the channel.

Public Involvement Process

EIR Scoping

An NOP for the proposed project was prepared in accordance with State CEQA Guidelines Section 15082 and circulated to the State Clearinghouse on June 11, 2015. The scoping period continued for 30 days and concluded on July 10, 2015. During the scoping period, the District received comment letters from the California Department of Transportation and the San Francisco Bay Regional Water Quality Control Board. All of the comments contained in the scoping letters have been incorporated and/or addressed as appropriate in this EIR.

Draft EIR Public Comment Period

The District ~~is circulating this~~ circulated the DEIR for a 45-day public review and comment period.

Interested parties ~~are~~were encouraged to submit written comments on ~~this~~the DEIR. All comments ~~must be received~~were due by 5:00 p.m. on July 3, 2017 and directed to:

Michael Coleman, Environmental Planner II
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95115
mcoleman@valleywater.org

Written comments on the DEIR received by the Distirict during the public review period ~~will be~~were addressed in ~~the~~this Final EIR (Volume 1, Response to Comments on the Draft EIR).

Areas of Known Controversy and Issues to Be Resolved

State CEQA Guidelines Section 15123(b) requires that an Executive Summary identify "areas of controversy known to a lead agency including issues raised by agencies and the public."

The following issues were raised by agencies in response to the EIR NOP and may be considered controversial:

- Possible flooding effects due to sea-level rise in the vicinity of the I-880/Dixon Landing Road interchange;
- Construction-period impacts on I-880 and other highways (e.g., vehicle queues on ramps);
- Accurate description of project components not evaluated in the Lower Berryessa Program EIR; and
- Potential effects on the I-880 creek crossing.

Each issue is addressed in this EIR.

Significant Impacts

This section presents the significant impacts that were identified in the DEIR. This is not a comprehensive discussion of impacts of the proposed project; the reader is directed to Table ES-2 (Summary of Impacts and Mitigation Measures) which is presented at the end of this chapter for additional information. Environmental resource topics with the potential for significant environmental impacts are as follows:

- Air Quality
- Biological Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Noise and Vibration
- Traffic and Transportation

Sections 3.2 through 3.14 of this ~~D~~EIR address each of these environmental resource topics and the environmental consequences of the proposed project in more detail.

Significant and Unavoidable Impacts

The following impacts have been identified as significant and unavoidable:

- Impact NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in the applicable standards of other agencies
- Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- Impact NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The project would also make a cumulatively considerable contribution to significant cumulative noise impacts during project construction.

Alternatives Considered

The District considered the following alternatives to the proposed project:

- No Project Alternative
- Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal
- Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls
- Alternative 3: Reach 1 Raised Levee, Reach 3 Concrete Channel Lining, and Floodwalls

In addition, during project planning, the District considered several additional alternatives, but ultimately dismissed them from further analysis for one or more of the following reasons: (1) they would not sufficiently meet the proposed project objectives; (2) they were determined to be infeasible; or (3) they would not avoid or substantially reduce one or more significant impacts of the proposed project.

No Project Alternative

Under the No Project Alternative, no new construction activities would occur. The flood control channel would remain in its current condition. Ongoing maintenance activities, including sediment removal and vegetation management currently occurring under the District's SMP, would continue in the future. Although this alternative would avoid all impacts associated with construction of the proposed project, this alternative would not meet project objectives. Flood hazards and flooding impacts would increase under this alternative. In the event of a 100-year flood event, substantial damage to nearby land uses including residential, office space, the District's maintenance roads, nearby public roads, I-880, and the Penitencia Creek Trail. Flood damage and subsequent clean-up efforts could also result in adverse effects related to water quality, geology and soils, biological resources, cultural resources, recreational resources, noise, traffic and circulation, utilities and service systems, and air quality.

Alternative 1: Reach 1 Raised Levee, Floodwalls, and Ongoing Sediment Removal

Under this alternative, the south bank levee in Reach 1 would be raised but would not be relocated. Floodwalls would be constructed in Reaches 2, 3, and 4 and would be of similar height as those for the proposed project. As with the proposed project, headwalls would be constructed on both sides of the existing San Andreas Drive bridge.

Alternative 1 would result in similar construction-related impacts as the proposed project, including temporary transportation and traffic impacts, use of hazardous materials, air emissions, noise and vibration, and impacts on hydrology and water quality. Alternative 1 also would increase operational impacts associated with increased sediment removal in Reaches 2 and 4 compared to the proposed project, resulting in periodic disturbance of aquatic and riparian habitat that would be greater than if the proposed project were implemented. Additionally, the enhancements to Reach 1 tidal wetlands included in the proposed project would not be achieved, and the current degraded and isolated conditions of Reach 1 wetlands, which provide marginal habitat value, would continue indefinitely.

Alternative 2: Reach 1 Raised Setback Levee, Reaches 1 and 3 Wetland Benches, and Floodwalls

Under Alternative 2, the south bank levee in Reach 1 would be relocated and raised, which would create space for establishing a 50-foot-wide wetland bench immediately south of the existing channel. Floodwalls would be constructed in Reaches 2, 3, and 4. In Reach 3, the west bank floodwall would have a total height of 18.5 feet when viewed from inside the channel, but it would be partially below grade and extend about 4 feet above the crest of the existing levee. This alternative would create enhanced tidal wetlands in Reach 1, similar to the proposed project. In Reach 3, a 25 to 45-foot-wide wetland bench and depressed channel access road would be constructed.

Alternative 2 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. However, this alternative would not minimize the need for removal of sediment and non-woody vegetation.

This alternative would result in increased construction-related impacts due to excavation of the depressed maintenance road and Reach 3 wetland bench, and therefore would result in greater construction-related traffic, air quality, and noise impacts than the proposed project. Additionally, this alternative would involve greater excavation work than the proposed project and would therefore result in greater effects on existing landfill capacity. The increased hardscape in the channel due to the Reach 3 floodwall and depressed maintenance road could result in increased pollutant flows to the creek, adversely affecting water quality. This would be partially offset by the wetland bench between the road and the creek channel, which would help to filter pollutants from storm runoff before they reach the creek.

In the long term, up to 3 acres of wetland habitat would be established in Reach 3, which would provide habitat for common and special-status species. This wetland bench would offset loss of riparian habitat loss due to elimination of the Reach 3 central berm.

Alternative 3: Reach 1 Raised Raise, Reach 3 Concrete Channel Lining, and Floodwalls

Under Alternative 3, the south levee in Reach 1 would be raised and floodwalls would be constructed in Reaches 2, 3, and 4. The central berm in Reach 3 would be excavated and removed, and the entire channel would be lined with concrete. Alternative 3 would meet the primary objective of conveying Lower Penitencia Creek's 1-percent design flow, would meet the required water surface elevations at the confluences with Coyote and Lower Berryessa creeks, would maintain certification of the east levee, and would meet FEMA certification standards. This alternative would only partially meet objectives to minimize the need for removal of sediment and non-woody vegetation. Alternative 3 would minimize vegetation removal because about 8 acres of vegetation would be permanently replaced with concrete lining, but the need for future sediment removal would not be minimized.

Alternative 3 would result in greater construction-related traffic, noise, vibration, and air quality impacts due to excavation and removal of the Reach 3 berm and installing concrete lining in the Reach 3 channel. These activities would require substantially more haul truck trips in comparison to the proposed project. Lining the channel with concrete also would

result in loss of about 8 acres riparian and aquatic habitat throughout Reach 3, most of which occurs on the berm and some of which is used by special-status species; this would adversely affect the ecological functions the existing creek channel may provide.

Environmentally Superior Alternative

Among the alternatives considered in this EIR (not including consideration of the proposed project), Alternative 2 is considered the environmentally superior alternative. When considering the proposed project against Alternative 2, however, the proposed project is environmentally superior. Alternative 2 would permanently create greater wetlands in the project area than the proposed project, but would also result in permanent removal of more riparian habitat and creation of more in-stream hardscape than the proposed project. Alternative 2 would also result in greater construction-related impacts associated with traffic, noise, vibration, hazards and hazardous materials, utilities and service systems, and air quality. While the proposed project would expose of residents to significant and unavoidable construction noise and vibration impacts, Alternative 2 would increase the severity of those impacts.

Summary of Impacts and Levels of Significance

Table ES–2 summarizes the impact of the proposed project, mitigation measures, and levels of significance.

Table ES–2. Summary of Impacts and Mitigation Measures for the Proposed Project

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
Aesthetics			
AES-1: Have a substantial adverse effect on a scenic vista	NI	None	NI
AES-2: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway	NI	None	NI
AES-3: Substantially degrade the existing visual character or quality of the site and its surroundings	LS	None	LS
AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	LS	None	LS
Air Quality			
AQ-1: Conflict with or obstruct implementation of the applicable air quality plan	LS	None	LS
AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation	S	Mitigation Measure AQ-1	LM
AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	S	Mitigation Measure AQ-1	LM
AQ-4: Expose sensitive receptors to substantial pollutant concentrations	LS	None	LS
AQ-5: Potential to create objectionable odors affecting a substantial number of people during construction	S	Mitigation Measure AQ-2	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
Biological Resources			
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	S	Mitigation Measures BIO-1 through BIO 12	LM
BIO-1a: Impacts on longfin smelt and steelhead	S	Mitigation Measure BIO-1	LM
BIO-1b: Impacts on essential fish habitat	LS	None	LS
BIO-1c: Impacts on western pond turtles	S	BIO-2	LM
BIO-1d: Impacts on burrowing owls	LS	None	LS
BIO-1e: Impacts on the Alameda song sparrow and San Francisco common yellowthroat	S	Mitigation Measures BIO-3 and BIO-4	LM
BIO-1f: Impacts on non-nesting special-status birds	LS	None	LS
BIO-1g: Impacts on salt marsh harvest mouse	S	Mitigation Measures BIO 5 through BIO-8	LM
BIO-1h: Impacts on special-status bats	LS	None	LS
BIO-1i: Impacts on Congdon's tarplant	S	Mitigation Measures BIO-9 and BIO-10	LM
BIO-1j: Introduction of invasive species	S	Mitigation Measures BIO-11 and BIO-12	LM
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	LS	None	LS
BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), waters of the U.S., and waters of the state through direct removal, filling, hydrological interruption, or other means	S	Mitigation Measure BIO-13	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	LS	None	LS
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LS	None	LS
BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	NI	None	NI
Cultural Resources			
CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5	NI	None	NI
CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5	LS	None	LS
CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	NI	None	NI
CR-4: Disturb any human remains, including those interred outside of formal cemeteries.	LS	None	LS
CR-5: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in public resources code Section 21074	~~NI~~LS	None	~~NI~~LS
Geology, Soils and Seismicity			
GEO-1: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); or strong seismic ground shaking	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
GEO-2: Expose people or structures to potential substantial adverse effects, including, the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction; or landslides	S	Mitigation Measure GEO-1	LM
GEO-3: Result in substantial soil erosion or the loss of topsoil	LS	None	LS
GEO-4: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse	S	Mitigation Measure GEO-1	LM
GEO-5: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	LS	None	LS
GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	NI	None	NI
Greenhouse Gas Emissions			
GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	LS	None	LS
GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	NI	None	NI
GHG-3: Cause wasteful, inefficient, and unnecessary consumption of energy or cause a substantial increase in energy demand and increase the need for energy resources	LS	None	LS
Hazards and Hazardous Materials			
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	S	Mitigation Measure HAZ-1	LM
HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school	LS	None	LS
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	NI	None	NI
HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, such that the project could result in a safety hazard for people residing or working in the project area	NI	None	NI
HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	NI	None	NI
HAZ-7: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	LS	None	LS
Hydrology and Water Quality			
HYD-1: Violate any water quality standards or waste discharge requirements; or otherwise substantially degrade water quality	LS	None	LS
HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)	LS	None	LS
HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, or siltation on- or off-site	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site	LS	None	LS
HYD-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	LS	None	LS
HYD-6: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or place structures within a 100-year flood hazard area structures which would impede or redirect flood flows	NI	None	NI
HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	B	None	B
HYD-8: Inundation by seiche, tsunami, or mudflow	NI	None	NI
Land Use and Planning			
LU-1: Physically divide an established community	LS	None	LS
LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	LS	None	LS
LU-3: Conflict with any applicable habitat conservation plan or natural community conservation plan	NI	None	NI
Noise and Vibration			
NOI-1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	S	Mitigation Measure NOI-1	SU

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	S	Mitigation Measure NOI-1	SU
NOI-3: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	LS	None	LS
NOI-4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	S	Mitigation Measure NOI-1	SU
NOI-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI
NOI-6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels	NI	None	NI
Recreation			
REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	LS	None	LS
REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	LS	None	LS
Traffic and Transportation			
TRA-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit	S	Mitigation Measure TRA-1	LM

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
TRA-2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways	LS	None	LS
TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	NI	None	NI
TRA-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	S	Mitigation Measure TRA-1	LM
TRA-5: Result in inadequate emergency access	S	Mitigation Measure TRA-1	LM
Utilities and Service Systems			
UTL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	LS	None	LS
UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	NI	None	NI
UTL-3: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	LS	None	LS
UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	LS	None	LS
UTL-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	LS	None	LS
UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	LS	None	LS

Impact	Significance Level Before Mitigation	Applicable Mitigation Measures	Significance Level After Mitigation
UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste	LS	None	LS
UTL-8: Potential disruption and/or relocation of existing utilities	LS	None	LS
Significant Cumulative Impacts			
CUM-1: Cumulative Impacts on Air Quality	S	Mitigation Measure AQ-1	NCC
CUM-2: Cumulative Impacts on Biological Resources	S	Mitigation Measures BIO-1 through BIO-13	NCC
CUM-3: Cumulative Impacts on Hydrology and Water Quality	S	None	NCC
CUM-4: Cumulative Impacts on Noise and Vibration	S	Mitigation Measure NOI-1	CC
CUM-5: Cumulative Impacts on Traffic Patterns and Safety Hazards	S	Mitigation Measure TRA-1	NCC

Notes:

LS = Less than Significant; LM = Less than Significant with Mitigation; N/A = Not Applicable; CC = Cumulativetly Considerable Contribition; NCC = Not Cumulatively Considerably; B = Beneficial; NI = No Impact; S = Significant; SU = Significant and Unavoidable

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	Approve and Authorize the City Manager to Execute the Construction Contract with McGuire and Hester to Provide Construction of the Main Lift Station Emissions Control Facility for the Not-To-Exceed Amount of $1,293,500.
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Tony Ndah, Public Works Director, 408-586-2602**
Recommendation:	1. Award NIB No. 2511 to McGuire and Hester. 2. Approve and Authorize the City Manager to Execute the Construction Contract with McGuire and Hester to provide construction of the Main Lift Station Emissions Control Facility for the not-two exceed amount of $1,293,500. 3. Authorize the City Manager to execute one or more change orders related to the project to increase the maximum compensation by an aggregate amount not to exceed $200,000.

Background:

All wastewater collected by the City of Milpitas sanitary sewer system flows through the Milpitas Main Lift Pump Station (Main Lift). The Main Lift discharges wastewater through two 36-inch diameter force mains to the San Jose-Santa Clara Regional Wastewater Facility. The Main Lift Pump Station has a covered wet well that is ventilated by an exhaust fan and the untreated ventilation air is discharged to the atmosphere through an exhaust stack.

Concerns from the Bay Area Air Quality Management District (BAAQMD) regarding elevated levels of hydrogen sulfide and odors at the Main Lift Pump Station prompted the City to initiate an investigation into odor emissions control technologies to address these concerns. In 2017, the City entered into a Professional Services Agreement with West Yost Associates to complete a study of the Main Pump Stations emissions and assess odor emissions control technologies for the City. The study included hydrogen sulfide monitoring and analysis and identified a biofiltration and carbon filtration treatment system that would treat hydrogen sulfide and odor resulting from operations of the Main Lift Pump Station.

In 2018, the City Council approved Capital Improvement Project No. 6130 – Main Lift Station Odor Emissions Control, which provided funding for the design and construction of emissions control at the Main Lift Pump Station, in order to address concerns regarding elevated levels of hydrogen sulfide and other odorous compounds in the environment. Approval of this contract would allow for the implementation of this project to address the concerns raised by BAAQMD.

Analysis:

The 2019 Main Lift Station Emissions Control Study completed for the City by West Yost Associates identified that a biotrickling filter would sufficiently control odor from the Main Lift Station. With a biotrickling filter, the contaminated air stream (exhaust from the Main Lift Pump Station) is passed up through a trickling filter allowing the air contaminants to first absorb into the liquid stream, and then the contaminants are removed by the organisms that are attached to the support media. This technology was selected for various reasons including control effectiveness, minimal ongoing maintenance, system size/footprint, and overall cost.

On March 29, 2021, the City's Purchasing unit released NIB No. 2511 for Construction of the Main Lift Station Odorous Emissions Control Facility. The technical specifications and plans were developed working in concert with the City's engineering consultant on the project.

The NIB was publicly noticed in accordance with California Uniform Public Construction Cost Accounting Act (CUPCCAA), which the City is a participant, as well as adhering to the requirements of the City's Municipal Code. The NIB was advertised on the City's website, emailed to companies registered with the City via ProcureNow.com and the City's internal CUPCCAA registration form. Additionally, two public notices were published in the Milpitas Post, a bid notice posted to PublicPurchase.com, and notices were emailed to designated trade journals.

Upon release, 393 firms received notification of the solicitation's release and 53 firms downloaded the bid documents. Five addenda and three notices were issued by staff and twelve clarifying questions were answered by City staff and consultants. Prospective bidders were required to attend a mandatory Pre-Bid Meeting via Zoom and attend a site visit to have their bids accepted.

Five firms submitted bids by the bid closing date of May 21, 2021. The bids received were reviewed by Purchasing staff for compliance and responsiveness and all were accepted.

The five (5) companies that submitted bids were:

1. Blocka Construction, Inc.
2. Hester and McGuire
3. JMB Construction Inc.
4. Valentine Corporation
5. WestCal Design and Build Inc.

All five bids were within staff's estimate for the project. The table below shows the base bid amounts by the five firms with the low bidder highlighted in green:

NIB No. 2511	**McGuire and Hester**	JMB Construction	Valentine Corporation	Blocka Construction Inc.	WestCal Design and Build Inc.
Base Bid	$1,293,500	$1,349,700	$1,548,369	$1,649,000	$1,865,000

Through this contract, the contractor will provide all work necessary to construct and install the biotrickling filter at the Main Lift Station including:

- Site preparations and cleaning;
- Procurement and installation of the biotrickling odor control system, including connection of ductwork, water piping, drainage piping, and power and control wiring in accordance with the manufacturer's installation instructions;
- Construction of concrete pad for placement of the filter and concrete equipment pads for foul air blower; and
- Other actions needed to complete, commission, and operationalize the odor control system.

The overall project schedule will be dependent on the manufacturer delivery schedule. Tentative project milestone schedule is as follows:

Notice to Proceed	July 1, 2021
Equipment Order Placed	July 2021
Construction Begins	Fall 2021
Construction Completed	Summer 2022

Policy Alternatives:

Alternative 1: Reject all bids and delay implementation of the project

Pros: Allows City to utilize approved CIP funds for other sewer projects.

Cons: Rejection of all bids and delaying the implementation of the project would cause a delay in addressing the odor concerns raised by BAAQMD.

Reason not recommended: Delay in award of construction contract would delay project completion, prolong construction activities and would not allow the City to address the odor concerns raised by BAAQMD.

Fiscal Impact:
Sufficient funds for the project are available in CIP 6130 (balance is $2,064,401 as of June 1, 2021) – Main Lift Station Odor Emissions Control, which provided funding for the planning, design, and construction of emissions control at the Main Lift Pump Station. The project is funded by the Sewer Infrastructure Fund and Sewer Treatment Fund.

California Environmental Quality Act:
The project is categorically exempt under Section 15301 of the California Environmental Quality Act guidelines for existing facilities.

Recommendation:
1. Award NIB No. 2511 to McGuire and Hester.
2. Approve and Authorize the City Manager to Execute the Construction Contract with McGuire and Hester to Provide Construction of the Main Lift Station Emissions Control Facility for the not-to exceed amount of $1,293,500.
3. Authorize the City Manager to execute one or more change orders related to the project to increase the maximum compensation by an aggregate amount not to exceed $200,000.

Attachments:
1. Construction Contract with McGuire and Hester

CITY OF MILPITAS

MILPITAS, CALIFORNIA

CONTRACT DOCUMENTS AND SPECIFICATIONS FOR

NIB NO. 2511
CONSTRUCTION OF MAIN LIFT ODOROUS EMISSIONS CONTROL FACILITY

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NIB 2511 – NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that the City Council of the City of Milpitas ("City") invites and will receive sealed electronic Bids up to but not later than **2:00 p.m. PST on May 14, 2021** at https://secure.procurenow.com/portal/milpitas-ca, for the furnishing to City of all labor, equipment, materials, tools, services, transportation, permits, utilities, and all other items necessary for **NIB No. 2511 - Construction of Main Lift Odorous Emissions Control Facility** (the "Project"). At 2:05 p.m. PST on said date, Bids will be publicly opened via Zoom conference call and read aloud as specified on the bid notice at https://secure.procurenow.com/portal/milpitas-ca. Bids received after said time shall not be accepted and/or shall be returned unopened. Bids shall be valid for a period of ninety (90) calendar days after the Bid opening date.

Bids must be submitted on the City's Bid Forms. Bid Forms shall only be made available electronically at https://secure.procurenow.com/portal/milpitas-ca. **PAPER BIDS SHALL NOT BE ACCEPTED**. Bidders may obtain a copy of the Contract Documents, Addenda and Notices from https://secure.procurenow.com/portal/milpitas-ca. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, the City shall provide an electronic copy of the Contract at no charge to the contractor plan room.

It is the responsibility of each prospective bidder to download and print all Bid Documents for review and to verify the completeness of Bid Documents before submitting a bid. Any Addenda will be posted on https://secure.procurenow.com/portal/milpitas-ca. It is the responsibility of each prospective bidder to check https://secure.procurenow.com/portal/milpitas-ca on a daily basis through the close of bids for any applicable addenda or updates. The City does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading or printing of the Bid Documents. Information on https://secure.procurenow.com/portal/milpitas-ca may change without notice to prospective bidders. The Contract Documents shall supersede any information posted or transmitted by https://secure.procurenow.com/portal/milpitas-ca.

Each Bid shall be accompanied by cash, a certified or cashier's check, or Bid Bond secured from a surety company satisfactory to the City Council, the amount of which shall not be less than ten percent (10%) of the submitted Total Bid Price, made payable to City of Milpitas as bid security. The bid security shall be provided as a guarantee that within five (5) working days after the City provides the successful bidder the Notice of Award, the successful Bidder will enter into a contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful Bidder fails to comply within said time. No interest will be paid on funds deposited with City.

A **MANDATORY** Pre-Bid Conference is scheduled for **10:00 a.m. PST on Tuesday April 13, 2021** to review the Project's existing conditions via Zoom Conference call, the details of which are shown in the bid notice on ProcureNow.com. Representatives of the City and consulting engineers, if any, will be present. Bidders need only to attend one Pre-Bid Conference. Questions asked by Bidders at the Pre-Bid Conference not specifically addressed within the Contract Documents shall be answered in writing, and issued as an Addendum. A **MANDATORY** pre-bid site walk which will be made by appointment only on **Wednesday, April 14, 2021 and Thursday, April 15, 2021.** Bidders are instructed to contact the City's procurement officer listed at the bottom of this notice to secure an appointment for the mandatory site walk. Bids will not be accepted from any bidder who did not attend **BOTH** the mandatory Pre-Bid Conferences and the Pre-Bid Job Walk.

The successful Bidder will be required to furnish a Faithful Performance Bond and a Labor and Material Payment Bond each in an amount equal to one hundred percent (100%) of the Contract Price. Each bond shall be in the forms set forth herein, shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120, and that is a California admitted surety insurer.

Pursuant to Section 22300 of the Public Contract Code of the State of California, the successful Bidder may substitute certain securities for funds withheld by City to ensure its performance under the contract.

Pursuant to Labor Code Section 1773, City has obtained the prevailing rate of per diem wages and the prevailing wage rate for holiday and overtime work applicable in Santa Clara County from the Director of the Department of Industrial Relations for each craft, classification, or type of worker needed to execute this contract. A copy of these prevailing wage rates may be obtained via the internet at: www.dir.ca.gov/dlsr/

In addition, a copy of the prevailing rate of per diem wages is available at the City'sDepartment of Public Works and shall be made available to interested parties upon request. The successful bidder shall post a copy of the prevailing wage rates at each job site. It shall be mandatory upon the Bidder to whom the Contract is awarded, and upon any subcontractors, to comply with all Labor Code provisions, which include but are not limited to the payment of not less than the said specified prevailing wage rates to all workers employed by them in the execution of the Contract, employment of apprentices, hours of labor and debarment of contractors and subcontractors.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No Bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. In bidding on this Project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its Bid.

Unless otherwise provided in the Instructions for Bidders, each Bidder shall be a licensed contractor pursuant to sections 7000 et seq. of the Business and Professions Code in the following classification(s) throughout the time it submits its Bid and for the duration of the contract: **(A) General Engineering Contractor or (B) General Building Contractor**.

Substitution requests shall be made within 35 calendar days after the award of the contract. Pursuant to Public Contract Code Section 3400(b), the City may make findings designating that certain additional materials, methods or services by specific brand or trade name other than those listed in the Standard Specifications be used for the Project. Such findings, if any, as well as the materials, methods or services and their specific brand or trade names that must be used for the Project may be found in the Special Conditions.

City shall award the contract for the Project to the lowest responsive, responsible Bidder as determined by the City from the **BASE BID ALONE**. City reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process.

For further information, contact Zachary DeVine, Buyer zdevine@ci.milpitas.ca.gov or (408) 586-3163.

END OF NOTICE INVITING BIDS

00 21 13 – INSTRUCTIONS TO BIDDERS

1. SECURING DOCUMENTS

Bids must be submitted to the City on the Bid Forms which are a part of the Bid Package for the Project. Bid and Contract Documents may be obtained from the City as specified in the Notice Inviting Bids. Prospective bidders are encouraged to telephone in advance to determine the availability of Contract Documents. Any charge for the Contract Documents is stated in the Notice Inviting Bids.

The City may also make the Contract Documents available for review at one or more plan rooms, as indicated in the Notice Inviting Bids. Please Note: Prospective Bidders who choose to review the Contract Documents at a plan room must contact the City to obtain the required Contract Documents if they decide to submit a bid for the Project.

Addenda, if any, issued during the bid period will be posted on https://secure.procurenow.com/portal/milpitas-ca. Failure to acknowledge addenda may make a bid nonresponsive and not eligible for award of the contract.

2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

At its own expense and prior to submitting its Bid, each Bidder shall visit the site of the proposed work and fully acquaint itself with the conditions relating to the construction and labor required so that the Bidder may fully understand the work, including but not limited to difficulties and restrictions attending the execution of the work under the contract. Each Bidder shall carefully examine the Drawings, and shall read the Specifications, Contract, and all other documents referenced herein. Each Bidder shall also determine the local conditions which may in any way affect the performance of the work, including local tax structure, contractors' licensing requirements, availability of required insurance, the prevailing wages and other relevant cost factors, shall familiarize itself with all federal, state and local laws, ordinances, rules, regulations and codes affecting the performance of the work, including the cost of permits and licenses required for the work, and shall make such surveys and investigations, including investigations of subsurface or latent physical conditions at the site or where work is to be performed as may be required. Bidders are responsible for consulting the standards referenced in the Contract. The failure or omission of any Bidder to receive or examine any contract documents, forms, instruments, addenda, or other documents, or to visit the site and acquaint itself with conditions there existing shall in no way relieve any Bidder from any obligation with respect to its Bid or to the contract and no relief for error or omission will be given except as required under State law. The submission of a Bid shall be taken as conclusive evidence of compliance with this Article.

Storm, surface, nuisance, or other waters may be encountered at various times during construction of the Project. Federal and State laws require the City and its contractors to appropriately manage such waters pursuant to the requirements of California State Water Resources Control Board Order Number 2009-0009-DWQ and any amendment or renewal thereof, the Federal Clean Water Act, and the California Porter Cologne Water Quality Control Act. By submitting a Bid, each Bidder acknowledges that it has investigated the risk arising from such waters, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.

3. INTERPRETATION OF DRAWINGS AND DOCUMENTS

Prospective Bidders unclear as to the true meaning of any part of the Drawings, Specifications or other proposed contract documents may submit to the Engineer of the City a written request for interpretation. The prospective Bidder submitting the request is responsible for prompt delivery. Interpretation of the Drawings, Specifications or other proposed contract documents will be made only by a written addendum duly issued and a copy of such addenda will be mailed or delivered to each prospective Bidder who has downloaded a set of Drawings and Specifications. The City will not be responsible for any other explanation or interpretations of the proposed documents. If a Prospective Bidders becomes aware of any errors or omissions in any part of the Contract Documents, it is the obligation of the Prospective Bidder to promptly bring it to the attention of the City.

4. INSPECTION OF SITE; PRE-BID CONFERENCE

Each prospective bidder is responsible for fully acquainting itself with the conditions of the Project Site (which may include more than one site), as well as those relating to the construction and labor of the Project, to fully understand the facilities, difficulties and restrictions which may impact the cost or effort required to complete the Project. To this end, a Pre-Bid Meeting and Site Walk will be held on the date(s) and time(s) indicated in the Notice Inviting Bids.

5. ADDENDA

The City reserves the right to revise the Contract Documents prior to the Bid opening date. Revisions, if any, shall be made by written Addenda. All Addenda issued by the City shall be included in the Bid and made part of the Contract Documents. Pursuant to Public Contract Code Section 4104.5, if the City issues an Addendum which includes material changes to the Project less than 72 hours prior to the deadline for submission of Bids, the City will extend the deadline for submission of Bids. The City may determine, in its sole discretion, whether an Addendum warrants postponement of the Bid submission date. Each prospective Bidder shall provide City a name, address, email address, and facsimile number to which Addenda may be sent, as well as a telephone number by which the City can contact the Bidder. Any Addenda will be posted on https://secure.procurenow.com/portal/milpitas-ca. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, each Bidder should contact Zachary DeVine, Buyer at City of Milpitas City Hall, 455 E. Calaveras Bouelvard, Milpitas, CA 95035, zdevine@ci.milpitas.ca.gov or 408-586-3163 to verify that it has received all Addenda issued, if any, prior to the Bid opening. The Bidder shall indicate the Addenda received prior to bidding in the space provided in the Bid Form. Failure to indicate all Addenda may be sufficient cause for rejecting the Bid.

6. ALTERNATE BIDS

If alternate bid items are called for in the Contract Documents, the time required for completion of the alternate bid items has already been factored into the Contract duration and no additional Contract time will be awarded for any of the alternate bid items. The City may elect to include one or more of the alternate bid items, or to otherwise remove certain work from the Project scope of work. Accordingly, each bidder must ensure that each bid item contains a proportionate share of profit, overhead, and other costs or expenses which will be incurred by the bidder.

7. COMPLETION OF BID FORMS

Bids shall only be prepared using copies of the Bid Forms which are included in the Contract Documents. The use of substitute Bid Forms other than clear and correct photocopies of those provided by the City will not be permitted. Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. In addition, Bidders shall fill in all blank spaces (including inserting "N/A" where applicable), and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms nor make substitutions thereon. USE OF BLACK OR BLUE INK, INDELIBLE PENCIL, OR A TYPEWRITER IS REQUIRED. Deviations in the Bid Forms may result in the Bid being deemed non-responsive.

8. MODIFICATIONS OF BIDS

Each Bidder shall submit its Bid in strict conformity with the requirements of the Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a Bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, or supplement the printed matter on the Bid Forms, or make substitutions thereon. Oral, telephonic and electronic modifications will not be considered.

9. SUBCONTRACTORS

Bidder shall set forth the name, address of the place of business, and contractor license number of each subcontractor who will perform work, labor, furnish materials or render services to the bidder on said contract and each subcontractor licensed by the State of California who, under subcontract to bidder, specially fabricates and installs a portion of the Work described in the Drawings and Specifications in an amount in excess of one half of one percent (0.5%) of the total bid price, and shall indicate the portion of the work to be done by such subcontractor in accordance with Public Contract Code Section 4104.

<u>The successful bidder will be required to self-perform at least 51% of the work.</u>

10. LICENSING REQUIREMENTS

Pursuant to Business and Professions Code Section 7028.15 and Public Contract Code Section 3300, all bidders must possess proper licenses for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted. Pursuant to Business and Professions Code Section 7028.5, the City shall consider any bid submitted by a contractor not currently licensed in accordance with state law and pursuant to the requirements found in the Contract Documents to be nonresponsive, and the City shall reject the Bid. The City shall have the right to request, and Bidders shall provide within ten (10) calendar days, evidence satisfactory to the City of all valid license(s) currently held by that Bidder and each of the Bidder's subcontractors, before awarding the Contract.

Notwithstanding anything contained herein, if the Work involves federal funds, the Contractor shall be properly licensed by the time the Contract is awarded, pursuant to the provisions of Public Contract Code section 20103.5.

11. BID GUARANTEE (BOND)

Each bid shall be accompanied by: (a) cash; (b) a certified or cashier's check made payable to City of Milpitas; or (c) a Bid Bond secured from a surety company satisfactory to the City Council, the amount of which shall not be less than ten percent (10%) of the Total Bid Price, made payable to City of Milpitas as bid security. Personal sureties and unregistered surety companies are unacceptable. The surety insurer shall be California admitted surety insurer, as defined in Code of Civil Procedure Section 995.120. The bid security shall be provided as a guarantee that within ten (10) working days after the City provides the successful bidder the Notice of Award, the successful bidder will enter into a contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful bidder fails to comply within said time, and City may enter into a contract with the next lowest responsive responsible bidder, or may call for new bids. No interest shall be paid on funds deposited with the City. City will return the security accompanying the bids of all unsuccessful bidders no later than sixty (60) calendar days after award of the contract.

12. IRAN CONTRACTING ACT OF 2010

In accordance with Public Contract Code Section 2200 *et seq*., the City requires that any person that submits a bid or proposal or otherwise proposes to enter into or renew a contract with the City with respect to goods or services of one million dollars and zero cents ($1,000,000.00) or more, certify at the time the bid is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Public Contract Code Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Public Contract Code Section 2202.5, or as a person described in subdivision (b) of Public Contract Code Section 2202.5, as applicable.

The form of such Iran Contracting Certificate is included with the bid package and must be signed and dated under penalty of perjury.

13. NONCOLLUSION DECLARATION

Bidders on all public works contracts are required to submit a declaration of noncollusion with their bid. This form is included with the bid package and must be signed and dated under penalty of perjury.

14. PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. To this end, Bidder shall sign and submit with its Bid the Public Works Contractor Registration Certification on the form provided, attesting to the facts contained therein. Failure to submit this form may render the bid non-responsive. In addition, each Bidder shall provide the registration number for each listed subcontractor in the space provided in the Designation of Subcontractors form.

15. WAGE THEFT CERTIFICATION

Bidders on public works contracts are required to submit a certification disclosing whether the Bidder or any of its proposed subcontractors has been found by a final court order or administrative action of an investigatory government agency to have violated federal, state or local wage and hour laws, including but not limited to the federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance, within the past five (5) years from the bid submission deadline.

16. BIDDER INFORMATION AND EXPERIENCE FORM

Each Bidder shall complete the questionnaire provided herein and shall submit the questionnaire along with its Bid. Failure to provide all information requested within the questionnaire along with the Bid may cause the bid to be rejected as non-responsive. The City reserves the right to reject any Bid if an investigation of the information submitted does not satisfy the Engineer that the Bidder is qualified to properly carry out the terms of the contract.

17. WORKERS' COMPENSATION CERTIFICATION

In accordance with the provisions of Labor Code Section 3700, Contractor shall secure the payment of compensation to its employees. Contractor shall sign and file with the City the following certificate prior to performing the work under this Contract:

> I am aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

The form of such Workers' Compensation Certificate is included as part of this document.

18. SIGNING OF BIDS

All Bids submitted shall be executed by the Bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of its Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the Bidder to each Bid and to any Contract arising therefrom.

If a Bidder is a joint venture or partnership, it may be asked to submit an authenticated Power of Attorney executed by each joint venturer or partner appointing and designating one of the joint venturers or partners as a management sponsor to execute the Bid on behalf of Bidder. Only that joint venturer or partner shall execute the Bid. The Power of Attorney shall also: (1) authorize that particular joint venturer or partner to act for and bind Bidder in all matters relating to the Bid; and (2) provide that each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of Bidder assumed under the Bid and under any Contract arising therefrom. The Bid shall be executed by the designated joint venturer or partner on behalf of the joint venture or partnership in its legal name.

19. SUBMISSION OF SEALED BIDS

Once the Bid and supporting documents have been completed and signed as set forth herein, they shall be uploaded to https://secure.procurenow.com/portal/milpitas-ca before the time and

day set for the receipt of bids. No oral, paper or telephonic bids will be considered. No forms transmitted via e-mail, facsimile, or any other means will be considered unless specifically authorized by the City as provided herein. Bids received after the time and day set for the receipt of bids shall be rejects, not accepted and/or returned to the bidder unopened.

Only where expressly permitted in the Notice Inviting Bids may bidders submit their bids via electronic transmission pursuant to Public Contract Code sections 1600 and 1601. Any acceptable method(s) of electronic transmission shall be stated in the Notice Inviting Bids. City may reject any bid not strictly complying with City's designated methods for delivery.

20. OPENING OF BIDS

At the time and place set for the opening and reading of bids, or any time thereafter, each and every bid received prior to the time and day set for the receipt of bids will be publicly opened and read. The City will leave unopened any Bid received after the specified date and time, and any such unopened Bid will be returned to the bidder. It is the bidder's sole responsibility to ensure that its Bid is received as specified. Bids may be submitted earlier than the date(s) and time(s) indicated.

The public reading of each bid will include the following information:

A. The name and business location of the bidder.

B. The nature and amount of the bid security furnished by bidder.

C. The bid amount.

Bidders or their representatives and other interested persons may be present at the opening of the bids. The bid opening shall occur via Zoom Conference Call. A link to the bid opening is as follows:

https://ci-milpitas-ca-gov.zoom.us/j/82519855017?pwd=Z3NaM2FaQ0tFZ04rUXg3RmxweURqdz09

The City may, in its sole discretion, elect to postpone the opening of the submitted Bids. The City reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid.

21. WITHDRAWAL OF BID

Any bid may be withdrawn either personally or by written request, incurring no penalty, at any time prior to the scheduled closing time for receipt of bids. Requests to withdraw bids shall be worded so as not to reveal the amount of the original bid. Withdrawn bids may be resubmitted until the time and day set for the receipt of bids, provided that resubmitted bids are in conformance with the instructions herein.

Bids may be withdrawn after bid opening only by providing written notice to City within five (5) working days of the bid opening and in compliance with Public Contract Code Section 5100 *et seq*., or as otherwise may be allowed with the consent of the City.

22. BIDDERS INTERESTED IN MORE THAN ONE BID

No Bidder shall be allowed to make, file or be interested in more than one bid for the same work unless alternate bids are specifically called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders. No person, firm, corporation, or other entity may submit a sub-proposal to a Bidder, or quote prices of materials to a Bidder, when also submitting a prime Bid on the same Project.

23. SUBSTITUTION OF SECURITY

The Contract Documents call for monthly progress payments based upon the percentage of the Work completed. The City will retain a percentage of each progress payment as provided by the Contract Documents. At the request and expense of the successful Bidder, the City will substitute securities for the amount so retained in accordance with Public Contract Code Section 22300.

24. PREVAILING WAGES

The City has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the Contract. These rates are available at the City or may be obtained online at http://www.dir.ca.gov. Bidders are advised that a copy of these rates must be posted by the successful Bidder at the job site(s).

25. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code Sections 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

26. INSURANCE REQUIREMENTS

Prior to commencing work, the successful bidder shall purchase and maintain insurance as set forth in the General Conditions.

27. PERFORMANCE BOND AND PAYMENT BOND REQUIREMENTS

The successful bidder will be required to furnish a Labor and Material Payment Bond and a Faithful Performance Bond each in an amount equal to one hundred percent (100%) of the contract price. Each bond shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120 and is admitted by the State of California. Each bond shall be accompanied, upon the request of City, with all documents required by California Code of Civil Procedure Section 995.660 to the extent required by law. All bonding and insurance requirements shall be completed and submitted

to City within ten (10) working days from the date the City provides the successful bidder with the Notice of Award.

28. SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses and fees required by the agencies with authority in the jurisdiction in which the Work will be located, unless otherwise expressly provided by the Contract Documents.

29. FILING OF BID PROTESTS

Bidders may file a "protest" of a Bid with the City of Milpitas City Engineer. In order for a Bidder's protest to be considered valid, the protest must:

A. Be filed in writing within five (5) calendar days after the bid opening date;

B. Clearly identify the specific irregularity or accusation;

C. Specify in detail the grounds for protest and the facts supporting the protest; and

D. Include all relevant, supporting documentation with the protest at time of filing.

If the protest does not comply with each of these requirements, the City may reject the protest without further review.

If the protest is timely and complies with the above requirements, the City Engineer, or other designated City staff member, shall review the protest, any response from the challenged Bidder(s), and all other relevant information. The City Engineer will provide a written decision to the protestor.

The procedure and time limits set forth in this Article are mandatory and are the sole and exclusive remedy in the event of a Bid protest. Failure to comply with these procedures shall constitute a failure to exhaust administrative remedies and a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.

30. BASIS OF AWARD; BALANCED BID

The City shall award the Contract to the lowest responsible Bidder submitting a responsive Bid. The lowest Bid will be determined on the basis of the Total Base Bid alone unless otherwise set forth in the Notice Inviting Bids.

The City may reject any Bid which, in its opinion when compared to other Bids received or to the City's internal estimates, does not accurately reflect the cost to perform the Work. The City may reject as non-responsive any Bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items.

31. AWARD PROCESS

Once all Bids are opened and reviewed to determine the lowest responsive and responsible Bidder, the City Council may award the contract. The apparent successful Bidder should begin to prepare the following documents: (1) the Performance Bond; (2) the Payment Bond; and (3)

the required insurance certificates and endorsements. Once the City notifies the Bidder of the award, the Bidder will have fourteen (14) calendar days from the date of this notification to execute the Contract and supply the City with all of the required documents and certifications. Regardless of whether the Bidder supplies the required documents and certifications in a timely manner, the Contract time will begin to run twenty-one (21) calendar days from the date of the Notice of Award. Once the City receives all of the properly drafted and executed documents, certifications from the Bidder, and any other documents as maybe specified in the Contract Documents, the City shall issue a Notice to Proceed to that Bidder.

32. EXECUTION OF CONTRACT

As required herein the Bidder to whom an award is made shall execute the Contract in the amount determined by the Contract Documents. The City may require appropriate evidence that the persons executing the Contract are duly empowered to do so. The Contract and bond forms to be executed by the successful Bidder are included within these Specifications and shall not be detached.

00 41 43 – BID FORMS

1.1 Bid Acknowledgement.

NAME OF BIDDER: McGuire and Hester

To the Honorable City Council of the City of Milpitas, attn City Clerk:

The undersigned hereby declare that we have carefully examined the location of the proposed Work, and have read and examined the Contract Documents, including all plans, specifications, and all addenda, if any for the following Project:

NIB 2511 - CONSTRUCTION OF MAIN LIFT ODOROUS EMISSIONS CONTROL FACILITY

A We hereby propose to furnish all labor, materials, equipment, tools, transportation, and services, and to discharge all duties and obligations necessary and required to perform and complete the Project, as described and in strict conformity with the Contract Documents for the Total Bid Price indicated herein.

B The undersigned agrees that this Bid constitutes a firm offer to the City which cannot be withdrawn for the number of calendar days indicated in the Notice Inviting Bids from and after the Bid opening, or until a Contract for the Work is fully executed by the City and a third party, whichever is earlier.

C The undersigned has by careful examination of the Contract Documents and any addenda thereto, and by examination of the actual Site conditions, satisfied itself as to the nature and location of all Work, the plans and specifications, and the general and local conditions to be encountered in the performance of any Work, the requirements of the Contract and all other matters which can in any way affect the Work or the cost thereof.

D [RESERVED]

E Attached hereto and by this reference incorporated herein and made a part of this Bid are the following forms which have been completed and executed by undersigned Bidder:

1. Designation of Subcontractors form.
2. Bidder Information and Experience form.
3. Noncollusion Declaration form.
4. Iran Contracting Act Certification form.
5. Public Works Contractor Registration Certification form.
6. Attached is the completed Wage Theft Certification form.
7. Contractor's Certificate Regarding Workers' Compensation form.

8. Bid Guarantee in the amount of not less than 10% of the Total Bid Price.

F If awarded a contract, the undersigned hereby agrees to sign the contract and furnish the necessary bonds and certificates of insurance within fourteen (14) days after the City provides the successful bidder with the Notice of Award.

G Upon receipt of the signed contract and other required documents, the contract will be executed by the City, after which the City will prepare a letter giving Contractor Notice to Proceed. The official starting date shall be the date of the Notice to Proceed, unless otherwise specified. The undersigned agrees to begin the Work within ten (10) working days of the date of the Notice to Proceed, unless otherwise specified.

H Bidder is an individual _____, or corporation __X__, or partnership _____, organized under the laws of the State of __California_____.

I Bidder represents and confirms that license(s) required by California State Contractor's License Law for the performance of the subject project are in full effect and proper order. The following are the Bidder's applicable license number(s), with their expiration date(s) and class of license(s):

95879 Exp. 11/30/2021

A, B, C21, C27, C31, HAZ

If the Bidder is a joint venture, each member of the joint venture must include the required licensing information.

(SIGNATURES CONTINUED ON NEXT PAGE)

J The undersigned that the representations made herein herein are true and correct and all of the information submitted in connection with this Bid are made under penalty of perjury under the laws of the State of California.

Executed at Alameda, on this 21st day of May, 2021.

(Bidder's Name – Print or Type)

Bruce W. Daseking, Exec. VP/Treasurer
(Name and Title)

(Corporate Seal)

(Signature) McGuire and Hester

Names of individual members of firm or names and titles of all officers of corporation and their addresses are listed below:

Name Michael R. Hester Title President

Complete Address 2810 Harbor Bay Parkway, Alameda, CA 94502

Phone 510 632-7676 Fax 510 562-5209

Name Brock N. Grunt Title Exec. VP/Secretary

Complete Address 2810 Harbor Bay Parkway, Alameda, CA 94502

Phone 510 632-7676 Fax 510 562-5209

Name Bruce W. Daseking Title Exec. VP/Treasurer

Complete Address 2810 Harbor Bay Parkway, Alameda, CA 94502

Phone 510 632-7676 Fax 510 562-5209

Name N/A Title

Complete Address

Phone Fax

1.2 BID SCHEDULE

NO.	ITEM DESCRIPTION	UNIT OF MEASURE	EST. QTY.	UNIT PRICE	TOTAL ITEM PRICE
1.	Mobilization/Demobilization	LS	1	65,000.00	65,000.00
2.	Diversion of Recyclable Waste Materials	LS	1	1,500.00	1,500.00
3.	Worker Protection and Safety/Shoring pursuant to the California Labor Code and all applicable safety orders and permits	LS	1	2,000.00	2,000.00
4.	All equipment and services in accordance with Section 11302	LS	1	635,000.00	635,000.00
5.	All other work in accordance with the Contract Documents, with the exception of work included under items 1 through 4	LS	1	590,000.00	590,000.00
				TOTAL BASE BID PRICE	1,293,500.00

TOTAL BID PRICE BASED ON BID SCHEDULE TOTAL OF UNIT PRICES
FOR NIB No. 2511 - Construction of Main Lift Odorous Emissions Control Facility

$ 1,293,500.00

Total Bid Price in Numbers

$ One Million Two Hundred Ninety Three Thousand Five Hundred Dollars

Total Bid Price in Written Form

In case of discrepancy between the written price and the numerical price, the written price shall prevail.

Bidders must provide pricing for every bid item. The costs for any Work shown or required in the Contract Documents, but not specifically identified as a line item are to be included in the related line items and no additional compensation shall be due to Contractor for the performance of the Work.

In case of discrepancy between the Unit Price and the Total Item Price set forth for a unit basis item, the unit price shall prevail and shall be utilized as the basis for determining the lowest responsive, responsible Bidder. However, if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the “Item Price” column, then the amount set forth in the “Item Price” column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the Unit Price.

For purposes of evaluating Bids, the City will correct any apparent errors in the extension of unit prices and any apparent errors in the addition of lump sum and extended prices.

The estimated quantities for Unit Price items are for purposes of comparing Bids only and the City makes no representation that the actual quantities of work performed will not vary from the estimates. Final payment shall be determined by the Engineer from measured quantities of work performed based upon the Unit Price.

1.3 List of Subcontractors

In compliance with the Subletting and Subcontracting Fair Practices Act Chapter 4 (commencing at Section 4100), Part 1, Division 2 of the Public Contract Code of the State of California and any amendments thereof, Bidder shall set forth below: (a) the name and the location of the place of business, (b) the California contractor license number, (c) the DIR public works contractor registration number unless exempt pursuant to Labor Code Sections 1725.5 and 1771.1, and (d) the portion of the work which will be done by each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the work or improvement to be performed under this Contract in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price. Notwithstanding the foregoing, if the work involves the construction of streets and highways, then the Bidder shall list each subcontractor who will perform work or labor or render service to the Bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price or $10,000, whichever is greater. No additional time shall be granted to provide the below requested information.

If a Bidder fails to specify a subcontractor or if a contractor specifies more than one subcontractor for the same portion of work, then the Bidder shall be deemed to have agreed that it is fully qualified to perform that portion of work and that it shall perform that portion itself.

As stated in the Instructions to Bidders, Bidder is required to complete at least Fifty-One Percent (51%) of the contract value with its own forces. Bidder shall indicate the value of each subcontractor's work and the sum may not exceed the allowable amount.

Work to be done by Subcontractor	Name of Subcontractor	Location of Business	CSLB Contractor License No.	DIR Registration Number	% of the Work
Concrete (partial)	Casey Fogli	Hayward, CA	265292	1000008424	9%
Electrical	St. Francis Electric	San Leandro, CA	1003811	1000022208	7%
Coatings	Jeffco Painting & Coatings	Vallejo, CA	364702	1000001665	0.7%

Work to be done by Subcontractor	Name of Subcontractor	Location of Business	CSLB Contractor License No.	DIR Registration Number	% of the Work

(Attach additional sheets if necessary)

Name of Bidder McGuire and Hester

Signature

Name and Title Bruce W. Daseking, Exec. VP/Treasurer

Dated May 21, 2021

1.4 Bidder Information and Experience Form

A. INFORMATION ABOUT BIDDER

NOTE: Indicate not applicable ("N/A") where appropriate. If Bidder is a joint venture, pages shall be duplicated and information provided for all parties to the joint venture.

1.0 Name of Bidder: McGuire and Hester

2.0 Type, if Entity: California Corporation

3.0 Bidder Address: 2810 Harbor Bay Parkway

Alameda, CA 94502

510 632-7676 — Facsimile Number

510 562-5209 — Telephone Number

estimating@mcguireandhester.com — Email Address

4.0 How many years has Bidder's organization been in business as a Contractor? 95 years

5.0 How many years has Bidder's organization been in business under its present name? 95 years

5.1. Under what other or former names has Bidder's organization operated? N/A

6.0 If Bidder's organization is a corporation, answer the following:

6.1. Date of Incorporation: 4/7/1947

6.2. State of Incorporation: California

6.3. President's Name: Michael R. Hester

6.4. Vice-President's Name(s): Bruce W. Daseking

Brock N. Grunt

6.5. Secretary's Name: Brock N. Grunt

6.6. Treasurer's Name: Bruce W. Daseking

7.0 If an individual or a partnership, answer the following:

7.1. Date of Organization: N/A

7.2. Name and address of all partners (state whether general or limited partnership):

N/A

8.0 If other than a corporation or partnership, describe organization and name principals:

N/A

9.0 List other states in which Bidder's organization is legally qualified to do business.

Nevada

10.0 What type of work does the Bidder normally perform with its own forces?

Grading, Paving, Concrete, Underground and Landscaping

11.0 Has Bidder ever failed to complete any work awarded to it? If so, note when, where, and why:

None

12.0 Within the last five years, has any officer or partner of Bidder's organization ever been an officer or partner of another organization when it failed to complete a contract? If so, attach a separate sheet of explanation:

None

13.0 List Trade References:

Rudolph & Sletten - Mike Detata mike.detata@rsconst.com 650 216-3676

Hathaway Dinwiddie - Sara Carmod carmodys@hdcco.com 415 794-3172

Stanford University - Kelly Rohlfs krohlfs@standford.edu 650 868-2315

14.0 List Bank References (Bank and Branch Address):

City National Bank

2001 N. Main Street, #200

Walnut Creek, CA 94596

925 274-5125

15.0 Name of Bonding Company and Name and Address of Agent:

Western Surety Company

Woodruff-Sawyer & Co.

50 California Street, Floor 12, San Francisco, CA 94111

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B. LIST OF CURRENT PROJECTS (BACKLOG)

[**Duplicate Page if needed for listing additional current projects.**]

Project Name, & Owner Contact Information	Description of Bidder's Work	Completion Date	Cost of Bidder's Work
SEE ATTACHED			

McGuire & Hester Job Status Report as of January 31, 2021

Job #	Job Name	Contract Amt	% Comp	Contract Backlog
4006	CITY OAKLAND-Lakeside Green Street	15,462,138.32	98%	316,036
4049	R&S-LBNL IGB and MUP	3,215,182.46	94%	184,373
4052	CITY OAKLAND-Peralta St Streetscape	4,078,000.00	99%	22,683
4234	TURNER-PG&E EER Warehouses Brisbane	1,652,270.46	97%	45,416
4251	CLARK-Highland Hospital ACT	5,052,297.00	99%	57,418
4285	MILLIE AND SEVERSON-OMP Pacific Commons	11,766,807.50	98%	224,886
4298	GLORIA TERRACE LLC-Gloria Terrace Sitework	3,409,575.38	98%	59,195
4315	CITY ALAMEDA-Cyclic Sewer Replacement Phase 15	4,591,088.77	99%	32,556
4336	CITY OF ALAMEDA - Cross Alameda Trail Ralph Appezzato	4,953,003.00	100%	22,770
4338	TURNER - Zeiss Innovation Center	2,159,139.14	97%	63,114
4376	LSD - Happy Valley and Lafayette Elementary Schools Inc. 1	6,394,158.59	100%	17,304
4384	PACIFIC STATES ENVIRONMENTAL - 73rd Avenue Remedia	59,008.60	1%	58,482
4387	SWINERTON - KOMC Meadow	1,759,616.59	100%	0
4395	CITY OF OAKLAND - On-Call Citywide Pavement Rehab 2019	15,125,107.26	62%	5,712,504
4395C	CITY OF OAKLAND - On-Call TO #4	3,378,596.17	54%	1,554,662
4395E	CITY OF OAKLAND - On-Call TO #6	8,849,431.60	30%	6,171,944
4414	CITY OF MARTINEZ - 19-21 On-Call Repair & Resurface	2,559,690.38	77%	585,760
4456	HERREROBOLDT - Sutter Santa Rosa Hospital Expansion	742,962.00	86%	104,048
4457	SWINERTON - NP3 Early Landscape - San Francisco	21,978,681.15	30%	15,430,648
4460	SUFFOLK - Moxy Hotel Landscape - Oakland	75,642.00	32%	51,459
4482	DSRSD - On-Call Sewer and Water	442,153.86	98%	8,459
4485	PANKOW - SFCM 50% CD GMP - San Francisco	775,861.50	64%	282,111
4488	R&S - CSUEB (N) CORE Bldg Minor Concrete	1,265,482.00	0%	1,264,248
4492	LEVEL 10 - KLA Amenities Bldg T1 - Landscape	895,058.59	99%	7,152
4499	XL CONST - Facebook-New 100 (FB Commissary)	2,281,122.93	90%	235,946
4512	RANSOME - UCB - Landscape Connection Hearst Avenue	257,952.00	90%	25,945
4519	Pankow - 1951 Harbor Bay Core & Shell Grading	557,296.39	96%	21,356
4522	R&S - CSUEB Library Annex Seismic Upgrade - Concrete	1,353,525.00	99%	11,309
4523	SRVUSD - Stone Valley MS Parking Lot-Field Renovation	2,213,529.50	94%	123,142
4524	City of Oakley - Vintage Parkway Repair & Resurfacing 214	1,134,337.22	100%	1,156
4530	CCC - 2019 Flood Control & Airport Maintenance	10,000.00	0%	10,000
4534	CITY OF OAKLAND - 2020 Oakland Fire Trails Grading	11,200.00	100%	0
4546	MK ELECTRIC - 5601 San Leandro Site UG	257,962.80	23%	199,302
4547	CITY OF ALAMEDA - Fire Station 2 Pavement	413,386.00	1%	409,515
4548	CITY OF ALAMEDA - 2020 Pavement Mgmt Ph 39 Alameda	1,310,857.97	98%	28,968
4550	LYON HOMES - Newark Force Main Ph 2	5,298,590.76	21%	4,173,511
4560	SWINERTON - JMH Demo & Utility Relocation	1,397,750.00	3%	1,359,004
4566	CITY OF OAKLAND - On Call Construction Services 2019	10,000.00	0%	10,000
4569	PLANT CONSTRUCTION - The Presidio Quartermaster Marsl	401,015.00	93%	28,357
4572	SWINERTON - Park Point Landscape	6,682,660.34	37%	4,193,201
4573	FEDEX - Gate 1 Crack Repair Oakland	293,067.00	97%	9,540
4581	MK ELECTRIC - Green Sage Cultivation	94,800.00	1%	93,633
4584	PRESIDIO-Presidio 2020 Pavement Rehab & Maintenance	4,835,203.01	28%	3,461,756
4586	SWINERTON - Beinoff Children's Hospital Oakland	50,000.00	8%	46,147
4589	CITY OAKLAND-Thornhill Drive Sidewalk Improvement	1,332,000.00	1%	1,321,653
4598	TURNER - Westrock Milpitas SWPPP	326,339.83	61%	127,557
4601	CITY OAKLAND-On Call Paving Services	12,686,200.00	0%	12,686,200
4610	DONATION - Alameda Co. Food Bank 2-Inch Milll & Overlay	11,168.80	100%	(0)
4611	TURNER - 30 Otis 100% CD Landscape	2,482,271.00	0%	2,479,585
4613	GIRON - Paving Work at Tunnel Tops - SF	14,890.00	89%	1,632
4615	HILLTOP MALL - Emergency 8" Fire Svc Repair at Loading Zc	29,282.00	100%	0

Job #	Job Name	Contract Amt	Comp	Backlog
4617	WARRANTY & JOB COST ON CLOSED JOBS - East Bay	0.00	100%	0
4621	CITY OF SAN LEANDRO - Emergency Repair 794 Fulton Ave	8,000.00	77%	1,825
4622	PORT OF OAKLAND-Berth 57,58 & 59 Sanitary Sewer	1,063,540.00	1%	1,055,113
4626	DUTRA GROUP - Alameda Marina Outfalls	328,493.00	0%	328,493
4123	STANFORD-Serra Roundabout Ext Precon	278,628.00	62%	105,625
4133	STANFORD-2017 Serra Roundabout	16,974,810.22	87%	2,205,520
4219	R&S-Microsoft SVC BP2C Site Util	19,088,605.12	94%	1,084,538
4240	STANFORD-Serra Mall and Encina Hall	4,603,664.00	91%	398,039
4293	ACCO - Microsoft SVC Trenching	2,156,305.01	100%	0
4310	STANFORD-Via Ortega North	5,114,647.00	94%	301,542
4314	LEVEL 10-Stanford CAM1 Utilities	1,921,174.50	99%	21,623
4365	TRUEBECK - Industrial Road Exterior Carpentry	779,879.00	41%	460,402
4372	LEVEL 10 - Stanford CAM 1 Landscaping	4,986,575.00	95%	244,115
4373	CITY OF PALO ALTO - Recycled Water	158,228.00	1%	156,141
4413	STANFORD - Bonair-Pampus Scope	3,586,200.00	72%	998,227
4429	STANFORD - Lasuen Bicycle Circle	1,456,525.82	58%	613,241
4433	STANFORD - Stanford Credit Union Tree Removal	321,232.00	98%	5,913
4455	LEVEL 10 - Stanford Public Safety Building - Stanford	2,623,317.90	96%	115,286
4461	GOOGLE - E. Shorebird Trail Connection - Mountain View	10,000.00	61%	3,924
4471	SWINERTON - Kaiser Redwood City On-Site	3,224,705.77	100%	0
4484	SWINERTON - 239 Polhemus Ave.	8,190,291.01	21%	6,491,209
4487	STANFORD - Manzanita Turnaround	2,176,769.00	30%	1,526,804
4494	CBRE - Paragon Point Courtyard Renovation	116,758.09	23%	89,633
4500	STANFORD - Fremont Pathway - Stanford	110,530.00	100%	0
4508	STANFORD - Quarry Lights Increment 1	420,000.00	69%	130,748
4514	STANFORD - Campus Center Pavilion	43,849.00	9%	39,839
4520	STANFORD - LECI Circulation	100,000.00	1%	98,665
4529	STANFORD - Arboretum Phase 1	151,950.00	99%	1,428
4532	LPJUSD - Loma Prieta Track & Field	1,867,166.72	97%	52,586
4536	DOME CONST. - Stratford School San Bruno	65,000.00	28%	46,690
4537	STANFORD - Sand Hill Road Waterline Replacement	390,569.00	99%	4,398
4539	R&S - Intuit Project Landscape	3,677,856.00	0%	3,677,856
4542	R&S - ECH Old Main Demo - Mountain View	1,215,627.00	0%	1,215,627
4545	SWINERTON - Moffett Airfield Fuel Farm	24,200.00	11%	21,540
4551	ARE - Precon Services Geng Development	1,948,257.00	61%	755,283
4556	ROSENDIN - Oppidan Data Center - Site Utilities	1,259,711.67	31%	873,146
4564	STANFORD - Casper Lot	1,410,404.00	0%	1,407,743
4567	SEEGERT - PG&E Pavement & Site Improvements	5,538,186.00	33%	3,731,213
4574	METLIFE - Paragon Point Courtyard Renovation	285,654.44	14%	245,330
4577	STANFORD - History Corner Make Ready	14,000.00	100%	0
4579	CASEY-FOGLI - On-Call Work - SF	18,134.68	100%	0
4588	STANFORD - History Corner Utility Work	1,141,317.00	40%	687,998
4590	STANFORD - Campus Dr Domestic Water	1,251,160.45	59%	514,239
4593	STANFORD - Fremont Electioneer	50,000.00	19%	40,518
4600	SOUTHLAND INDUSTRIES - Recycled Water	122,491.00	6%	114,820
4603	ERRG - 12th Street Station UG	128,691.00	5%	121,783
4604	HENSEL PHELPS - Sunnyvale Civic Center Utilities	1,681,024.00	3%	1,627,664
4616	NATURAL SYSTEMS - Google Bay View Wastewater	1,505,000.00	0%	1,505,000
4618	WARRANTY & JOB COST ON CLOSED JOBS - South Bay	0.00	100%	0
4623	TRUEBECK - ECH Women's Hospital Expansion Utilities	710,868.00	1%	706,518
3840	WEBCOR-Transbay Roof Park Landscaping	33,406,520.85	99%	227,088
3868	R&S-El Camino IMOB Make Ready Site Util	1,771,790.00	97%	57,680
4012	GECMS/M&H JV UBER-1455 & 1515 BP 2C	2,698,180.12	99%	21,559
4045	R&S-El Camino IMOB Garage/New Main Connect	7,233,288.00	99%	73,440

Job #	Job Name	Contract Amt	Comp	Backlog
4209	BURNS&McDONALD-SFO Transfer Line Pit Rep	2,268,847.00	100%	0
4222	HATHAWAY DINWIDDIE-Burlingame Pt Site	31,272,500.00	99%	326,402
4267	SKANSKA-SFO Boarding Area A Hydrant	16,990,549.29	100%	0
4267A	SKANSKA - Plot 6 Civil Work at SFIA	7,740,039.27	100%	11,780
4289	TRUEBECK CONS-Marin County Day School LS Upper	1,029,831.56	86%	140,917
4291	R&S-ECH IMOB & NMC BP 6A Landscape	451,008.00	81%	84,455
4296	R&S-IMOB - Landscaping & Off-Site Improvements	5,841,648.18	97%	168,127
4311	WEITZ CO-SFO Superbay Civil Package	8,433,692.84	99%	51,877
4367	TRUEBECK - San Mateo Health Campus Concrete & Undergr	1,834,726.70	99%	14,688
4374	BURNS & McDONNELL - SFO New Fuel Storage Tanks	11,108,855.00	100%	1,679
4392-01	HATHAWAY DINWIDDIE - Sierra Point Phase 2	11,572,015.10	33%	7,732,638
4392A	HATHAWAY DINWIDDIE - Sierra Point Pump Station	4,232,347.00	7%	3,939,253
4392B	HATHAWAY DINWIDDIE - Sierra Point Offsite Trans 7	559,074.00	0%	559,074
4400	TRUEBECK - Haskins Biotech Campus Landscape	2,441,187.25	98%	57,780
4401	SKANSKA - Autograph Hotel Upgrade	587,681.98	96%	24,267
4406	R&S - Hartzell Building Renovation	2,457,854.00	96%	93,516
4458	HATHAWAY DINWIDDIE - Kilroy Oyster Point Development	8,931,357.28	38%	5,546,024
4467	GECMS/M&H JV CAHILL - MB Block 6W - SF	566,196.00	36%	361,714
4477	HATHAWAY DINWIDDIE - Gateway of Pacific Phase 2&3 Site	3,093,219.83	47%	1,643,376
4478	BOLDT - UCSF ZSFG Site Civil	3,643,830.46	61%	1,411,758
4478A	BOLDT - UCSF ZSFG Temp Paving	35,500.00	99%	263
4510	R&S - FB Bldg 104 Landscape - Burlingame	2,599,990.00	13%	2,258,239
4518	Turner - SFO T3W Sitework - San Francisco	111,963.00	15%	95,366
4525	R&S - Sutter MBC Landscape C/O	421,383.84	59%	173,329
4527	ICB - 7th & Mission Plaza, SF Federal Bldg	752,203.00	2%	738,411
4540	BUILD GROUP - M2-90CD 941 Mission St Landscape - SF	306,859.00	0%	306,804
4562	CASEY-FOGLI - UCSF PCMB - 3RD & 16TH	60,335.93	76%	14,632
4575	TURNER - PG&E San Rafael Paving	1,780,311.00	30%	1,250,653
4576	CASEY-FOGLI - On-Call Work - SF	35,217.21	100%	0
4580	MORROW-MEADOWS - Sierra Point Ph2 A, B, C	30,000.00	0%	30,000
4592	HATHAWAY DINWIDDIE - Sierra Point Towers Corner	851,252.00	1%	841,671
4594	ECH - Added Punch-List - Close-Out Items as Requested	11,633.22	0%	11,633
4596	TRUEBECK - Gilead Park Rough Grade & Demo	629,250.00	4%	604,751
4605	PLANT CONSTRUCTION - Doyle Dr Phase 3B	3,777,810.00	0%	3,764,696
4614	UMI - Hand Excavation at Sierra Pt. - Brisbane	123,998.00	100%	0
4619	WARRANTY & JOB COST ON CLOSED JOBS - West Bay	0.00	100%	0
4625	DESILVA GATES - Genesis Marina Utility	2,589,979.00	0%	2,589,979
4236	R&S-New O Street Office Building	4,309,724.75	79%	898,270
4323	OTTO CONSTRUCTION - Powerhouse Science Center	2,025,665.56	98%	40,248
4393	GLEI - Sutter Basin Levee - Sutter County	2,880,240.33	99%	18,473
4431	CITY OF ROSEVILLE - Hillcrest Drainage Improvement Projec	3,964,119.35	99%	54,897
4468	LENNAR - Barrett Ranch - Backbone Imp Ph 1 - Sacramento	5,607,464.83	87%	742,724
4476	BOLDT - Natomas Paso Verde #2	5,123,244.10	94%	325,133
4498	S & B JAMES CONST - UCDH Point West Specialty Clinics	908,363.05	100%	0
4501	CARTER-KELLY - LLB-Fallbrook Westmore Oaks Homecomir	2,229,472.66	93%	161,601
4533	SEEGERT CONST. - NNRH Daycare Roof Demo - Revised Pı	539,400.00	58%	225,002
4535	OKLAND CONST. - Feather River Temple BP 1	2,363,973.32	70%	719,036
4541	CITY OF DAVIS - 66 Influent Sewer Sliplining	1,738,960.98	100%	5,026
4544	SIEMENS - Storage Yard French Rd.	742,387.00	100%	501
4557	SJWD - WTP Residual Area Stormwater LS Project	435,325.00	42%	251,605
4568	CO. OF SACRAMENTO - Mather Airport Repair of Localized F	895,714.40	44%	501,552
4578	CITY OF LATHROP - River Islands Parkway Widening Project	1,350,314.00	70%	405,344
4585	CITY OF DAVIS - Core Area Manhole Replacement & Installat	49,900.00	100%	0
4587	SEEGERT CONST. - Wheatland - Drive Entry Construction	347,366.58	20%	278,691

Job #	Job Name	Contract Amt	Comp	Backlog
4595	DUCKS UNLIMITED - Gray Lodge Wildlife Area Water Supply	1,270,720.00	19%	1,024,640
4597	CITY OF DAVIS - Sewer Lift Station No. 4 Rehabilitation	3,118,676.25	2%	3,060,856
4599	DONATION JOB - Otto Construction PCPD Mark	16,430.00	100%	0
4602	CITY OF DAVIS - Downtown Water Barriers	34,200.00	45%	18,855
4606	AIRCO - Kaiser Morse, Sacramento Water Disconnect	111,000.00	2%	108,820
4607	SASD - Capitola Pump Station Rehabilitation Project	1,955,572.00	1%	1,928,964
4608	SEEGERT CONST. - Emergency FW Repair, Red Bluff PG&E	23,015.80	100%	0
4609	CITY OF FAIRFIELD - West Texas Gateway Improvement	3,935,669.75	1%	3,891,992
4612	CITY OF GALT - Emergency Fire Water Repair	36,812.50	28%	26,520
4620	WARRANTY & JOB COST ON CLOSED JOBS - Sacramento	0.00	100%	0
4624	SEEGERT CONST. - PG&E Redding Frontage Improvements	229,700.00	0%	229,160
	Company Total	501,214,712		147,310,921

C. LIST OF COMPLETED PROJECTS – LAST THREE YEARS

[**Duplicate Page if needed for listing additional completed projects.**]

Project Name, & Owner Contact Information	Description of Bidder's Work	Completion Date	Cost of Bidder's Work
SEE ATTACHED			

Project Name: SFO Superbay Civil Package

Project Address: 1060 N. Access Rd. SFO Airport

Project Description: General Project scope of work is to install a new pump house, Fire Water Tanks, utility infrastructure and fire suppression system for the United and American Airlines Superbay Hangar at SFO Airport.

H20 System:
- 5,300 LF of 12" C900 Pipe for New fire hydrants and pump house FW supply.
- 900 LF of 24" Fused HDPE Pipe for Underground Fire suppression line from Pump house to the Hangar
- 850 LF of 8" C900 Pipe for New Fire Hydrants
- 900 LF of 6" and 8" C900 Pipe for FDC underground lines

Industrial Waste System:
- 2 Each 12' diameter x 23' deep precast Vaults for Ind. Waste lift station. Includes 6" and 12" pumps, check valves, and plug valves
- 1 Ea. Above ground 10' diameter x 30" holding tank for Industrial waste from lift station.
- 600 LF of 8" C900 Pipe for Gravity Industrial Waste underground Lines.

Industrial Waste Force Main –
- 1900 LF of 6" C900 Pipe for Industrial Waste Force Main
- 550 LF Directional Drill of 8" HDPE Fused Pipe inside 16" HDPE Fused casing for Industrial Waste Force Main

Storm Drain – 200 LF of 6" PVC for roof pump house Roof Drains

10,000 SF of structural Excavation for New Pump House Building and 2 EA. 55' Diameter Fire Water Holding Tanks.

Project Data:
- Prime or Subcontractor: Subcontractor
- Percent Self Performed: 90%
- Project Size (Gross Sq. Ft.): 400,000 sf
- LEED Certification Type: NA
- Original Contract Amount: $6,205,000.00
- Final Contract Amount: $8,350,000.00
- Amount of Change Orders: $2,145,000.00
- Number of Change Orders: 46
- Start Date: 1/30/2019
- Original Contract Completion Date: 12/1/2019
- Extended Contract Completion Date: 10/1/2020
- Actual Contract Completion Date: 10/1/2020

Owner: San Francisco International Airport

- Contact: Jenna M. Castro
- Email: jenna.castro@flysfo.com
- Address: P.O. Box 8097, San Francisco, CA 94128
- Phone: 650 821-5305

Client: Weitz Co.

- Contact: Mike Griever
- Email: mike.griever@weitz.com
- Address: 5901 Thornton Avenue, Des Moines, IA 50321
- Phone: 513 815-1739

Inspector of Record:

- Contact: Mike Parrish
- Phone: 209 338-7647

Design Team Info:

- Construction Manager: AGS
  - Contact: Jim Herrenbruck
  - Phone: 510 388-1475
- Civil Engineer: Telemon Engineering Consultants
  - Contact: Doug Zuuring
  - Phone: 415 837-1336
- Architect: OCI Associates Inc.
  - Contact: Kaz Kazeminia
  - Phone: 407 332-5110

M&H Team Info:

- Project Manager: Danny Robinson
- Superintendent: Mike Haley
- Lead Estimator: Duane Schulze, Keith Ones
- Area Manager: Kevin Hester
- Foreman: Simana Moli, David Floyd, Jose Alarcon

Project Name: Lincoln Airport Fuel Tank

Project Address: 1410 Flightline Drive, Lincoln, CA

Project Description: Design Bid to provide and install (1) AVGas Fuel Tank System and (1) JetA Fuel Tank System. Which included all Electrical conduits/Panel components, site grading to provide concrete slab 36'x59', minimal striping.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 70%
- Project Size (Gross Sq. Ft.): 40,000
- LEED Certification Type: NA
- Original Contract Amount: $1,020,088.00
- Final Contract Amount: $1,080,398.70
- Amount of Change Orders: $60,310.70
- Number of Change Orders: 4
- Start Date: 10/22/2019
- Original Contract Completion Date: 01/31/2020
- Extended Contract Completion Date: 07/10/2020
- Actual Contract Completion Date: 07/10/2020

Owner: City Of Lincoln

- Contact: Roland Neufeld
- Email: roland.neufeld@lincolnca.gov
- Address: 600 6th Street, Lincoln, CA 95648
- Phone: (916) 434-2481

Inspector of Record: Brandley Engineering

- Contact: R. Damon Brandley
- Phone: (916) 652-4725

Design Team Info:

- Construction Manager: Brandley Engineering
  - Contact: R. Damon Brandley
  - Phone: (916) 652-4725
- Civil Engineer: Brandley Engineering
  - Contact: R. Damon Brandley
  - Phone: (916) 652-4725

M&H Team Info:

- Project Manager: Arnie Garcia
- Superintendent: Curtis Smith, Carlos Maldonado
- Lead Estimator: Aaron Heppner
- Area Manager: Jeff Hoebel
- Foreman: Matthew Haggard, Ismael Castillo

Project Name: Water Main and Saddle Replacements

Project Address: Davis, CA

Project Description: Abandonment of Existing Water Main and installation of new water main (509 LF) and connection to existing water system. Reconnection of water services. Install and replace saddles (147 ea) and portions of service lines on designated water mains. Replace curb, gutter, and sidewalk. Grind and overlay pave an existing roadway.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 96%
- Project Size (Gross Sq. Ft.): 20,000
- LEED Certification Type: NA
- Original Contract Amount: $716,114.00
- Final Contract Amount: $679,456.00
- Amount of Change Orders: ($50,525.13)
- Number of Change Orders: 6
- Start Date: 03/01/2020
- Original Contract Completion Date: 07/31/2020
- Extended Contract Completion Date: NA
- Actual Contract Completion Date: 07/31/2020

Owner/Client: City of Davis

- Contact: Mike Davis
- Email: mwdavis@cityofdavis.org
- Address: 1717 5th Street, Davis, CA 95616
- Phone: (530) 757-5686

Inspector of Record: City of Davis

- Contact: Ken Pearce
- Email: kpearce@cityofdavis.org
- Phone: (530) 681-7913

Design Team Info:

- Civil Engineer: City of Davis
  - Contact: Terry Jue
  - Email: tjue@cityofdavis.org
  - Phone: (530) 574-9293

M&H Team Info:

- Project Manager: Brian Unruh
- Superintendent: Dennis Neal
- Lead Estimator: Aaron Heppner
- Area Manager: Jeff Hoebel
- Foreman: Steve Crocker

Additional Information: The community impact of this project was to improve resident water lines. As the first saddle project for M&H, it was a challenging start but in little time we hit production every day through successful completion.

Project Name: Hillcrest Drainage Improvement

Project Address: Hillcrest Drive, Roseville, CA

Project Description: Removal and replacement of 6,500' LF of 12" through 42" storm drain up to 22' deep. Removal, replacement and or relocation of 43 storm drain inlets. Removal and replacement of 19 new storm drain MHs. Removal and replacement of 3,770 LF of curb and gutter. Installation of 45 new pedestrian ADA ramps.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 90%
- Project Size (Gross Sq. Ft.): 100,000
- LEED Certification Type: NA
- Original Contract Amount: $3,557,606.00
- Final Contract Amount: $3,964,119.00
- Amount of Change Orders: $829,500.00
- Number of Change Orders: 25
- Start Date: 08/05/2019
- Original Contract Completion Date: 01/22/2020
- Extended Contract Completion Date: 04/11/2020
- Actual Contract Completion Date: 04/11/2020

Owner: City of Roseville

- Contact: Jesse Khatkar
- Email: jskhatkar@roseville.ca.us
- Address: 311 Vernon Street, Roseville, CA 95678
- Phone: (916) 774-5434

Inspector of Record: City of Roseville

- Contact: Darrell Robbson
- Email: drobbson@roseville.ca.us
- Phone: (916) 223-7109

Design Team Info:

- Civil Engineer: Wood Rodgers
  - Address: 3301 C Street, Bldg 100-B, Sacramento, CA 95816
  - Phone: (916) 341-7760

M&H Team Info:

- Project Manager: Tommy Konwinski
- Project Engineer: Al Guidice
- Superintendent: Dennis Neal
- Lead Estimator: Hugo Gutierrez
- Area Manager: Jeff Hoebel
- Foreman: Jose Ventura

Project Name: CSU Maritime Academy Water Valve Replacement

Project Address: 200 Maritime Academy Drive, Vallejo, CA 94590

Project Description: Removal and replacement of water valves (20 ea.) and fire hydrants (4 ea.) within the campus, which included working with maintenance staff coordinating and scheduling shut-downs while campus was in session.

Project Data:

- Prime or Subcontractor: Subcontractor
- Percent Self Performed: 100%
- Project Size (Gross Sq. Ft.): NA
- LEED Certification Type: NA
- Original Contract Amount: $202,000.00
- Final Contract Amount: $252,406.32
- Amount of Change Orders: $50,406.32
- Number of Change Orders: 2
- Start Date: 10/23/2019
- Original Contract Completion Date: Open-ended
- Extended Contract Completion Date: NA
- Actual Contract Completion Date: 1/14/2020

Owner: California State University Maritime Academy

- Address: 200 Maritime Academy Drive, Vallejo, CA 94590
- Phone: (707) 654-1000

Client: Otto Construction

- Contact: John Garayalde
- Email: jgarayalde@ottoconstruction.com
- Address: 1717 2nd St., Sacramento, CA 95811
- Phone: (916) 441-6870
- Fax: (916) 441-6138

Design Team Info:

- Construction Manager: Otto Construction
  - Contact: John Garayalde
  - Phone: (916) 441-6870
- Civil Engineer: Sandis
  - Phone: (916) 783-6900

M&H Team Info:

- Project Manager: Aaron Heppner
- Project Engineer: Grant Cassady
- Superintendent: Dennis Neal
- Lead Estimator: Sean Moss
- Area Manager: Jeff Hoebel
- Foreman: Steve Crocker

Project Name: C Street Crossing Closure

Project Address: Sacramento, CA

Project Description: Demolition of UPRR railroad crossing. Reconstruction of roadway with round two roundabouts where original UPRR crossing was located on C Street. 1046 CY of roadway excavation, 600 CY of Class 2 Base placement, 240 Tons of Type A HMA placement, 130 LF of 10" storm drain installation, 4 EA SDDI installation, 2 EA SDMH installation, 4600 SF of sidewalk installation.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 72.3%
- Project Size (Gross Sq. Ft.): 48,000
- LEED Certification Type: None
- Original Contract Amount: $528,304.00
- Final Contract Amount: $533,443.52
- Amount of Change Orders: $5,139.52
- Number of Change Orders: 3
- Start Date: 9/18/2019
- Original Contract Completion Date: 11/15/2019
- Extended Contract Completion Date: 11/20/2019
- Actual Contract Completion Date: 11/9/2019

Owner/Client: City Of Sacramento

- Contact: Philip Vulliet
- Email: PVulliet@cityofsacramento.org
- Address: 915 I Street, RM 2000, Sacramento, CA 95814
- Phone: (916) 808-5092

Inspector of Record:

- Contact: Jason Claremont
- Phone: (916) 801-7105

Design Team Info: City of Sacramento

- Construction Manager:
  - Contact: Philip Vulliet
  - Phone: (916) 808-5092
- Civil Engineer:
  - Contact: Aaron Silva
  - Phone: (916) 808-8300

M&H Team Info:

- Project Manager: Peter Giordano
- Project Engineer: Grant Cassady
- Superintendent: Dennis Neal
- Lead Estimator: Robert Herrera
- Area Manager: Jeff Hoebel
- Foreman: Roger Krug

Project Name: North Main Street Rehabilitation

Project Address: Walnut Creek, CA

Project Description: Demo 6 concrete walks and install ADA ramps, 14,195 SF digouts, grind and overlay 6,734 tons.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 80%
- Project Size (Gross Sq. Ft.): 183,200
- LEED Certification Type: NA
- Original Contract Amount: $978,985.00
- Final Contract Amount: $964,535.00
- Amount of Change Orders: ($14,450.00)
- Number of Change Orders: 5
- Start Date: 07/22/2019
- Original Contract Completion Date: 10/08/2019
- Extended Contract Completion Date: NA
- Actual Contract Completion Date: 10/08/2019

Owner: City Of Walnut Creek

- Contact: Michael Hawthorne
- Email: hawthorne@walnut-creek.org
- Address: 1666 North Main Street, Walnut Creek, CA 94596
- Phone: (925) 943-5899

Design Team Info:

- Civil Engineer: City Of Walnut Creek
  - Contact: Carlton Thompson
  - Phone: (925) 943-5839

M&H Team Info:

- Project Manager: Michael Laganowsky
- Project Engineer: Ryan Su
- Superintendent: Art Turrin
- Lead Estimator: Kevin Exberger
- Area Manager: Matt Finley
- Foreman: Keith “KC” Mollet

Project Name: Hayward New Sidewalks FY 19

Project Address: Hayward, CA

Project Description: Install 3,000 LF of Sidewalk, 3,200 LF of curb and gutter and 31,000 SF of roadway paving on 3 different residential streets in Hayward (Muir Street, Calhoun Street, and Walpert Street). Walpert Street is a residential street with lots of through traffic. New Alignment of sidewalk became too narrow to allow two-way traffic after hours. Portable traffic lights were used to control traffic.

Project Data:

- Prime or Subcontractor: Prime
- Percent Self Performed: 78%
- Project Size (Gross Sq. Ft.): 44,000
- LEED Certification Type: NA
- Original Contract Amount: $1,372,881.00
- Final Contract Amount: $1,566,268.00
- Amount of Change Orders: $157,678.00
- Number of Change Orders: 16
- Start Date: 07/05/2019
- Original Contract Completion Date: 10/29/2019
- Extended Contract Completion Date: 10/30/2019
- Actual Contract Completion Date: 10/30/2019

Owner/Client: City of Hayward

- Contact: Yama Farouqi
- Email: yama.farouqi@hayward-ca.gov
- Address: 777 B Street, Hayward, CA 94541
- Phone: (510) 583-4761

Inspector of Record: City of Hayward

- Contact: Paulo Pulu
- Email: paulo.pulu@hayward-ca.gov
- Phone: (510) 583-4753

M&H Team Info:

- Project Manager: Brian Thompson
- Project Engineer: Nick Creber
- Superintendent: Art Turrin
- Lead Estimator: Randy Leonard
- Area Manager: Matt Finley
- Foreman: Sean Pipkin, Ramon Figueroa

Project Name: Paso Verde K-8 School Increment 1

Project Address: Del Paso Road, Sacramento, CA

Project Description: New school construction including rough grading 900,000 sf / 56,000 cyds, installation of underground utility lines including: 3,900 feet of storm drain, 1,100 feet of sewer, 7,000 feet of domestic and fire water, gas, electrical and low voltage conduits to within 5' of buildings, 13 manholes, 60 drain inlets, 8,000 tons of AB, and 91,000 sf of lime treatment.

Project Data:

- Prime or Subcontractor: Sub
- Percent Self Performed: 85%
- Project Size (Gross Sq. Ft.): 900,000
- LEED Certification Type: NA
- Original Contract Amount: $2,900,500.00
- Final Contract Amount: $3,390,402.00
- Amount of Change Orders: $482,958.00
- Number of Change Orders: 12
- Start Date: 05/20/2019
- Original Contract Completion Date: 12/20/2019
- Extended Contract Completion Date: NA
- Actual Contract Completion Date: 12/20/2019

Client: Boldt Construction

- Contact: Bobby Barney
- Email: bobby.barney@boldt.com
- Address: 2150 River Plaza Drive, Sacramento, CA 95833
- Phone: (916) 583-5611

Owner: Natomas Unified School District

- Contact: Noe Lopez
- Email: nlopez@natomasunified.org
- Address: 1901 Arena Blvd., Sacramento, CA 95834
- Phone: (916) 567-5400

Inspector of Record:

- Contact: Armand Perez
- Email: aperez2760@gmail.com

Design Team Info:

- Civil Engineer: Wood Rodgers, Inc.
  - Contact: Peter Tobia
  - Phone: (916) 326-4491
- Architect: Lionakis
  - Contact: Brian Bell
  - Phone: (916) 558-1900

M&H Team Info:

- Project Manager: Tony Naredo
- Project Engineer: Austin Eberle
- Superintendent: Dennis Neal, Curtis Smith
- Lead Estimator: Sean Moss
- Area Manager: Jeff Hoebel
- Foreman: Richard Kent, Javier Ramos

McGuire and Hester
Reference List for Various Projects

Note: This is a partial list of projects completed by McGuire and Hester. The intent is to give the reviewer an understanding of the type of work the company has successfully completed.

Job No.	Job Name	Contract Amount	Description of Work	Completion Date	Owner/General Name	Phone Number	Fax Number	Contact Person
2905	TJPA Temporary Terminal	$20,551,908	Temporary Terminal Facility	01/11	Transbay Joint Power Authority	(415) 343-2454	(510) 947-0603	Phil Sandri
3065	OFFC Tank Farm C Improvement OIA	$16,563,205	Tank Farm Improvements and Jet Fuel Lines	12/10	Oakland Fuel Facilities Corporation	(818) 228-7500	(818) 228-7535	Jon Currier
3103	12th Street Reconstruction Project	$38,399,926	Road and Bridge Construction	04/13	City of Oakland	(510) 238-6864	(510) 238-7227	Jose Martinez
3209	San Carlos Center	$18,418,480	Green Roof, Landscape, Utilities, Demo	11/14	Skanska USA	(206) 799-2653	(510) 285-1801	Raul Rosales
3462	UCSF Mission Bay Block 25A Academic Office Building	$2,503,063	Demo, Site Furnishings, Earthwork, Excavation	3/15	Rudolph & Sletten	(650) 216-3600	(650) 599-9112	Mike Detata
3624	Ridgeview 7 Lift Station Removal	$296,307	New Pipe to Existing Gravity Supply Line	5/14	El Dorado Irrigation District	(530) 642-4022	(530) 642-4577	Tim Sullivan
3516	Large Diameter Hayward Fault Seismic Project	$19,199,124	12" to 48" Diameter Pipelines Modifications	9/15	Alameda County Water District	(510) 668-4200	(510) 770-1793	Chris Delp
3521	Dorsey Drive Interchange	$16,736,444	Interchange and Bridge Widening, and Auxiliary Lanes	12/14	City of Grass Valley	(916) 817-4700	(916) 817-4747	Greg Zeiss
3538	UPRR Grading, Drainage and Bridge Construction	$3,900,430	New Bridge and Track Grading	2014	Union Pacific Railroad	(402) 544-7228	(402) 233-2298	Warrenetta McDaniel
3546	UPRR 16 Span PCB Bridge Ripon	$2,014,700	Construct New 16 Span Bridge	2014	Union Pacific Railroad	(402) 544-8268	(402) 271-3252	Mary R. Schroll
3559	Clayton Regency Mobile Home Park Emergency	$3,160,800	Pressure Reducing Station, Water Pipeline, Valves	5/14	Contra Costa Water District	(925) 688-8000	(925) 688-8122	Jonathon Marshall
3575	Yates Lift Station Upgrades	$579,500	New Lift Station, Wet Well, Pump, and Piping	2/14	El Dorado Irrigation District	(530) 642-4022	(530) 642-4577	Tim Sullivan
3599	SF Public Safety Building	$5,250,000	Exterior Improvements, Sidewalks, Paving, Concrete	6/15	Pankow Builders	(415) 786-3161	(510) 893-5199	Justin Cook
3625	Waste Water Treatment Plant Fencing & Security	$477,000	Earthwork, Demo, Excavation, Grading and Drainage	2014	Dublin San Ramon Services District	(925) 828-0515	(925) 819-1180	Steven Delight
3631	Highway 4 Offsite Intersection Mitigation	$558,266	Turn Lane Construction and Signal Modification	3/14	Port of Stockton	(209) 946-0246	(209) 464-7244	Mark Tollini
3649	Steinbeck School Soccer Fields	$4,305,976	Site Prep, Demo, Grading, Utilities, Synthetic Turf	4/15	City of San Jose	(408) 535-8394	(408) 292-6296	Morgan Loatfi
3681	Karl Nordvik Community Park	$2,301,483	Parking Lot, Synthetic Turf, Demo, Grading, Paving	12/14	City of Fremont	(510) 494-4530	(510) 494-4721	Mark Mennucci
3729	Werder & Destination Parks	$1,167,325	Earthwork, Site Drainage, Site Utilities, Planting	10/15	City of Foster City/Estero Municipal	(650) 286-3386	(650) 349-7204	Pricilla Tam
3740	Linear Park Bay Meadows	$2,061,258	Grading, Paving, Unit Pavers, Landscape	3/15	Wilson Meany	(408) 998-5577	(415) 905-5530	Scott Giddens
3742	East Eighth Street Improvements	$558,470	Road and Sidewalk Improvements	1/15	City of Davis	(530) 757-5686	(530) 757-5660	Michael Mitchell
3749	21st Amendment Brewery	$647,708	Water Pump Station, Site Utilities	4/15	Rudolph & Sletten	(650) 219-3600	(650) 599-9030	Terry Barnacal
3755	Fairfield Transportation Center	$1,348,672	Storm Drain and Sewer Line Relocation	7/15	City of Fairfield	(707) 428-7476	(707) 428-7607	Jay Swanson
3757	Noble Gulch Trunkline Relocation	$9,562,124	11,800 lf of Sewer Trunkline, 1,900 ft Slip Lining	1/16	Santa Cruz County Sanitation	(831) 454-2809	(831) 454-2089	Shaun Deyhim
3761	Olympic Pump Station & Force Main	$2,583,422	Pump Station, HDPE Sewer Force Main	2/16	City of San Bruno	(650) 616-7083	(650) 876-0256	Wing Wong
3766	Gleason Drive Recycled Water Main Extension	$1,289,998	3,750 lf of 10", 250 lf of 6", 505 lf of 4", and 740 lf of 8" C90	5/15	Dublin San Ramon Services District	(925) 875-2254	(925) 829-1180	Steve Delight
3769	Advanced Utility Relocation	$7,700,894	Water Mains, Excavation, Valves, Curbs and Gutters	12/15	AC Transit	(510) 577-8869	(510) 430-8831	David Bui
3799	Kentucky Avenue Sewer Rehabilitation	$498,560	Slipline 27" to 30" PVC and Cast Iron Pipe	9/15	City of Woodland	(530) 661-5830	(530) 661-5813	Ed Wisniewski
3826	West Juana Ave Pedestrian Improvements	$824,661	Sidewalk, Curb, Gutter, Storm Drain	12/15	City of San Leandro	(510) 577-3308	(510) 577-3294	Keith Cooke
3792	Latham Square Streetscape	$4,190,156	Streetscape Improvements and Road Realignment	3/17	City of Oakland	(510) 238-6939	(510) 238-7227	Calvin Hao
3802	Los Gatos & Saratoga High School Fields	$7,243,738	Synthetic Turf Football and Baseball Fields	3/16	Los Gatos - Saratoga Joint Union HS	(408) 354-2520	(408) 354-4198	Greg Medici
3823	Sycamore Park	$2,580,464	Grading, Water, Sewer, and Storm Drain	4/16	City of West Sacramento	(916) 224-0595	(916) 371-0845	Chris Surawski
3830	Brewer Road Pipeline	$1,714,435	12" Diameter Water Pipe	4/16	Nevada Irrigation District	(530) 273-6185	(530) 477-2646	Doug Hobbs
3860	East Bidwell Street Infill/Widening	$1,970,804	Roadway Widening, Pavement Repair/Resurface	7/16	City of Folsom	(916) 355-7272	(916) 351-0525	Laura Douglass
3873	Legacy Fields Sports Complex	$5,126,655	Six (6) Soccer, Seven (7) Baseball Natural Turf Fields	8/16	City of Tracy	(209) 831-6400	(209) 831-6439	S. Paul Verma
3880	Auburn Folsom Road Safety	$868,476	Roadway Widening, Pedestrian Signal, Sidewalk	2016	County of Placer	(530) 745-3528	(530) 745-7544	Robert Vrooman
3896	Woodward Reservoir Muir Point	$2,509,363	Lift Station Retrofit, Sewer Force Main	4/16	County of Stanislaus	(209) 525-6786		Stephanie Musso
3902	Hedge Ave. at Florin Rd. Signalization & Improvement	$1,264,864	Roadway Improvement, Excavation, Paving, Sidewalk	7/16	Lennar Communities	(916) 783-3224	(916) 783-3914	Larry Gualco

McGuire and Hester
Reference List for Various Projects

Note: This is a partial list of projects completed by McGuire and Hester. The intent is to give the reviewer an understanding of the type of work the company has successfully completed.

Job No.	Job Name	Contract Amount	Description of Work	Completion Date	Owner/General Name	Phone Number	Fax Number	Contact Person
3909	Sausal Vista Pump Station Project - Phase II	$993,400	New Pump Station, Excavation, Structural Concrete	10/16	West Bay Sanitary District	(650) 321-0384	(650) 321-4265	Bill Kitajima
3912	Recology San Bruno - Stormwater Improvements	$314,350	Install Stormwater Filtration System, Grading, Drainage	3/16	Recology Environmental Solutions	(707) 450-2343		Sally Schoemann
3923	Recology Stormwater Parallel Plates Sillicon Valley	$306,144	Install Parallel Plate Separators, Drainage	6/16	Recology Environmental Solutions	(707) 450-2343		Sally Schoemann
3926	Blairs Lane Bridge	$2,684,669	Construct New 2 Lane Bridge, Demo, Sidewalks	9/17	City of Placerville	(530) 642-5250	(530) 642-5568	Rebecca Neves
3927	Granite Drive Storm Drain	$597,518	30" Storm Drain, Demo, Manholes, Pipe Discharge	6/16	City of Rocklin	(916) 625-5028	(916) 625-5095	Zack Bosch
3942	Old Town Sewer Rehabilitation	$1,147,603	3,000 lf of 8" PVC, Sewer Laterals, Sewer Cleanouts	9/16	City of Folsom	(916) 355-7272	(916) 351-0525	Laura Douglass
3840	Transbay Roof Park	$32,280,000	Landscape, Hardscape, Irrigation, Paving and Concrete	8/18	Webcor Builders	(415) 978-5730	(510) 748-7800	Jeff Heath
3841	Fed Ex Oakland Hub Pavement Maintenance	$10,568,342	Repair Asphalt and Concrete Pavement	4/19	Federal Express Corporation	(510) 639-3714		Glenn Kirkland
3944	Backyard Sanitary Sewer Relocation Phase 3	$2,077,856	New Sewer Laterals Installed Using HDD and Open Cut	11/16	Union Sanitary District	(510) 477-7602	(510) 477-7501	Rollie Arbolante
3946	Willow Hill Pipeline	$4,609,635	Slip lining of 1,600 lf of 48" RCP with HDPE, 30" RCP, 24"	6/17	City of Folsom	(916) 355-7272	(916) 351-0525	Laura Douglass
3981	James Logan High Synthetic Track	$4,980,000	New Synthetic Track Fencing, Bleacher Modification	2/17	New Haven Unified School District	(510) 477-1100	(510) 477-9182	
3983	Cull Creek Dam Spillway	$1,069,290	Bypass Pumping, Cofferdam, Stream Diversion	11/16	Alameda County Flood Control	(510) 670-5450	(510) 670-5269	
4006	Lakeside Green Street	$14,137,751	Roadway Improvement and Landscape.	6/19	City of Oakland	(510) 238-7310	(510) 238-2346	Ali Schwarz
4022	Lodestar-Conestoga Pipeline	$1,697,250	Installation of a 12" Pipeline	9/17	Nevada Irrigation District	(530) 273-6185	(530) 477-2646	Douglas Hobbs
4033	Memorial Park South Water Meter Retrofit	$571,736	Installed 569 Meters, MXU's, Registers, Meter Boxes	12/16	City of West Sacramento	(916) 224-0595	(916) 371-0845	Dereck Goodwin
4053	Lake Merritt Improvement	$2,228,606	Streetscape, Bus Stop Shelter, Street Light Relocation	6/19	City of Oakland	(510) 238-7310	(510) 238-2346	Ali Schwarz
4102	Sean Diamond Park	$2,142,291	Turf Grass Areas, Landscaping, Site Furnishings	9/18	City of Dublin	(925) 833-6646		Rosemary Alex
4106	Cherryland Elementary Increment 1	$6,102,661	Underground Utilities, Site Grading, Demo	10/17	Hayward Unified School District	(510) 784-2600		Rose Garcia
4110	Laurel Creek Field and Parking Lot Expansion	$3,078,000	New Sod Field and Track, Shade Structure	8/17	Fairfield Suisun Unified School District	(707) 738-3864	(707) 255-2094	
4160	Rheem Blvd/Center Street 96-in Storm	$1,320,700	96" Storm Drain Culver Repair, Precast, Shoring	11/17	Town of Moraga		(925) 376-2034	
4169	R Street Phase III	$5,805,230	Roadway Reconstruction, Landscaping, Lighting	7/18	City of Sacramento	(916) 264-5685		Jose Ledesma
4052	Peralta Street Streetscape	$4,045,000	Streetscape, ADA Ramps, Pedestrian Lights	1/19	City of Oakland	(510) 238-7310	(510) 238-2346	Ali Schwarz
4062	Group 3 Sewer Pump Station	$3,298,343	Wetwells, Manholes, Force and Gravity Mains	1/18	City of Alameda	(510) 747-4851	(510) 747-4851	Jeanette Navarro
4072	UCSF Mission Bay 2nd Parcel Surface Improvements	$11,637,493	Surface Improvements, Irrigation and Storm Drain	3/19	University of California San Francisco	(415) 476-5391	(415) 476-6503	Tra Thanh
4104	East 9th Street Phase I Improvement	$6,988,293	Water, Sewer and Road Rehabilitation	3/19	City of Sacramento	(916) 808-1446		Richard Dalrymple
4125	Third Street Improvements, Phase I	$2,601,375	Storm Drain, Sanitary Sewer, Backfill	12/17	City of Davis	(530) 681-7912	(530) 758-4738	
4128	Cross Alameda Trail Jean Sweeney	$3,240,404	Demo, Grading, Excavation	10/18	City of Alameda	(510) 474-4851		Jeanette Navarro
4130	Mokelumne Aqueduct No 1	$3,011,929	New Pile Supported Concrete Temperature Anchor	1/19	East Bay Municipal Utility District	(866) 403-2683		Jonathan Tham
4146	Menlo Atherton Practice Field	$2,404,400	High School Practice Field	6/18	Sequoia Union High School District	(650) 369-1411	(650) 365-4734	Rosa Miralles
4147	Sequoia High Practice Field	$1,862,798	High School Practice Field	6/18	Sequoia Union High School District	(650) 369-1411	(650) 365-4734	Rosa Miralles
4197	Twin Force Mail Relocation	$8,271,729	Bore and Jack New Force Main Pipeline	2018	William Lyon Homes	(925) 543-5520		Joe Chretien
4200	Pleasant View Annexation Improvements	$1,311,915	Grading, Paving, Underground	8/18	City of Livermore	(925) 373-5265	(925) 960-4505	Tom Purcell
4206	Sacramento Executive Airport	$1,371,667	Runway Closure, Grading	2018	County of Sacramento	(916) 874-7281	(916) 874-7831	Tracy Soth
4218	Sewer Collection System and Remediation	$6,344,123	Sewer Main Replacement, CIPP Lining	9/18	City of Grass Valley	(530) 274-4373	(530) 274-4399	Catharine Dykes
4222	Burlingame Point	$31,250,000	Pipline, Pump Stations, Pedestrian Bridge	12/20	Hathaway Dinwiddie	(415) 986-2718	(415) 956-5669	Brian Chisholm
4231	Ramona Avenue Extension	$7,174,981	New Roadway, Landscape, Water Main	6/19	City of Sacramento	(916) 264-5685		Jose Ledesma
4266	Tim Spencer Alley Reconstruction	$1,733,715	Road Reconstruction, Water Main, Sanitary Sewer	3/19	City of Davis	(530) 681-7912	(530) 758-4738	

McGuire and Hester
Reference List for Various Projects

Note: This is a partial list of projects completed by McGuire and Hester. The intent is to give the reviewer an understanding of the type of work the company has successfully completed.

Job No.	Job Name	Contract Amount	Description of Work	Completion Date	Owner/General Name	Phone Number	Fax Number	Contact Person
4271	Stanley Middle School Increment 1	$5,624,278	New Utilities, Retaining Wall, Building Pad	7/19	Lafayette School District	(925) 284-7046		
4281	West Woodland Safe Routes to School	$4,107,075	Curb Ramps, New Bike Lanes, Striping	5/19	City of Woodland	(530) 661-5830	(530) 661-5813	Miguel Chavez
4304	Benicia Paving	$1,871,184	Paving	12/18	Union Pacific Railroad	(714) 510-4281	(323) 276-3131	
4311	SFO Superbay Civil Package	$8,350,000	Underground Utilities, Survey, Paving Site Demo	10/20	Weitz Co.	(515) 210-0433		Jacob Sterk
4336	Cross Alameda Trail Ralph Appezzato	$4,935,833	Low-Stress Four-Mile Bicycling and Walking Corridor	2/20	City of Alameda	(510) 747-4851	(510) 769-6030	Jeanette Navarro
4386	Module 4-5 Perimeter Road Kiefer Landfill	$4,929,294	Excavation, Reinforced Concrete Piping	11/19	County of Sacramento	(916) 876-9817		Brian Liebich
4415	New Market Drive Extension	$3,245,148	Earthwork, Gradng, Wet Utilities	12/20	City of Sacramento	(916) 264-5685		
4417	New Sidewalk FY 19	$1,566,268	Demo, Concrete Sidewalk, Curb Ramps	10/19	City of Hayward	(510) 583-4802		
4425	C Street Crossing Closure	$533,443	Demo, Excavation, UPRR Crossing	10/19	City of Sacramento	(916) 808-5092		Philip Vulliet
4430	On Call Water & Sewer Repairs	$527,417	Emergency Water Repairs	12/19	Dublin San Ramon Services District	(925) 570-8914		Daniel Leonardo
4459	Lincoln Airport Fuel Tank	$1,080,398	Design Bid, Fuel Tank System, Site Grading	7/20	City of Lincoln	(916) 434-2481		Roland Neufeld
4497	Pavement Repairs Elk Grove	$593,847	Asphalt Concrete, Speed Hump	5/20	City of Elk Grove	(916) 687-3005		Robert French
4521	Creekside Elementary School Paving Ph 2	$949,860	Asphalt Concrete Paving, Accessible Path	10/20	Lodi Unified School District	(209) 331-7223		Vickie Brum
4255	L Street Improvements	$5,186,678	Road Reconstruction, Water Lines, Concrete	5/20	City of Davis	(530) 757-5686	(530) 758-4738	Terry Jue
4559	McCaffrey Middle School Track & Field	$679,312	Paving, Storm Drain, Utilities, AC Track	10/20	S+B James Construction	(916) 290-8618		Hayden Meyers
Major Projects Currently Under Construction:				**Estimated**				
4285	OMP Pacific Commons	$4,470,153	Mass Grading, Site Utilities, Asphalt Paving, Curbs	2021	Millie & Severson	(925) 227-0700	(925) 227-0703	Sarah Russell
4296	IMOB Landscaping & Off Site Improvements	$4,438,799	Landscape, Off Site Improvements	2021	Rudolph & Sletten	(650) 216-3600	(650) 599-9030	
4315	Cyclic Sewer Replacement Phase 15	$4,917,145	Sanitary Sewer, Sewer Laterals, Manholes, Curb, Gutter	2021	City of Alameda	(510) 747-4851	(510) 769-6030	Jeanette Navarro
4374	SFO New Fuel Storage Tanks	$10,835,782	Demo, Excavation, Grading, Concrete, Piping, Pumps	2021	Burns & McDonnell	(650) 871-2926		Chris Snider
4414	2019-21 On Call Repair & Resurfacing	$2,573,972	Pavement Rehabilitation	2021	City of Martinez	(925) 372-3575		
4426	Citywide Digouts	$1,166,407	HMA, Replacement of Failed Wheel Paths	2021	City of Rocklin	(916) 625-5028		
4541	66 inch Influent Sewer Sliplining	$1,617,870	Slipline, Pipe Bursting, Excavation	2021	City of Davis	(530) 757-5686	(530) 748-4738	Terry Jue
4548	2020 Pavement Management Ph 39	$1,213,061	Asphalt Concrete, Curb Ramps	2021	City of Alameda	(510) 747-7900	(510) 769-6030	Trung Nguyen
4558	Pavement Repair, Grant Line, Kammerer & Waterman Road	$453,602	Asphalt Concrete Repair	2021	City of Elk Grove	(916) 478-3648	(916) 691-3173	Robert French
4578	River Island Parkway Widenting	$1,270,499	Road Widening from 2 to 5 Lanes, Overlay, Lighting	2021	City of Lathrop	(209) 941-7430	(209) 941-7449	Ken Reed
4589	Thornhill Drive Sidewalk Improvements	$1,469,380	ADA Ramps, Concrete Curb Gutter, Paving, Striping	2021	City of Oakland	(510) 238-2014	(510) 238-2346	Jing Jing Lin
4597	Sewer Lift Station No. 4 Rehabilitation	$3,118,676	Lift Station, Sewer Bypass, Slurry Seal, AC, Sliplining	2021	City of Davis	(530) 757-5686	(530) 748-4738	Terry Jue
4607	Capitola Pump Station Rehabilitation	$1,955,572	Pump Station, Demo, Paving Grading, Drainage	2021	Sacramento Area Sewer District	(916) 970-8001		Hilary Masters
4609	West Texas Gateway Improvements	$3,935,669	Bus Off-Ramp, Sidewalk, Crosswalks, Landscaping	2021	City of Fairfield	(707) 428-7505	(707) 428-7607	Phil Layoso
4622	Berths 57, 58 and 59 Sanitary Sewer	$1,063,540	Sanitary Sewer Lift Station	2021	Port of Oakland	(510) 627-1560		

D. EXPERIENCE AND TECHNICAL QUALIFICATIONS QUESTIONNAIRE

Personnel:

The Bidder shall identify the key personnel to be assigned to this project in a management, construction supervision or engineering capacity.

1. List each person's job title, name and percent of time to be allocated to this project:

SEE ATTACHED

2. Summarize each person's specialized education:

SEE ATTACHED

3. List each person's years of construction experience relevant to the project:

SEE ATTACHED

4. Summarize such experience:

SEE ATTACHED

Bidder agrees that personnel named in this Bid will remain on this Project until completion of all relevant Work, unless substituted by personnel of equivalent experience and qualifications approved in advance by the City.

Additional Bidder's Statements:

If the Bidder feels that there is additional information which has not been included in the questionnaire above, and which would contribute to the qualification review, it may add that information in a statement here or on an attached sheet, appropriately marked:

N/A

E. VERIFICATION AND EXECUTION

These Bid Forms shall be executed only by a duly authorized official of the Bidder:

I declare under penalty of perjury under the laws of the State of California that the foregoing information is true and correct:

Name of Bidder McGuire and Hester

Signature

Name Bruce W. Daseking

Title Exec. VP/Treasurer

Date May 21, 2021

KEY PERSONNEL

NAME	POSITION	YEARS OF EXPERIENCE	SPECIALTY
Michael R. Hester	President	27+	Estimator/Project Manager Grading & Paving Underground Structures
Brock N. Grunt	Exec. VP/Operations	28+	Underground Structures
Bruce Daseking	Exec. VP/Estimating Treasurer	31+	Estimator Underground Structures
Kevin Hester	Area Manager San Francisco	21+	Grading & Paving Underground
Jeff Hoebel	Area Manager Sacramento	17+	Grading & Paving Underground
Matt Finley	Area Manager East Bay	12+	Grading & Paving Underground Landscaping
David Buffa	Area Manager South Bay	16+	Grading & Paving Underground Landscaping
Matt Daley	Landscape Manager	19+	Landscaping
Mike Anderson	Underground Manager	15+	Underground
Kyle Carone	Grading/Paving Manager	14+	Grading & Paving
Mike Haley	Superintendent	40+	Underground
Nathan Fox	Superintendent	15+	Grading & Paving
Karl Herzer	Superintendent	32+	Landscaping
Brandon Borger	Safety Manager	18+	Safety/Training

Other individuals available upon request

Dave Buffa

Area Manager

510.632.7676
dbuffa@mcguireandhester.com

Qualifications

Education

University of the Pacific, Project Management

Certifications

LEED AP

Confined Space Entry

Erosion and Sediment Control Inpsector

Competent Person Trenching and Excavation

OSHA 30 Hour

Qualified SWPPP Practitioner

Fall Protection

UPRR e-Railsafe

Trenching Shoring and Excavation

CPR/First Aid

Asbestos Cement Pipe

C2 Rigging

Contacts

Mark E. Johnson
Devcon Construction
Sr. Project Manager
690 Gibralter Drive
Milpitas, CA 95035
P: 408.942.8200

Albert Huff
Bogard / Kitchell
Project Manager
350-A Coral Street
Santa Cruz, CA 95060
P: 831.466.2777

Summary

Beginning his career at a grading and paving construction company, David chose to accept a job offer from McGuire and Hester in 2002. The transition was fueled by David's desire to learn multiple trade disciplines. After speaking with other McGuire and Hester employees, he felt that the culture of the company was a fit for his family and personal values. Throughout the years David has worked at McGuire and Hester as a Project Engineer, Estimator, Project Manager and Senior Project Manager. His great rapport with employees and clients made him a perfect choice for Area Manager of our South Bay region.

Experience

Legacy Sports Complex

City of Tracy - $5.3 MM

- Installation of 6 soccer fields and 7 baseball fields.
- New concrete paving, drainage, and landscape.

Linear Park Bay Meadows

San Mateo - $2 MM

- Installation of a park that extends three long and narrow blocks.
- Grading, erosion control, storm drain inlets, finish grading, concrete sidewalk and curbs.
- Custom landscaping, including trellis, bocce ball court and cast in place seat walls.
- Safety surfacing and drinking fountain system.

San Carlos Medical Center

PAMF - $18.4 MM

- Pre-Construction services.
- Install of 4 story parking garage.
- Mass excavation for 18.1 acre medical facility.
- Domestic utilities, fire service, storm systems, sanitary sewer, utility team join trench, asphalt paving.
- Architectural concrete, 18,000 cy topsoil and bioswale import.
- Installation of 1 Acre American Hydrotech green roof.

Mike Anderson

VP, Underground

manderson@mcguireandhester.com

Education

B.S. Construction Management

Minor Business Administration

California State University, Chico

Associations

United Contractors

Pipe Users Group

Contacts

Chris Delp
Engineer Supervisor
Alameda County Water District
P: 510.668.4422
chris.delp@acwd.com

Kelly Rohlfs
Project Executive
Stanford University
P: 650.868.2315
krohlfs@stanford.edu

John Goodwin
Vice President
West Yost Associates
P: 530.792.3294
jgoodwin@westyost.com

Summary

When Michael is asked how he ended up in construction, he replies, "I had to choose between three passions, Engineering, Accounting and Law. I choose the profession that had all three". Michael came to McGuire and Hester in 2002 where he has held positions in Estimating, Project Engineering, GPS Management, Project Management and Design Build. After working as the Operations Manager for Underground/Mechanical he was promoted to Vice President, Group Manager for company-wide underground operations.

Responsibilities

- Oversight of group operations for the company
- Establish, implement, and communicate the strategic direction of group operations
- Mentorship, development and training of all personnel in group

Skills

- Business & construction management
- Strategic vision & ability to implement
- Technical skill and competency
- Excellent communication skills with employees, clients, and partners
- Construction methods and regulations

Recent Noteworthy Projects

- William Lyons Homes- Phase I and 2 Newark Force Main $12 MM
- Hathaway Dinwiddie - Shore at Sierra Point Pump Station $25 MM
- Burns & McDonnell - SFO Transfer Line & Hydrant System $1.8 MM
- Hathaway Dinwiddie - Burlingame Point $33 MM
- Natural Systems Utilities - Google Bay View Wastewater - $1.5 MM
- Boldt - UCSF ZSFG Site Civil - $2.8 MM

Mike Haley, General Superintendent

Experience Summary

Mike started his career at McGuire and Hester in 1977. During his career he has worked as a Laborer, Operator, Foreman, Operations Manager, Resource Manager, Area Manager and is now working as our General Superintendent for our Underground Division. Mike has years of experience with some of McGuire and Hester's most challenging underground projects. He is an expert in incorporating safety in to the work activities, public relations and quality control.

Certifications/Academic Credentials

Competent Person Trenching and Excavation
CPR/First Aid

Bachelor of Science, Business Management, St. Mary's College

Project Experience

City of Alameda - Group 3 Sewer Pump Station, Alameda
$3,099,132 contract removing and replacing equipment, rehabilitating existing wetwells, construction of new wetwells, construction of new manholes, installing new equipment, and replacing force and gravity mains at nine (9) sewage lift stations. Equipment to be replaced and installed include pumps, piping, valves, electrical equipment, and other items shown to be constructed on the contract drawings or specifications, including repair, and reconstruction of existing improvements affected by the Work, and incidentals for complete and usable facility. Completed in 2018.

Town of Moraga - Rheem Blvd/Center Street 96-Inch Storm Drain, Moraga
$1,515,513 contract to complete a 96 inch storm drain culvert repair. 24' deep x 115' long x 16' wide shoring with system 80 struts. Beam and plat shoring with several utility crossings utilizing lagging. Relocate/Replace 115LF of 6" sanitary sewer pipe with SDR 26. Grind and overlay 2" HMA. Install ADA ramp and new vertical curb. Completed in 2017.

City of Tracy – Legacy Sports Complex, Tracy
$5,363,353 contract for six (6) Soccer Fields and seven (7) Baseball Fields includes clear and grub of existing surface, earthwork and grading operations, including the installation of new concrete paving, drainage, fencing, edgebands, athletic furnishings, irrigation, natural turf, infield fines and landscape. Completed in 2016.

County of Santa Cruz - Neary Lagoon Force Main Rehab, Santa Cruz
$490,471 subcontract to Michels Corp for the rehabilitation of approximately 1,500 lineal feet of 36-inch diameter bar-wrapped pipe (AWWA C303) wastewater force main, using Cured-in-Place-Pipe (CIPP) lining process, along the District's Neary Lagoon Force Main, associated sewage flow bypass, sewer force main cleaning, debris disposal, installation of access tees, pre- and post-construction internal inspection, pressure and leakage testing, and any spot repairs as needed. Completed in 2016.

County of Santa Cruz – Noble Gulch Trunkline Relocation, Capitola
$9,561,124 contract for the construction of approximately 11,800 lf of deep sewer trunk line, including slip lining approximately 1,900 feet of existing pipe, Construction of 2 50' deep jacking pits and 3 receiving pits, 1,800 LF of Microtunnel, constructing approximately 62 new manholes, abandoning and sealing the existing sewer line and abandoning one pump station. Completed in 2016.

Stanford University - SLAC Office Building, Stanford
$1,216,334 contract to install parking lot, storm drain, hydronic piping, landscaping, curb and gutter, sidewalks and building pad. Completed in 2010.

City of Salinas - East Laurel Drive, Salinas
$2,895,221 contract for asphalt paving of East Laurel Drive, grinding, 5" deep lift paving, 2" overlay, striping, signage, signal light modification, concrete curb & gutter for median islands, storm drain, irrigation and landscaping. Completed in 2009.

Brandon Borger

Safety Manager

bborger@harborlinx.com

Qualifications

Education

Los Angeles College of Chiropractic - Doctor of Chiropractic

Certifications

CUSP

OSHA 30

First Aid

CPR

Contacts

Michael Hester
President
McGuire and Hester
P: 510.632.7676
mhester@mcguireandhester.com

Alan Williams
Safety Director
Alvah Construction
P: 530.999.8415

Andy Vasconi
President
Casey-Fogli Concrete
P: 510.887.0837
avasconi@caseyfogli.com

Summary

The safety, health, and welfare of all stakeholders is paramount to the project's success. Our Safety Manager, Brandon Borger is dedicated to achieving zero accidents and zero missed work. Brandon joined the construction industry in 2003 and has worked hard to ensure that every worker he comes into contact with is equipped to do their job safely. With open communication and support from Executive and Project Management, Brandon's oversight ensures that our workforce is well trained and in compliance with all site safety protocols detailed in our Code of Safe Practices and IIPP, which is strictly enforced on every project. These extraordinary efforts protect not only our workers but all those involved in and around the project.

Responsibilities

- Oversight of the safety program for Harbor Linx and all subsidiary companies.
- Development and execution of health and safety plan according to legal guidelines.
- Preparation and enforcement of policies that establish a culture of health and safety.
- Ongoing developmental and procedural trainings to ensure a qualified workforce prepared for advancement.

Skills

- Identifying and Communicating Hazards
- Knowledge of Regulatory Organizations
- Gathering and Interpreting Data
- Excellent communication skills with employees, clients, and partners
- Ethics and Accountability

Recent Noteworthy Projects

- Swinterton Builders - Presidio Tunnel Tops $21 MM
- Hathaway Dinwiddie - Shore at Sierra Point Pump Station $25 MM
- DGS PMDB - State Printing Plant Demolition $11 MM
- Seegert Construction - PG&E Pavement & Site Improvements $5.7 MM
- Hensel Phelps- Sunnyvale Civic Center Utilities $2 MM

1.5 Non-Collusion Declaration

The undersigned declares:

I am the Exec. VP/Treasurer of McGuire and Hester, the party making the foregoing Bid.

The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid Price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid Price, or of that of any other Bidder. All statements contained in the Bid are true. The Bidder has not, directly or indirectly, submitted his or her Bid Price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on May 21, 2021 [date], at Alameda [city], California [state].

Name of Bidder McGuire and Hester

Signature

Name Bruce W. Daseking

Title Exec. VP/Treasurer

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)

County of Alameda)

On May 21, 2021 before me, Mabel Cater, Notary Public
Date *Here Insert Name and Title of the Officer*

Personally appeared Bruce W. Daseking
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

MABEL CATER
Notary Public - California
Alameda County
Commission # 2320379
My Comm. Expires Feb 28, 2024

Signature
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document Non Collusion Document Date May 21, 2021

Number of Pages Signer(s) Other Than Named Above

Capacity(ies) Claimed by Signer(s)

Signer's Name Bruce W. Daseking
☒ Corporate Officer—Title(s) Executive VP/Treasurer
☐ Partner ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other
Signer Is Representing McGuire and Hester

Signer's Name
☐ Corporate Officer—Title(s)
☐ Partner ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other
Signer Is Representing

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1.6 Iran Contracting Act Certification.
(Public Contract Code section 2200 et seq.)

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

☒ The Contractor is not:

(1) identified on the current list of person and entities engaged in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or

(2) a financial instruction that extends, for 45 days or more, credit in the amount of $20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

☐ The City has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the City will be unable to obtain the goods and/or services to be provided pursuant to the Contract.

☐ The amount of the Contract payable to the Contractor for the Project does not exceed $1,000,000.

Signature: _____

Printed Name: Bruce W. Daseking

Title: Exec. VP/Treasurer

Firm Name: McGuire and Hester

Date: May 21, 2021

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of $250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

1.7 Public Works Contractor Registration Certification

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See http://www.dir.ca.gov/Public-Works/PublicWorks.html for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Bidder hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.[1]

Name of Bidder: McGuire and Hester

DIR Registration Number: 1000000033

DIR Registration Expiration: 06/30/2022

Small Project Exemption: _____ Yes or __XX_ No

Unless Bidder is exempt pursuant to the small project exemption, Bidder further acknowledges:

1. Bidder shall maintain a current DIR registration for the duration of the project.
2. Bidder shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Name of Bidder McGuire and Hester

Signature

Name and Title Bruce W. Daseking, Exec. VP/Treasurer

Dated May 21, 2021

[1] If the Project is exempt from the contractor registration requirements pursuant to the small project exemption under Labor Code Sections 1725.5 and 1771.1, please mark "Yes" in response to "Small Project Exemption."

1.8 Wage Theft Certification

The Bidder certifies subject to penalty for perjury that the option checked below relating to the Bidder and its subcontractors' status in regard to wage theft is true and correct:

[x] Neither the Bidder nor any of its subcontractors have been found by a final court order or administrative action of an investigatory government agency to have violated federal, state or local wage and hour laws, including but not limited to the federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance, within the past five (5) years from the bid submission deadline.

[ ] The Bidder or its subcontractors have been found by a final court order or administrative action of an investigatory government agency to have violated federal, state or local wage and hour laws, including but not limited to the federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance, within the past five (5) years from the bid submission deadline. For each violation, the Bidder shall provide a copy of (i) the final court order and/or final administrative decision/action; and (ii) documents demonstrating either that the order/decision/action has been fully satisfied, or if the order/decision/action has not been fully satisfied, documents evidencing a payment or other alternative plan approved by the court/government agency to satisfy the order/decision/action and proof that the Bidder or its subcontractors are in compliance with that plan as of the bid submission deadline.

[ ] The City has exempted the Bidder from the requirements of the City of Milpitas Wage Theft Procurement Policy.

Signature: _____

Printed Name: Bruce W. Daseking

Title: Exec. VP/Treasurer

Firm Name: McGuire and Hester

Date: May 21, 2021

1.9 Contractor's Certificate Regarding Workers' Compensation.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

Name of Bidder McGuire and Hester

Signature

Name Bruce W. Daseking

Title Exec. VP/Treasurer

Dated May 21, 2021

1.10 Bid Bond

Note: Not required when other form of Bidder's Security, e.g. cash, certified check or cashier's check, accompanies bid.

The makers of this bond are, McGuire and Hester, as Principal, and Western Surety Company, as Surety and are held and firmly bound unto the City of Milpitas, hereinafter called the City, in the penal sum of TEN PERCENT (10%) OF THE TOTAL BID PRICE of the Principal submitted to CITY for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid dated May 21, 20 21, for NIB NO. 2511 - CONSTRUCTION OF MAIN LIFT ODOROUS EMISSIONS CONTROL FACILITY.

If the Principal does not withdraw its Bid within the time specified in the Contract Documents; and if the Principal is awarded the Contract and provides all documents to the City as required by the Contract Documents; then this obligation shall be null and void. Otherwise, this bond will remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents shall in affect its obligation under this bond, and Surety does hereby waive notice of any such changes.

In the event a lawsuit is brought upon this bond by the City and judgment is recovered, the Surety shall pay all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and expenses.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this 18th day of May, 20 21, the name and corporate seal of each corporation.

(Corporate Seal)

McGuire and Hester
Contractor/Principal

By

Bruce W. Daseking
Title Exec. VP/ Treasurer

(Corporate Seal)

Western Surety Company
Surety

By
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title Attorney-in-Fact, Yvonne Roncagliolo

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF ALAMEDA

On May 19, 20 21, before me, Mabel Cater, Notary Public, personally appeared Bruce W. Daseking, who proved to me on the basis of satisfactory
Name(s) of Signer(s)
evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

MABEL CATER
Notary Public - California
Alameda County
Commission # 2320379
My Comm. Expires Feb 28, 2024

WITNESS my hand and official seal.

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

- ☐ Individual
- ☒ Corporate Officer
  Executive VP/Treasurer
  Title(s)
- ☐ Partner(s) ☐ Limited ☐ General
- ☐ Attorney-In-Fact
- ☐ Trustee(s)
- ☐ Guardian/Conservator
- ☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

Bid Bond
Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF Contra Costa

On May 18, 20 21, before me, Christina Burton, Notary Public, personally appeared Yvonne Roncagliolo, who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

CHRISTINA BURTON
Notary Public - California
Contra Costa County
Commission # 2321050
My Comm. Expires Feb 10, 2024

Signature of Notary Public

WITNESS my hand and official seal.

C Burton

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

- ☐ Individual
- ☐ Corporate Officer

Title(s)

- ☐ Partner(s) ☐ Limited ☐ General
- ☒ Attorney-In-Fact
- ☐ Trustee(s)
- ☐ Guardian/Conservator
- ☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

Yvonne Roncagliolo

DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of-Attorney to local representatives of the bonding company must also be attached.

END OF BID BOND

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Charles R Shoemaker, Kelly Holtemann, Mark M Munekawa, Nerissa S Bartolome, Joan De Luca, Yvonne Roncagliolo, Thomas E Hughes, Patrick R Diebel, Alicia Dass, Valerie Garcia, Sara Ridge, Christina Burton, Peter Tam, Zachary V Overbay, Individually

of San Francisco, CA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 20th day of October, 2020.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 20th day of October, 2020, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2021

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 18TH day of MAY, 2021.

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

00 52 13 – CONTRACT

This CONTRACT, No. 2511 is made and entered into this ____ day of _____, _____, by and between City of Milpitas, sometimes hereinafter called "City," and McGuire and Hester, sometimes hereinafter called "Contractor."

WITNESSETH: That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other as follows:

a. **SCOPE OF WORK.** The Contractor shall perform all Work within the time stipulated in the Contract, and shall provide all labor, materials, equipment, tools, utility services, and transportation to complete all of the Work required in strict compliance with the Contract Documents as specified in Article 5, below, for the following Project:

NIB NO. 2511 - CONSTRUCTION OF MAIN LIFT ODOROUS EMISSIONS CONTROL FACILITY

The Contractor and its surety shall be liable to the City for any damages arising as a result of the Contractor's failure to comply with this obligation.

b. **TIME FOR COMPLETION.** Time is of the essence in the performance of the Work. The Work shall be commenced on the date stated in the City's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents within **Four Hundred Fifty-Five (455)** calendar days from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the time for completion set forth above is adequate and reasonable to complete the Work.

c. **CONTRACT PRICE.** The City shall pay to the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of One Million Two Hundred Ninety-Three Thousand Five Hundred Dollars ($1,293,500.00). Payment shall be made as set forth in the General Conditions.

d. **LIQUIDATED DAMAGES.** In accordance with Government Code section 53069.85, it is agreed that the Contractor will pay the City the sum set forth in Section 00 73 13, Article 1.11 for each and every calendar day of delay beyond the time prescribed in the Contract Documents for finishing the Work, as Liquidated Damages and not as a penalty or forfeiture. In the event this is not paid, the Contractor agrees the City may deduct that amount from any money due or that may become due the Contractor under the Contract. This Article does not exclude recovery of other damages specified in the Contract Documents.

e. **COMPONENT PARTS OF THE CONTRACT.** The "Contract Documents" include the following:

Notice Inviting Bids
Instructions to Bidders
Bid Form
Bid Bond
Designation of Subcontractors

Information Required of Bidders
Non-Collusion Declaration Form
Iran Contracting Act Certification
Public Works Contractor Registration Certification
Wage Theft Certification
Performance Bond
Payment (Labor and Materials) Bond
General Conditions
Special Conditions
Technical Specifications
Addenda
Plans and Drawings
Caltrans Standard Specifications, except Division 1
Caltrans Standard Plans
Applicable Local Agency Standards and Specifications, as last revised
Approved and fully executed change orders
Any other documents contained in or incorporated into the Contract

The Contractor shall complete the Work in strict accordance with all of the Contract Documents.

All of the Contract Documents are intended to be complementary. Work required by one of the Contract Documents and not by others shall be done as if required by all. This Contract shall supersede any prior agreement of the parties.

f. **PROVISIONS REQUIRED BY LAW AND CONTRACTOR COMPLIANCE.** Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of applicable federal, state and local laws, rules and regulations, including, but not limited to, the provisions of the California Labor Code and California Public Contract Code which are applicable to this Work.

g. **INDEMNIFICATION.** Contractor shall provide indemnification and defense as set forth in the General Conditions.

h. **PREVAILING WAGES.** Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at the City's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

i. **WAGE THEFT PREVENTION.**

(a) Contractor, and any subcontractor it employs to complete work under this Contract, shall comply with all applicable federal, state and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code and the Milpitas Minimum Wage Ordinance.

(b) BY SIGNING THIS CONTRACT, CONTRACTOR AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY, FINDING IN THE FIVE (5) YEARS PRIOR TO EXECUTING THIS CONTRACT THAT CONTRACTOR OR ITS SUBCONTRACTORS HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS. CONTRACTOR FURTHER

AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) HAS EITHER FULLY SATISFIED EACH JUDGMENT, DECISION OR ORDER, OR, IF ANY JUDGMENT, DECISION OR ORDER HAS NOT BEEN FULLY SATISFIED, CONTRACTOR AFFIRMS THAT IT OR ITS SUBCONTRACTOR(S) IS CURRENTLY SATISFYING SAID JUDGMENT, DECISION OR ORDER THROUGH A PAYMENT OR ALTERNATIVE PLAN APPROVED BY THE APPLICABLE COURT/GOVERNMENT AGENCY AND THAT CONTRACTOR OR ITS SUBCONTRACTOR(S) ARE IN COMPLIANCE WITH SAID PLAN AS OF THE DATE OF EXECUTING THIS CONTRACT.

(c) If at any time during the term of this Contract, a court or investigatory government agency issues a final judgment, decision or order finding that Contractor or a subcontractor it employs to perform work under this Contract has violated any applicable wage and hour law, or Contractor learns of such a judgment, decision, or order that was not previously disclosed in its bid/proposal, Contractor shall inform the City no more than fifteen (15) calendar days after the judgment, decision or order becomes final or from the date of learning of the final judgment, decision or order. Contractor or its subcontractor(s) shall, within thirty (30) calendar days after notifying the City, either (i) fully satisfy any such judgment, decision, or order and provide the City with documentary evidence of satisfying said judgment, decision or order; or (ii) provide the City documentary evidence of a payment or other alternative plan approved by the court/government agency to satisfy the judgment, decision or order. If the Contractor or its subcontractor is subject to a payment or other alternative plan, the Contractor or its subcontractor shall continue to submit documentary evidence every thirty (30) calendar days during the term of the Contract demonstrating continued compliance with the plan until the judgment, decision or order has been fully satisfied.

(d) For purposes of this Section, a "final judgment, decision, or order" refers to one for which all appeals have been exhausted or the time period to appeal has expired. Relevant investigatory government agencies include: the United States Department of Labor, the California Division of Labor Standards Enforcement, the City, or any other governmental entity or division tasked with the investigation and enforcement of wage and hour laws.

(e) Failure to comply with any part of this Section constitutes a material breach of this Contract. Such breach may serve as a basis for immediate termination of this Contract and/or any other remedies available under this Contract and/or law.

(f) Notice provided to the City shall be addressed to: Attention: Finance Director, 455 E. Calaveras Blvd. Milpitas, CA 95035. The Notice provisions of this Section are separate from any other notice provisions in this Contract and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, this Contract has been duly executed by the above-named parties, on the day and year above written.

CITY OF MILIPITAS

By: _____
Steven G. McHarris
City Manager

McGuire and Hester

By: _____

Its: _____

Printed Name: _____

(CONTRACTOR'S SIGNATURE MUST BE NOTARIZED AND CORPORATE SEAL AFFIXED, IF APPLICABLE)

APPROVED:

By: _____
Lauren Lai,
Director of Finance/Risk Manager

APPROVED AS TO FORM:

By: _____
Christopher J. Diaz, City Attorney

APPROVED AS TO SCOPE:

By _____
Tony Ndah
Director of Public Works

END OF CONTRACT

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally

appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

☐ Individual
☐ Corporate Officer

_____
Title(s)

☐ Partner(s) ☐ Limited ☐ General
☐ Attorney-In-Fact
☐ Trustee(s)
☐ Guardian/Conservator
☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

_____
_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

00 61 13 – BOND FORMS

1.1 Performance Bond.

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the City of Milpitas, (hereinafter referred to as "City") has awarded to _____, (hereinafter referred to as the "Contractor") an agreement for _____, (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the City in the sum of _____ DOLLARS, ($_____), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one (1) year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officials, officers, employees, and authorized volunteers, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by City in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by City, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure Section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

i Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

ii Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

iii Permit the City to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the City, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

(Corporate Seal)

_____
Contractor/Principal

By _____

Title _____

(Corporate Seal)

_____
Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

(The rate of premium on this bond is _____ per thousand. The total amount of premium charges is $_____.

(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____
_____
_____

(Name and Address of Agent or Representative for service of process in California, if different from above) _____
_____
_____

(Telephone number of Surety and Agent or Representative for service of process in California) _____

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally

appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

☐ Individual
☐ Corporate Officer

_____
Title(s)

☐ Partner(s) ☐ Limited ☐ General
☐ Attorney-In-Fact
☐ Trustee(s)
☐ Guardian/Conservator
☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

_____

_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

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STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally

appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

☐ Individual
☐ Corporate Officer

_____
Title(s)

☐ Partner(s) ☐ Limited ☐ General

☐ Attorney-In-Fact
☐ Trustee(s)
☐ Guardian/Conservator
☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

_____

_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of Attorney to local representatives of the bonding company must also be attached.

END OF PERFORMANCE BOND

1.2 Payment Bond (Labor and Materials).

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the City of Milpitas (hereinafter designated as the "City"), by action taken or a resolution passed _____ , 20_____, has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows: _____ (the "Project"); and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City in the penal sum of _____ Dollars ($_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Civil Code Section 9100, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Revenue and Taxation Code Section 18663, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 9100 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that

this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or City and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Civil Code Section 9100, and has not been paid the full amount of his claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned, including but not limited to the provisions of sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20__.

(Corporate Seal)

_____
Contractor/Principal

By _____

Title _____

(Corporate Seal)

_____
Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally

appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

☐ Individual
☐ Corporate Officer

_____
Title(s)

☐ Partner(s) ☐ Limited ☐ General
☐ Attorney-In-Fact
☐ Trustee(s)
☐ Guardian/Conservator
☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

_____

_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20___, before me, _____, Notary Public, personally

appeared _____, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

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☐ Corporate Officer

_____
Title(s)

☐ Partner(s) ☐ Limited ☐ General
☐ Attorney-In-Fact
☐ Trustee(s)
☐ Guardian/Conservator
☐ Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

_____

_____

DESCRIPTION OF ATTACHED DOCUMENT

_____
Title or Type of Document

_____
Number of Pages

_____
Date of Document

_____
Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of-Attorney to local representatives of the bonding company must also be attached.

END OF PAYMENT BOND

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00 72 13 – GENERAL CONDITIONS

ARTICLE 1 DEFINED TERMS

Whenever used in the Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined below, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

A. Act of God – An earthquake of magnitude of 3.5 or higher on the Richter scale or a tidal wave.

B. Addenda -- Written or graphic instruments issued prior to the submission of Bids which clarify, correct, or change the Contract Documents.

C. Additional Work -- New or unforeseen work will be classified as "Additional Work" when the City's Representative determines that it is not covered by the Contract.

D. Applicable Laws -- The laws, statutes, ordinances, rules, codes, regulations, permits, and licenses of any kind, issued by local, state or federal governmental authorities or private authorities with jurisdiction (including utilities), to the extent they apply to the Work.

E. Bid -- The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices and other terms for the Work to be performed.

F. Bidder -- The individual or entity who submits a Bid directly to the City.

G. Caltrans Standard Specifications - Standard Specifications of the State of California, Department of Transportation, current edition. Any reference therein to a State agency or officer shall be interpreted as if the corresponding City office or agent acting under this contract were so specified.

H. Caltrans Standard Plans - Standard plans of the State of California, Department of Transportation, current edition. All metric measurements or quantities in the Caltrans Standard Plans shall be disregarded, and equivalent United States measures used.

I. Change Order ("CO") -- A document that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Contract, in accordance with the Contract Documents and in the form contained in the Contract Documents.

J. Change Order Request ("COR") -- A request made by the Contractor for an adjustment in the Contract Price and/or Contract Times as the result of a Contractor-claimed change to the Work. This term may also be referred to as a Change Order Proposal ("COP"), or Request for Change ("RFC").

K. City -- The City of Milpitas.

L. City Council, Council -- The City Council of the City.

M. City's Representative -- The individual or entity as identified in the Special Conditions to act as the City's Representative.

N. Claim -- A demand or assertion by the City or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

O. Contract -- The entire integrated written agreement between the City and Contractor concerning the Work. "Contract" may be used interchangeably with "Agreement" in the Contract Documents. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral, and includes all Contract Documents.

P. Contract Documents -- The documents listed in Section 00 52 13, Article 5. Some documents provided by the City to the Bidders and Contractor, including but not limited to reports and drawings of subsurface and physical conditions are not Contract Documents.

Q. Contract Price -- Amount to be paid by the City to the Contractor as full compensation for the performance of the Contract and completion of the Work, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs.

R. Contract Times -- The number of days or the dates stated in the Contract Documents to: achieve defined Milestones, if any; and to complete the Work so that it is ready for final payment.

S. Contractor -- The individual or entity with which the City has contracted for performance of the Work.

T. Contractor's Designated On-Site Representative -- The Contractor's Designated On-Site Representative will be as identified in Section 00 72 13, Article 3 and shall not be changed without prior written consent of the City.

U. Daily Rate -- The Daily Rate stipulated in the Contract Documents as full compensation to the Contractor due to the City's unreasonable delay to the Project that was not contemplated by the parties.

V. Day -- A calendar day of 24 hours measured from midnight to the next midnight.

W. Defective Work -- Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referenced in the Contract Documents.

X. Demobilization -- The complete dismantling and removal by the Contractor of all of the Contractor's temporary facilities, equipment, and personnel at the Site.

Y. Drawings -- That part of the Contract Documents prepared by of the Engineer of Record which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

Z. Effective Date of the Contract -- The date indicated in the Contract on which it becomes effective, but if no such date is indicated, it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.

AA. Engineer, whenever not qualified, shall mean the City Engineer or its designee, acting either directly or through properly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them. On all questions concerning the acceptance of materials, machinery, the classifications of material, the execution of work, conflicting interest of the contractors performing related work and the determination of costs, the decision of the Engineer, duly authorized by the City Council, shall be binding and final upon both parties.

BB. Engineer of Record -- The individual, partnership, corporation, joint venture, or other legal entity named as such in Section 00 73 13, Article 1.1. or any succeeding entity designated by the City.

CC. Hazardous Waste -- The term “Hazardous Waste” shall have the meaning provided in Section 104 of the Solid Waste Disposal Act (42 U.S.C. § 6903) as amended from time to time or, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a class I, class II, or class III disposal site in accordance with provisions of existing law, whichever is more restrictive.

DD. Holiday – The Holidays are defined as legal Federal, State, and City holidays including:

New Year’s Day - January 1
Martin Luther King Jr.'s Birthday – Third Monday in January
Lincoln's Birthday – Febraury 12
President’s Day – Third Monday in February
Cesar Chavez Day – March 31
Memorial Day - Last Monday in May
Independence Day - July 4
Labor Day - First Monday in September
Veteran’s Day - November 11
Thanksgiving Day - Fourth Thursday in November
Friday after Thanksgiving
Christmas Eve – December 24
Christmas Day - December 25

If any Holiday listed above falls on a Saturday, Saturday and the preceding Friday are both Holidays. If the Holiday should fall on a Sunday, Sunday and the following Monday are both Holidays.

EE. Notice of Award -- The written notice by the City to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, the City will sign and deliver the Contract.

FF. Notice of Completion -- The form which may be executed by the City and recorded by the county where the Project is located constituting final acceptance of the Project.

GG. Notice to Proceed -- A written notice given by the City to Contractor fixing the date on which the Contractor may proceed with the Work and when Contract Times will commence to run.

HH. Project -- The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

II. Recyclable Waste Materials -- Materials removed from the Site which are required to be diverted to a recycling center rather than an area landfill. Recyclable Waste Materials include asphalt, concrete, brick, concrete block, and rock.

JJ. Schedule of Submittals -- A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to facilitate scheduled performance of related construction activities.

KK. Shop Drawings -- All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

LL. Specifications -- That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

MM. Stop Payment Notice -- A written notice as defined in Civil Code section 8044.

NN. Subcontractor -- An individual or entity other than a Contractor having a contract with any other entity than the City for performance of any portion of the Work at the Site.

OO. Submittal -- Written and graphic information and physical samples prepared and supplied by the Contractor demonstrating various portions of the Work.

PP. Successful Bidder -- The Bidder submitting a responsive Bid to whom the City makes an award.

QQ. Supplier -- A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment used in the performance of the Work or to be incorporated in the Work.

RR. Underground Facilities -- All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

SS. Unit Price Work -- Work to be paid for on the basis of unit prices as provided by the Contractor in its bid or as adjusted in accordance with the Contract Documents.

TT. Warranty -- A written guarantee provided to the City by the Contractor that the Work will remain free of defects and suitable for its intended use for the period required by the Contract Documents or the longest period permitted by the law of this State, whichever is longer.

UU. Work -- The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

ARTICLE 2 CONTRACT DOCUMENTS

A. **Contract Documents.** The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all.

B. **Interpretations.** The Contract Documents are intended to be fully cooperative and complementary. If the Contractor observes that any documents are in conflict, the Contractor shall promptly notify the Engineer in writing. In case of conflicts between the Contract Documents, the order of precedence shall be as follows:

1. Change Orders
2. Contract
3. Addenda
4. Special Conditions
5. Technical Specifications
6. Plans (Contract Drawings)
7. General Conditions
8. Instructions to Bidders
9. Notice Inviting Bids
10. Contractor's Bid Forms
11. City Standard Specifications
12. City Standard Drawings
13. Caltrans Standard Specifrications, except Division 1
14. Caltrans Standard Plans
15. Reference Documents

With reference to the Drawings, the order of precedence shall be as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Addenda or Change Order drawings govern over Contract Drawings
4. Contract Drawings govern over Standard Drawings
5. Contract Drawings govern over Shop Drawings

C. **Conflicts in Contract Documents.** Notwithstanding the orders of precedence established above, in the event of conflicts, the higher standard, higher quality, and most expensive shall always apply.

D. **Organization of Contract Documents.**Organization of the Contract Documents into divisions, sections, and articles, and arrangement of drawings shall not control the Contractor in dividing Project Work among subcontractors or in establishing the extent of Work to be performed by any trade.

ARTICLE 3 PRECONSTRUCTION AND CONSTRUCTION COMMUNICATION

Before any Work at the site is started, a conference attended by the City, Contractor, City's Representative, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to herein, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

At this conference the City and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

ARTICLE 4 CONTRACT DOCUMENTS: COPIES & MAINTENANCE

Contractor will be furnished, free of charge, **five (5)** copies of the Contract Documents. Additional copies may be obtained at cost of reproduction.

Contractor shall maintain a clean, undamaged set of Contract Documents, including submittals, at the Project site.

ARTICLE 5 EXAMINATION OF DRAWINGS, SPECIFICATIONS AND SITE OF WORK

A. **Examination of Contract Documents.** Before commencing any portion of the Work, Contractor shall again carefully examine all applicable Contract Documents, the Project site, and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall immediately notify the Engineer of any potential error, inconsistency, ambiguity, conflict, or lack of detail or explanation. If Contractor performs, permits, or causes the performance of any Work which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction. In no case shall the Contractor or any subcontractor proceed with Work if uncertain as to the applicable requirements.

B. **Additional Instructions.** After notification of any error, inconsistency, ambiguity, conflict, or lack of detail or explanation, the Engineer will provide any required additional instructions, by means of drawings or other written direction, necessary for proper execution of Work.

C. **Quality of Parts, Construction and Finish.** All parts of the Work shall be of the best quality of their respective kinds and the Contractor must use all diligence to inform itself fully as to the required construction and finish.

D. **Contractor's Variation from Contract Document Requirements.** If it is found that the Contractor has varied from the requirements of the Contract Documents including the requirement to comply with all applicable laws, ordinances, rules and regulations, the Engineer may at any time, before or after completion of the Work, order the improper Work removed, remade or replaced by the Contractor at the Contractor's expense.

ARTICLE 6 EXISTENCE OF UTILITIES AT THE WORK SITE

A. The City has endeavored to determine the existence of utilities at the Project site from the records of the owners of known utilities in the vicinity of the Project. The positions of these utilities as derived from such records are shown on the Plans.

B. Unless indicated otherwise on the Plans and Specifications, no excavations were made to verify the locations shown for underground utilities. The service connections to these utilities may not be not shown on the Plans. Any connections shown on the Plans are general locations. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing Work which could result in damage to such utilities. The Contractor shall immediately notify the City in writing of any utility discovered in a different position than shown on the Plans or which is not shown on the Plans.

C. If applicable, all water meters, water valves, fire hydrants, electrical utility vaults, telephone vaults, gas utility valves, and other subsurface structures shall be relocated or adjusted to final grade by the Contractor. Locations of existing utilities shown on the Plans are approximate and may not be complete. The Contractor shall be responsible for coordinating its Work with all utility companies during the construction of the Work.

D. Notwithstanding the above, pursuant to section 4215 of the Government Code, the City has the responsibility to identify, with reasonable accuracy, main or trunkline facilities on the plans and specifications. In the event that main or trunkline utility facilities are not identified with reasonable accuracy in the plans and specifications made a part of the invitation for Bids, the City shall assume the responsibility for their timely removal, relocation, or protection.

E. Contractor, except in an emergency, shall contact the appropriate regional notification center (USA North), Northern California Underground Service Alert at 811 or 1-800-227-2600 or on-line at usanorth811.org at least two working days prior to commencing any excavation if the excavation will be performed in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the City, and obtain an inquiry identification number from that notification center. No excavation shall be commenced or carried out by the Contractor unless such an inquiry identification

number has been assigned to the Contractor or any subcontractor of the Contractor and the City has been given the identification number by the Contractor.

ARTICLE 7 SOILS INVESTIGATIONS

A. Reports and Drawings. The Special Conditions identify:

1. those reports known to the City of explorations and tests of subsurface conditions at or contiguous to the site; and

2. those drawings known to the City of physical conditions relating to existing surface or subsurface structures at the site (except Underground Facilities).

B. Limited Reliance by Contractor on Technical Data Authorized. Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, which were expressly not created or obtained to evaluate or assist in the evaluation of constructability, and are not Contract Documents. Contractor shall make its own interpretation of the "technical data" and shall be solely responsible for any such interpretations. Except for reliance on the accuracy of such "technical data," Contractor may not rely upon or make any claim against the City, City's Representative, or Engineer of Record, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including without limitation any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, conclusions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

ARTICLE 8 CONTRACTOR'S SUPERVISION

Contractor shall continuously keep at the Project site, a competent and experienced full-time Project superintendent acceptable to the City. Superintendent must be able to proficiently speak, read and write in English and shall have the authority to make decisions on behalf of the Contractor.Contractor shall continuously provide efficient supervision of the Project.

ARTICLE 9 WORKERS

A. Contractor shall at all times enforce strict discipline and good order among its employees. Contractor shall not employ on the Project any unfit person or any one not skilled in the Work assigned to him or her.

B. Any person in the employ of the Contractor whom the City may deem incompetent or unfit shall be dismissed from the Work and shall not be employed on this Project.

ARTICLE 10 INDEPENDENT CONTRACTORS

Contractor shall be an independent contractor for the City and not an employee. Contractor understands and agrees that it and all of its employees shall not be considered officers, employees, or agents of City and are not entitled to benefits of any kind normally provided employees of City, including but not limited to, state unemployment compensation or workers' compensation. Contractor assumes full responsibility for the acts and omissions of its employees or agents related to the Work.

ARTICLE 11 SUBCONTRACTS

A. Contractor agrees to bind every subcontractor to the terms of the Contract Documents as far as such terms are applicable to subcontractor's portion of the Work. Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as Contractor is for acts and omissions of persons directly employed by Contractor. Nothing contained in these Contract Documents shall create any contractual relationship between any subcontractor and the City.

B. The City reserves the right to accept all subcontractors. The City's acceptance of any subcontractor under this Contract shall not in any way relieve Contractor of its obligations in the Contract Documents.

C. Prior to substituting any subcontractor listed in the Bid Forms, Contractor must comply with the requirements of the Subletting and Subcontracting Fair Practices Act pursuant to California Public Contract Code section 4100 et seq.

ARTICLE 12 VERIFICATION OF EMPLOYMENT ELIGIBILITY

By executing this Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subcontractors, sub-subcontractors and consultants to comply with the same. Each person executing this Contract on behalf of Contractor verifies that he or she is a duly authorized officer of Contractor and that any of the following shall be grounds for the City to terminate the Contract for cause: (1) failure of the Contractor or its subcontractors, sub-subcontractors or consultants to meet any of the requirements provided for in this Article; (2) any misrepresentation or material omission concerning compliance with such requirements; or (3) failure to immediately remove from the Work any person found not to be in compliance with such requirements.

ARTICLE 13 REQUESTS FOR SUBSTITUTION

A. For the purposes of this provision, the term "substitution" shall mean the substitution of any material, method or service substantially equal to or better in every respect to that indicated in the Standard Specifications or otherwise referenced herein.

B. Pursuant to Public Contract Code section 3400(b), the City may make a finding that is described in the Notice Inviting Bids that designates certain products, things, or services by specific brand or trade name.

C. Unless specifically designated in the Special Conditions, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating the description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer for substitution any material, process, or article which may be substantially equal to or better in every respect to that so indicated or specified in the Contract Documents. However, the City has adopted uniform standards for certain materials, processes, and articles.

D. The Contractor shall submit substitution requests, together with substantiating data, for substitution of any "or equal" material, process, or article no later than fifteen (15) calendar days after award of Contract. Provisions regarding submission of substitution requests shall not in any way authorize an extension of time for the performance of this Contract. If a substitution request is rejected by the City, the Contractor shall provide the material, method or service specified herein. The City shall not be responsible for any costs incurred by the Contractor associated with substitution requests. The burden of proof as to the equality of any material, process, or article shall rest with the Contractor. The Engineer has the complete and sole discretion to determine if a material, process, or article is substantially equal to or better than that specified and to approve or reject all substitution requests.

E. Substantiating data as described above shall include, at a minimum, the following information:

1. A signed affidavit from the Contractor stating that the material, process, or article proposed as a substitution is substantially equal to or better than that specified in every way except as may be listed on the affidavit.

2. Illustrations, specifications, catalog cut sheets, and any other relevant data required to prove that the material, process, or article is substantially equal to or better than that specified.

3. A statement of the cost implications of the substitution being requested, indicating whether and why the proposed substitution will reduce or increase the amount of the contract.

4. Information detailing the durability and lifecycle costs of the proposed substitution.

F. Failure to submit all the required substantiating data detailed above in a timely manner so that the substitution request can be adequately reviewed may result in rejection of the substitution request. The Engineer is not obligated to review multiple submittals related the same substitution request resulting from the Contractor's failure to initially submit a complete package.

G. Time limitations within this Article shall be strictly complied with and in no case will an extension of time for completion of the contract be granted because of Contractor's failure to provide substitution requests at the time and in the manner described herein.

H. The Contractor shall bear the costs of all City work associated with the review of substitution requests.

I. If substitution requests approved by the Engineer require that Contractor furnish materials, methods or services more expensive than that specified, the increased costs shall be borne by Contractor.

ARTICLE 14 SHOP DRAWINGS

A. Contractor shall check and verify all field measurements and shall submit with such promptness as to provide adequate time for review and cause no delay in its own Work or in that of any other contractor, subcontractor, or worker on the Project, six (6) copies of all shop drawings, calculations, schedules, and materials list, and all other provisions required by the Contract Documents. Contractor shall sign all submittals affirming that submittals have been reviewed and approved by Contractor prior to submission to Engineer. Each signed submittal shall affirm that the submittal meets all the requirements of the Contract Documents except as specifically and clearly noted and listed on the transmittal letter of the submittal.

B. Contractor shall make any corrections required by the Engineer, and file with the Engineer six (6) corrected copies each, and furnish such other copies as may be needed for completion of the Work. Engineer's acceptance of shop drawings shall not relieve Contractor from responsibility for deviations from the Contract Documents unless Contractor has, in writing, called Engineer's attention to such deviations at time of submission and has secured the Engineer's written acceptance. Engineer's acceptance of shop drawings shall not relieve Contractor from responsibility for errors in shop drawings.

ARTICLE 15 SUBMITTALS

A. Contractor shall furnish to the Engineer for approval, prior to purchasing or commencing any Work, a log of all samples, material lists and certifications, mix designs, schedules, and other submittals, as required in the Contract Documents. The log shall indicate whether samples will be provided in accordance with other provisions of this Contract.

B. Contractor will provide samples and submittals, together with catalogs and supporting data required by the Engineer, to the Engineer within a reasonable time period to provide for adequate review and avoid delays in the Work.

C. These requirements shall not authorize any extension of time for performance of this Contract. Engineer will check and approve such samples, but only for conformance with design concept of work and for compliance with information given in the Contract Documents. Work shall be in accordance with approved samples and submittals.

ARTICLE 16 MATERIALS

A. Except as otherwise specifically stated in the Contract Documents, Contractor shall provide and pay for all materials, labor, tools, equipment, lights, power, transportation, superintendence, temporary constructions of every nature, and all

other services and facilities of every nature whatsoever necessary to execute and complete this Contract within specified time.

B. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted and/or specified, and workmanship shall be of good quality.

C. Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of the Work and shall be stored properly and protected as required by the Contract Documents. Contractor shall be entirely responsible for damage or loss by weather or other causes to materials or Work.

D. No materials, supplies, or equipment for Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the Work and agrees upon completion of all work to deliver the Project, to the City free from any claims, liens, or charges.

E. Materials shall be stored on the Project site in such manner so as not to interfere with any operations of the City or any independent contractor.

F. Contractor shall verify all measurements, dimensions, elevations, and quantities before ordering any materials or performing any Work, and the City shall not be liable for Contractor's failure to so. No additional compensation, over and above payment for the actual quantities at the prices set out in the Bid Form, will be allowed because of differences between actual measurements, dimension, elevations and quantities and those indicated on the Plans and in the Specifications.Any difference therein shall be submitted to the Engineer for consideration before proceeding with the Work.

G. The City shall provide compensation for actual quantities of materials installed in accordance with the Contract Documents and at the price set forth in the Contractor's bid and/or executed change order. The City is not obligated to pay for materials stored on/off site but not yet installed in accordance with the Contract Documents.

ARTICLE 17 PERMITS AND LICENSES

A. Contractor shall obtain all other necessary permits and licenses for the construction of the Project, including encroachment permits, and shall pay all fees required by law and shall comply with all laws, ordinances, rules and regulations relating to the Work and to the preservation of public health and safety. Before acceptance of the Project, the Contractor shall submit all licenses, permits, certificates of inspection and required approvals to the City.Any construction permits required by City for performing any work on this project will be issued by City at no charge to Contractor. Contractor and all subcontractors shall maintain a City business license at all times they are performing the Work.

ARTICLE 18 TRENCHES

A. **Trenches Five Feet or More in Depth.** Contractor shall submit to the Engineer at the preconstruction meeting, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from hazards of caving ground during the excavation of any trench or trenches five feet or more in depth. If such plan varies from shoring system standards established by the Construction Safety Orders of the California Code of Regulations, Department of Industrial Relations, the plan shall be prepared by a California registered civil or structural engineer. The plan shall not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations. The Contractor shall designate in writing the "competent person" as defined in Title 8, California Code of Regulations, who shall be present at the Work Site each day that trenching/excavation is in progress. The "competent person" shall prepare and provide daily trenching/excavation inspection reports to the Engineer. Contractor shall also submit a copy of its annual California Occupational Safety and Health Administration (Cal/OSHA) trench/excavation permit.

B. **Excavations Deeper than Four Feet.** If the Work involves excavating trenches or other excavations that extend deeper than four feet below the surface, Contractor shall promptly, and before the excavation is further disturbed, notify the City in writing of any of the following conditions:

1. Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

2. Subsurface or latent physical conditions at the site differing from those indicated.

3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract

The City shall promptly investigate the conditions, and if it finds that the conditions do so materially differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a change order under the procedures described in the Contract Documents.

In the event that a dispute arises between the City and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the parties.

ARTICLE 19 DIVERSION OF RECYCLABLE WASTE MATERIALS

In compliance with the applicable City's waste reduction and recycling efforts, Contractor shall divert all Recyclable Waste Materials to appropriate recycling centers as required for compliance with the local jurisdiction's waste diversion ordinances, and provide the City Engineer with detailed records and quantities of the materials that were sent to recycling centers. Contractor will be required to submit weight tickets and written proof of diversion with its monthly progress payment requests. Contractor shall complete and execute any certification forms required by City or other applicable agencies to document Contractor's compliance with these diversion requirements. All costs incurred for these waste diversion efforts shall be the responsibility of the Contractor.

ARTICLE 20 REMOVAL OF HAZARDOUS MATERIALS

Should Contractor encounter material reasonably believed to be polychlorinated biphenyl (PCB) or other toxic wastes and hazardous materials which have not been rendered harmless at the Project site, the Contractor shall immediately stop work at the affected Project site and shall report the condition to the City in writing. The City shall contract for any services required to directly remove and/or abate PCBs and other toxic wastes and hazardous materials, if required by the Project site(s), and shall not require the Contractor to subcontract for such services. The Work in the affected area shall not thereafter be resumed except by written agreement of the City and Contractor.

ARTICLE 21 SANITARY FACILITIES

Contractor shall provide sanitary temporary toilet buildings and hand washing facilities for the use of all workers. All toilets and hand washing facilities shall comply with all applicable federal, state and local laws, codes, ordinances, and regulations. Toilets shall be kept supplied with toilet paper and shall have workable door fasteners. Toilets and hand washing facilities shall be serviced no less than once weekly and shall be present in a quantity of not less than 1 per 20 workers as required by Cal/OSHA regulations. The toilets and hand washing facilities shall be maintained in a sanitary condition at all times. Use of toilet and hand washing facilities in the Work under construction shall not be permitted. Any other sanitary facilities required by Cal/OSHA shall be the responsibility of the Contractor.

ARTICLE 22 AIR POLLUTION CONTROL

Contractor shall comply with all air pollution and dust control rules, regulations, ordinances and statutes, including, but not limited to, those required by thet Air Quality Management District. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate that the contents fully comply with the applicable material requirements.

ARTICLE 23 LAYOUT AND FIELD ENGINEERING

All field engineering required for laying out the Work and establishing grades for earthwork operations shall be furnished by the Contractor at its expense.

ARTICLE 24 TESTS AND INSPECTIONS

A. If the Contract Documents, the Engineer, or any instructions, laws, ordinances, or public authority requires any part of the Work to be tested or Approved, Contractor shall provide the Engineer at least two (2) working days' notice of its readiness for

observation or inspection. If inspection is by a public authority other than the City, Contractor shall promptly inform the City of the date fixed for such inspection. Required certificates of inspection (or similar) shall be secured by Contractor. Costs for City testing and City inspection shall be paid by the City. Costs of tests for Work found not to be in compliance shall be paid by the Contractor.

B. If any Work is done or covered up without the required testing or approval, the Contractor shall uncover or deconstruct the Work, and the Work shall be redone after completion of the testing at the Contractor's cost in compliance with the Contract Documents.

C. Where inspection and testing are to be conducted by an independent laboratory or agency, materials or samples of materials to be inspected or tested shall be selected by such laboratory or agency, or by the City, and not by Contractor. All tests or inspections of materials shall be made in accordance with the commonly recognized standards of national organizations.

D. In advance of manufacture of materials to be supplied by Contractor which must be tested or inspected, Contractor shall notify the City so that the City may arrange for testing at the source of supply. Any materials which have not satisfactorily passed such testing and inspection shall not be incorporated into the Work.

E. If the manufacture of materials to be inspected or tested will occur in a plant or location greater than sixty (60) miles from the City, the Contractor shall pay for any excessive or unusual costs associated with such testing or inspection, including but not limited to excessive travel time, standby time and required lodging.

F. Reexamination of Work may be ordered by the City. If so ordered, Work must be uncovered or deconstructed by Contractor. If Work is found to be in accordance with the Contract Documents, the City shall pay the costs of reexamination and reconstruction. If such work is found not to be in accordance with the Contract Documents, Contractor shall pay all costs.

ARTICLE 25 PROTECTION OF WORK AND PROPERTY

A. The Contractor shall be responsible for all damages to persons or property that occurs as a result of the Work. Contractor shall be responsible for the proper care and protection of all materials delivered and Work performed until completion and final Acceptance by the City. All Work shall be solely at the Contractor's risk. Contractor shall adequately protect adjacent property from settlement or loss of lateral support as necessary. Contractor shall comply with all applicable safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Project site where Work is being performed. Contractor shall erect and properly maintain at all times, as required by field conditions and progress of work, all necessary safeguards, signs, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created in the course of construction.

B. In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization from the Engineer, is hereby permitted to act to prevent such threatened loss or injury; and Contractor shall so

act, without appeal, if so authorized or instructed by the Engineer or the City. Any compensation claimed by Contractor on account of emergency work shall be determined by and agreed upon by the City and the Contractor.

ARTICLE 26 CONTRACTOR'S MEANS AND METHODS

Contractor is solely responsible for the means and methods utilized to perform the Work. In no case shall the Contractor's means and methods deviate from commonly used industry standards.

ARTICLE 27 AUTHORIZED REPRESENTATIVES

The City shall designate representatives, who shall have the right to be present at the Project site at all times. The City may designate an inspector who shall have the right to observe all of the Contractor's Work. The inspector shall not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.Contractor shall provide safe and proper facilities for such access.

ARTICLE 28 HOURS OF WORK

A. As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, Contractor stipulates that eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract is limited and restricted to eight (8) hours during any one calendar day and 40 hours during any one calendar week, except as hereinafter provided. Notwithstanding the provisions herein above set forth, work performed by employees of Contractor in excess of eight (8) hours per day, and 40 hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

B. The Contractor and every subcontractor shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of the City and to the Division of Labor Law Enforcement, Department of Industrial Relations of the State of California.

C. The Contractor shall pay to the City a penalty of twenty-five dollars ($25.00) for each worker employed in the execution of this Contract by the Contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

D. Any work necessary to be performed after regular working hours, or on Saturdays and Sundays or other holidays, shall be performed without additional expense to the City. Contractor shall also timely notify the City when work will be perfomed outside regular working hours or on weekends or holidays.

E. City will provide inspection during normal working hours from 7:00 a.m. to 3:30 p.m. Monday through Friday. Inspection before or after this time will be charged to the Contractor as reimbursable inspection time. Inspections on weekends requires two days' notice for review and approval. Upon written request and approval the 8.5 hour working day may be changed to other limits subject to city/county ordinance.

F. Refer to the most current version of the City of Milpitas Noise Abatement Ordinance, Ord. 196.6 of the Municipal Code Section V-213. It shall be unlawful for any person to engage or permit to engage in construction of any building or related road or walkway, pool, or landscape improvement or in the construction operations related thereto including to operate, permit, use, or cause to operate any of the following at the Project site, other than between the hours of 7:00 a.m. to 7:00 p.m., Monday through Sunday, unless otherwise approved by the City:

1. Powered Vehicles

2. Construction Equipment

3. Loading and Unloading Vehicles

4. Domestic Power Tools

ARTICLE 29 PAYROLL RECORDS; LABOR COMPLIANCE

A. Pursuant to Labor Code section 1776, Contractor and all subcontractors shall maintain weekly certified payroll records, showing the names, addresses, Social Security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work under this Contract. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.

B. In accordance with Labor Code section 1771.4, the Contractor and each subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on the specified interval and format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement. The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

C. Any stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the City. Contractor shall defend, indemnify and hold the City, its officials, officers,

employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor.

D. The payroll records described herein shall be certified and submitted by the Contractor at a time designated by the City. The Contractor shall also provide the following:

1. A certified copy of the employee's payroll records shall be made available for inspection or furnished to such employee or his or her authorized representative on request.

2. A certified copy of all payroll records described herein shall be made available for inspection or furnished upon request of the DIR.

E. Unless submitted electronically, the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.

F. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency, the City, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or performing the contract shall not be marked or obliterated.

G. In the event of noncompliance with the requirements of this Article, the Contractor shall have ten (10) calendar days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this Article. Should noncompliance still be evident after such 10-day period, the Contractor shall pay a penalty of one hundred dollars ($100.00) to the City for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payment then due.

H. The responsibility for compliance with this Article shall rest upon the Contractor.

ARTICLE 30 PREVAILING RATES OF WAGES

A. The Contractor is aware of the requirements of Labor Code sections 1720 *et seq.* and 1770 *et seq.*, as well as California Code of Regulations, Title 8, Section 16000 *et seq.* ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Since this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is $1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Contract from the website of the Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov. In the alternative, the Contractor may view a copy of

the prevailing rate of per diem wages which are on file at the City's Administration Office and shall be made available to interested parties upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the Project site. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or allege failure to comply with the Prevailing Wage Laws.

B. The Contractor shall forfeit as a penalty to the City not more than Two Hundred Dollars ($200.00), pursuant to Labor Code section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for any public work done under the Contract by it or by any subcontractor under it. The difference between such prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the Contractor.

C. Contractor shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

ARTICLE 31 PUBLIC WORKS CONTRACTOR REGISTRATION

Pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and its subcontractors must be registered with the Department of Industrial Relations prior to the execution of a contract to perform public works. By entering into this Contract, Contractor represents that it is aware of the registration requirement and is currently registered with the DIR. Contractor shall maintain a current registration for the duration of the Project. Contractor shall further include the requirements of Labor Code sections 1725.5 and 1771.1 in any subcontract and ensure that all subcontractors are registered at the time this Contract is entered into and maintain registration for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

ARTICLE 32 EMPLOYMENT OF APPRENTICES

A. Contractor and all subcontractors shall comply with the requirements of Labor Code sections 1777.5 and 1777.6 in the employment of apprentices.

B. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

C. Knowing violations of Labor Code section 1777.5 will result in forfeiture not to exceed one hundred dollars ($100.00) for each calendar day of non-compliance pursuant to Labor Code section 1777.7.

D. The responsibility for compliance with this Article shall rest upon the Contractor.

ARTICLE 33 NONDISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY

Pursuant to Labor Code section 1735 and other applicable provisions of law, the Contractor and its subcontractors shall not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law on this Project. The Contractor will take affirmative action to insure that employees are treated during employment or training without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law.

Employment Eligibility; Contractor. By executing this Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time. Such requirements and restrictions include, but are not limited to, examination and retention of documentation confirming the identity and immigration status of each employee of the Contractor. Contractor also verifies that it has not committed a violation of any such law within the five (5) years immediately preceding the date of execution of this Contract, and shall not violate any such law at any time during the term of the Contract. Contractor shall avoid any violation of any such law during the term of this Contract by participating in an electronic verification of work authorization program operated by the United States Department of Homeland Security, by participating in an equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, or by some other legally acceptable method. Contractor shall maintain records of each such verification, and shall make them available to the City or its representatives for inspection and copy at any time during normal business hours. The City shall not be responsible for any costs or expenses related to Contractor's compliance with the requirements provided for or referred to herein.

Employment Eligibility; Subcontractors, Sub-subcontractors and Consultants. To the same extent and under the same conditions as Contractor, Contractor shall require all of its subcontractors, sub-subcontractors and consultants performing any part of the Work or of this Contract to make the same verifications and comply with all requirements and restrictions provided for herein.

Employment Eligibility; Failure to Comply. Each person executing this Contract on behalf of Contractor verifies that he or she is a duly authorized officer of Contractor, and understands that any of the following shall be grounds for the City to terminate the Contract for cause: (1) failure of Contractor or its subcontractors, sub-subcontractors or consultants to meet any of the requirements provided for herein; (2) any misrepresentation or material omission concerning compliance with such requirements; or (3) failure to immediately remove from the Work any person found not to be in compliance with such requirements.

ARTICLE 34 DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS

Contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code section 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive

any public money for performing work as a subcontractor on a public works contract. Any public money that is paid, or may have been paid to a debarred subcontractor by a contractor on the project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the project.

ARTICLE 35 LABOR/EMPLOYMENT SAFETY

The Contractor shall comply with all applicable laws and regulations of the federal, state, and local government, including Cal/OSHA requirements and requirements for verification of employees' legal right to work in the United States.

The Contractor shall maintain emergency first aid treatment for his employees which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 *et seq*.), and California Code of Regulations, Title 8, Industrial Relations Division 1, Department of Industrial Relations, Chapter 4. The Contractor shall ensure the availability of emergency medical services for its employees in accordance with California Code of Regulations, Title 8, Section 1512.

The Contractor shall submit the Illness and Injury Prevention Program and a Project site specific safety program to the City prior to beginning Work at the Project site. Contractor shall maintain a confined space program that meets or exceeds the City Standards. Contractor shall adhere to the City's lock out tag out program.

ARTICLE 36 INSURANCE

The Contractor shall obtain, and at all times during performance of the Work of Contract, maintain all of the insurance described in this Article. Contractor shall not commence Work under this Contract until it has provided evidence satisfactory to the City that it has secured all insurance required hereunder. Contractor shall not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the City that the subcontractor has secured all insurance required under this Article. Failure to provide and maintain all required insurance shall be grounds for the City to terminate this Contract for cause. Contractor shall furnish City with original certificates of insurance and endorsements effective coverage required by this Contract on forms satisfactory to the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms acceptable to the City. All certificates and endorsements must be received and approved by the City before Work commences.

A. **Additional Insureds; Waiver of Subrogation**. The City, its officials, officers, employees, agents and authorized volunteers shall be named as Additional Insureds on Contractor's All Risk policy and on Contractor's and its subcontractors' policies of Commercial General Liability and Automobile Liability insurance using, for Contractor's policy/ies of Commercial General Liability insurance, ISO CG forms 20 10 and 20 37 (or endorsements providing the exact same coverage, including completed operations), and, for subcontractors' policies of Commercial General Liability insurance, ISO CG form 20 38 (or endorsements providing the exact same coverage). Notwithstanding the minimum limits set forth in this Contract for any type of insurance coverage, all available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as Additional Insureds hereunder. Contractor and its insurance carriers shall provide a Waiver of Subrogation in favor of those parties.

B. **Workers' Compensation Insurance**. The Contractor shall provide workers' compensation insurance for all of the employees engaged in Work under this Contract, on or at the Site, and, in case of any sublet Work, the Contractor shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees as prescribed by State law. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in work under this Contract, on or at the Site, is not protected under the Workers' Compensation Statutes, the Contractor shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected. The Contractor is required to secure payment of compensation to his employees in accordance with the provisions of section 3700 of the Labor Code. The Contractor shall file with the City certificates of his insurance protecting workers. Company or companies providing insurance coverage shall be acceptable to the City, if in the form and coverage as set forth in the Contract Documents.

C. **Employer's Liability Insurance**. Contractor shall provide Employer's Liability Insurance, including Occupational Disease, in the amount of at least one million dollars ($1,000,000.00) per person per accident. Contractor shall provide City with a certificate of Employer's Liability Insurance. Such insurance shall comply with the provisions of the Contract Documents. The policy shall be endorsed, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement and contain a Waiver of Subrogation in favor of the City.

D. **Commercial General Liability Insurance**. Contractor shall provide "occurrence" form Commercial General Liability insurance coverage at least as broad as the most current ISO CGL Form 00 01, including but not limited to, premises liability, contractual liability, products/completed operations, personal and advertising injury which may arise from or out of Contractor's operations, use, and management of the Site, or the performance of its obligations hereunder. The policy shall not contain any exclusion contrary to this Contract including but not limited to endorsements or provisions limiting coverage for (1) contractual liability (including but not limited to ISO CG 24 26 or 21 39); or (2) cross-liability for claims or suits against one insured against another. Policy limits shall not be less than $1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. Defense costs shall be paid in addition to the limits.

1. Such policy shall comply with all the requirements of this Article. The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Contractor from liability in excess of such coverage, nor shall it limit Contractor's indemnification obligations to the City, and shall not preclude the City from taking such other actions available to the City under other provisions of the Contract Documents or law.

2. All general liability policies provided pursuant to the provisions of this Article shall comply with the provisions of the Contract Documents.

3. All general liability policies shall be written to apply to all bodily injury, including death, property damage, personal injury, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, under-ground excavation, removal of lateral support, and other covered loss, however occasioned, occurring during the policy term, and shall specifically insure the performance by Contractor of that part of the indemnification contained in these General Conditions relating to liability for injury to or death of persons and damage to property.

4. If the coverage contains one or more aggregate limits, a minimum of 50% of any such aggregate limit must remain available at all times; if over 50% of any aggregate limit has been paid or reserved, the City may require additional coverage to be purchased by Contractor to restore the required limits. Contractor may combine primary, umbrella, and as broad as possible excess liability coverage to achieve the total limits indicated above. Any umbrella or excess liability policy shall include the additional insured endorsement described in the Contract Documents.

5. All policies of general liability insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

E. **Automobile Liability Insurance**. Contractor shall provide "occurrence" form Automobile Liability Insurance at least as broad as ISO CA 00 01 (Any Auto) in the amount of, at least, one million dollars ($1,000,000) per accident for bodily injury and property damage. Such insurance shall provide coverage with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by Contractor or for which Contractor is responsible, in a form and with insurance companies acceptable to the City. All policies of automobile insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

F. **Builder's Risk ["All Risk"]**

[RESERVED]

G. **Contractor's Pollution Liability Coverage**.

[RESERVED]

H. Contractor shall require all tiers of sub-contractors working under this Contract to provide the insurance required under this Article unless otherwise agreed to in writing by City. Contractor shall make certain that any and all subcontractors hired by Contractor are insured in accordance with this Contract. If any subcontractor's coverage does not comply with the foregoing provisions, Contractor shall indemnify and hold the City harmless from any damage, loss, cost, or expense, including attorneys' fees, incurred by the City as a result thereof.

ARTICLE 37 FORM AND PROOF OF CARRIAGE OF INSURANCE

A. Any insurance carrier providing insurance coverage required by the Contract Documents shall be admitted to and authorized to do business in the State of California unless waived, in writing, by the City's Risk Manager. Carrier(s) shall have an A.M. Best rating of not less than an A:VII. Insurance deductibles or self-insured retentions must be declared by the Contractor. At the election of the City the Contractor shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. If umbrella or excess liability coverage is used to meet any required limit(s) specified herein, the Contractor shall provide a "follow form" endorsement satisfactory to the City indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.

B. Each insurance policy required by this Contract shall be endorsed to state that: (1) coverage shall not be suspended, voided, reduced or cancelled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City; and (2) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the City, its officials, officers, agents, employees, and volunteers.

C. The Certificates(s) and policies of insurance shall contain or shall be endorsed to contain the covenant of the insurance carrier(s) that it shall provide no less than thirty (30) days written notice be given to the City prior to any material modification or cancellation of such insurance. In the event of a material modification or cancellation of coverage, the City may terminate the Contract or stop the Work in accordance with the Contract Documents, unless the City receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. Contractor shall not take possession, or use the Site, or commence operations under this Contract until the City has been furnished original Certificate(s) of Insurance and certified original copies of endorsements or policies of insurance including all endorsements and any and all other attachments as required in this Article. The original endorsements for each policy and the Certificate of Insurance shall be signed by an individual authorized by the insurance carrier to do so on its behalf.

D. The Certificate(s) of Insurance, policies and endorsements shall so covenant and shall be construed as primary, and the City's insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.

E. City reserves the right to adjust the monetary limits of insurance coverages during the term of this Contract including any extension thereof if, in the City's reasonable judgment, the amount or type of insurance carried by the Contractor becomes inadequate.

F. Contractor shall report to the City, in addition to the Contractor's insurer, any and all insurance claims submitted by the Contractor in connection with the Work under this Contract.

ARTICLE 38 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

A. **Time for Completion/Liquidated Damages.** Time is of the essence in the completion of the Work. Work shall be commenced within **Ten (10) Days** of the date stated in the City's Notice to Proceed and shall be completed by Contractor specified in the Contract Documents. The City is under no obligation to consider early completion of the Project; and the Contract completion date shall not be amended by the City's receipt or acceptance of the Contractor's proposed earlier completion date. Furthermore, Contractor shall not, under any circumstances, receive additional compensation from the City (including but not limited to indirect, general, administrative or other forms of overhead costs) for the period between the time of earlier completion proposed by the Contractor and the Contract completion date. If the Work is not completed as stated in the Contract Documents, it is understood that the City will suffer damage. In accordance with Government Code section 53069.85, being impractical and infeasible to determine the amount of actual damage, it is agreed that Contractor shall pay to the City as fixed and liquidated damages, and not as a penalty, the sum stipulated in the Contract for each calendar day of delay until the Work is fully completed as determined by the City. Contractor and its surety shall be liable for any liquidated damages. Any money due or to become due the Contractor may be retained to cover liquidated damages.

B. **Inclement Weather.** Extension of Time Due to Weather Delays: The City and Contractor mutually agree that excusable delay events associated with the occurrence of inclement weather will be based only on conditions that were not foreseeable at the time the Contract was entered into. The Contractor's construction schedule shall include an allowance for the following schedule of expected weather delay days. If the Contractor encounters fewer inclement weather days per month or in total than shown below, then the City has the right to use the unencountered balance of days as an offset against any other claims for excusable delays or Owner-caused delays. Actual inclement weather days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. All Contractor claims for excusable delay due to excessive inclement weather shall be for critical path work only and must be supported by a Time Impact Analysis as described in Article 42. No additional compensation will be granted for an excusable delay.

Month	Calendar Days
January	6
February	6
March	7
April	4
May	3
June	1
July	0
August	1
September	2

October	2
November	3
December	5
Total Annual Inclement Weather Days	40

C. **Extension of Time.** Contractor shall not be charged liquidated damages because of any delays in completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (or its subcontractors or suppliers). Contractor shall within five (5) Days of identifying any such delay notify the City in writing of causes of delay. The City shall ascertain the facts and extent of delay and grant extension of time for completing the Work when, in its judgment, the facts justify such an extension. Time extensions to the Project shall be requested by the Contractor as they occur and without delay. No delay claims shall be permitted unless the event or occurrence delays the completion of the Project beyond the Contract completion date.

D. **No Damages for Reasonable Delay.** The City's liability to Contractor for delays for which the City is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall the City be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs. Damages caused by unreasonable City delay, including delays caused by items that are the responsibility of the City pursuant to Government Code section 4215, shall be based on actual costs only, no proportions or formulas shall be used to calculate any delay damages.

ARTICLE 39 SCHEDULE OF VALUES, COST BREAKDOWN AND PERIODIC ESTIMATES

Contractor shall furnish on forms Approved by the City:

A. When requested by the Engineer, and within ten (10) Days of Notice to Proceed with the Contract, the Contractor shall provide a Schedule of Values consisting of a detailed estimate giving a complete breakdown of the Contract price for each lump sum bid item in the Contract.

B. A monthly itemized estimate of Work done for the purpose of making progress payments. In order for the City to consider and evaluate each progress payment application, the Contractor shall submit a detailed measurement of Work performed and a progress estimate of the value thereof before the tenth (10th) Day of the following month.

C. Contractor shall submit, with each of its payment requests, an adjusted list of actual quantities, verified by the Engineer, for unit price items listed, if any, in the Bid Form.

D. Following the City's Acceptance of the Work, the Contractor shall submit to the City a written statement of the final quantities of unit price items for inclusion in the final payment request.

E. The City shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any estimate for payment.

Contractor shall certify under penalty of perjury, that all cost breakdowns and periodic estimates accurately reflect the Work on the Project.

ARTICLE 40 PROGRESS ESTIMATES AND PAYMENT

A. By the tenth (10th) Day of the following calendar month, Contractor shall submit to Engineer a payment request which shall set forth in detail the value of the Work done for the period beginning with the date work was first commenced and ending on the end of the calendar month for which the payment request is prepared. Contractor shall include any amount earned for authorized extra work. From the total thus computed, a deduction shall be made in the amount of five percent (5%) for retention, except where the City has adopted a finding that the Work done under the Contract is substantially complex, and then the amount withheld as retention shall be the percentage specified in the Notice Inviting Bids. From the remainder a further deduction may be made in accordance with Section B below. The amount computed, less the amount withheld for retention and any amounts withheld as set forth below, shall be the amount of the Contractor's payment request.

B. The Contractor shall provide an updated project schedule with each payment request.

C. The City may withhold a sufficient amount or amounts of any payment or payments otherwise due to Contractor, as in his judgment may be necessary to cover:

1. Payments which may be past due and payable for just claims against Contractor or any subcontractors for labor or materials furnished in and about the performance of work on the Project under this Contract.

2. Defective work not remedied.

3. Failure of Contractor to make proper payments to his subcontractor or for material or labor.

4. Completion of the Contract if there is a reasonable doubt that the Work can be completed for balance then unpaid.

5. Damage to another contractor or a third party.

6. Amounts which may be due the City for claims against Contractor.

7. Failure of Contractor to keep the record ("as-built") drawings up to date.

8. Failure to provide update on construction schedule as required herein.

9. Site cleanup.

10. Failure to comply with Contract Documents.

11. Liquidated damages.

12. Legally permitted penalties.

D. The City may apply such withheld amount or amounts to payment of such claims or obligations at its discretion with the exception of subsections (B)(1), (3), and (5) of this Article, which must be retained or applied in accordance with applicable law. In so doing, the City shall be deemed the agent of Contractor and any payment so made by the City shall be considered as a payment made under contract by the City to Contractor and the City shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. The City will render Contractor a proper accounting of such funds disbursed on behalf of Contractor.

E. Upon receipt, the Engineer shall review the payment request to determine whether it is undisputed and suitable for payment. If the payment request is determined to be unsuitable for payment, it shall be returned to Contractor as soon as practicable but not later than seven (7) Days after receipt, accompanied by a document setting forth in writing the reasons why the payment request is not proper. The City shall make the progress payment within thirty (30) calendar days after the receipt of an undisputed and properly submitted payment request from Contractor, provided that a release of liens and claims has been received from the Contractor pursuant to Civil Code section 8132. The number of days available to the City to make a payment without incurring interest pursuant to this paragraph shall be reduced by the number of days by which the Engineer exceeds the seven (7) Day requirement.

F. A payment request shall be considered properly executed if funds are available for payment of the payment request and payment is not delayed due to an audit inquiry by the financial officer of the City.

ARTICLE 41 SECURITIES FOR MONEY WITHHELD

Pursuant to section 22300 of the Public Contract Code of the State of California, Contractor may request the City to make retention payments directly to an escrow agent or may substitute securities for any money withheld by the City to ensure performance under the contract. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City or with a state or federally chartered bank as the escrow agent who shall return such securities to Contractor upon satisfactory completion of the contract. Deposit of securities with an escrow agent shall be subject to a written agreement substantially in the form provided in section 22300 of the Public Contract Code.

ARTICLE 42 CHANGES AND EXTRA WORK.

A. **Contract Change Orders.**

1. The City, without invalidating the Contract, may order changes in the Work consisting of additions, deletions or other revisions, and the Contract Price and Contract Time shall be adjusted accordingly. Except as otherwise provided herein, all such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in the Contract Price or the Contract Time, and the full and final settlement of all costs (direct, indirect and overhead) related to the Work authorized by the Change Order.

2. Contractor shall promptly execute changes in the Work as directed in writing by the City even when the parties have not reached agreement on whether the change increases the scope of Work or affects the Contract Price or Contract Time. All claims for additional compensation shall be presented in writing. No claim will be considered after the Work in question has been completed unless a written Change Order has been issued or a timely written notice of claim has been made by Contractor.

3. Whenever any change is made as provided for herein, such change shall be considered and treated as though originally included in the Contract, and shall be subject to all terms, conditions, and provisions of the original Contract.

4. Contractor shall not be entitled to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any item or portion of Work to be done.

5. No dispute, disagreement, or failure of the parties to reach agreement on the terms of the Change Order shall relieve the Contractor from the obligation to proceed with performance of the work, including Additional Work, promptly and expeditiously.

6. Contractor shall make available to the City any of the Contractor's documents related to the Project immediately upon request of the City, as set forth in Article 52.

7. Any alterations, extensions of time, Additional Work, or any other changes may be made without securing consent of the Contractor's surety or sureties.

B. **Contract Price Change.**

1. Process for Determining Adjustments in Contract Price.

a. Owner Initiated Change. The Contractor must submit a complete cost proposal, including any change in the Contract Price or Contract Time, within seven (7) Days after receipt of a scope of a proposed change order initiated by the City, unless the City requests that proposals be submitted in less than seven (7) Days.

b. Contractor Initiated Change. The Contractor must give written notice of a proposed change order required for compliance with the Contract Documents within seven (7) Days of discovery of the facts giving rise to the proposed change order.

c. Whenever possible, any changes to the Contract amount shall be in a lump sum mutually agreed to by the Contractor and the City.

d. Price quotations from the Contractor shall be accompanied by sufficiently detailed supporting documentation to permit verification by the City, including but not limited to estimates and quotations

from subcontractors or material suppliers, as the City may reasonably request. Contractor shall certify the accuracy of all Change Order Requests under penalty of perjury.

e. If the Contractor fails to submit a complete cost proposal within the seven (7) Day period (or as requested), the City has the right to order the Contractor in writing to commence the Work immediately on a time and materials basis and/or issue a lump sum change to the Contract Price and/or Contract Time in accordance with the City's estimate. If the change is issued based on the City's estimate, the Contractor will waive its right to dispute the action unless within fifteen (15) Days following completion of the added/deleted work, the Contractor presents written proof that the City's estimate was in error.

2. Unit Price Change Orders.

a. When the actual quantity of a Unit Price item is found to vary from the Bid Form, compensation for the change in quantity will be calculated by multiplying the actual quantity by the Unit Price. This calculation may result in either an additive or deductive Final Change Order pursuant to the Contract Documents. Contractor shall immediately inform the Engineer when the actual quanities vary from estimated quantities.

b. No Mark up for Overhead and Profit. Because the Contract Unit Prices provided in the Bid Form include Overhead and Profit as determined by Contractor at the time of Bid submission, no mark up or deduction for Overhead and Profit will be included in Unit Price Change Orders.

c. Bid items included on the Bid Form may be deducted from the Work in their entirety without any negotiated extra costs.

d. Contractor acknowledges that unit quantities are estimates and agrees that the estimated unit quantities listed on the Bid Form will be adjusted to reflect the actual unit quantities which may result in an adjustment to the Contract Unit Prices. Such an adjustment will be made by execution of a final additive or deductive Change Order following Contractor's completion of the Work. Upon notification, Contractor's failure to respond within seven (7) Days will result in City's issuance of a unit quantity adjustment to the Contract Unit Prices and/or Contract Time in accordance with the Contract Documents.

3. Lump Sum Change Orders. Compensation for Lump Sum Change Orders shall be limited to expenditures necessitated specifically by the Additional Work, and shall be segregated as follows:

a. Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the Additional

Work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the Additional Work cost will not be permitted unless the Contractor establishes the necessity for such new classifications. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b. Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available in the quantities involved, plus sales tax, freight, and delivery. Materials costs shall be based upon supplier or manufacturer's invoice. If invoices or other satisfactory evidence of cost are not furnished within fifteen (15) Days of delivery, then the City shall determine the materials cost, at its sole discretion.

c. Tool and Equipment Use. Costs for the use of small tools, which are tools that have a replacement value of $1,000 or less, shall be considered included in the Overhead and Profit mark-ups established below. Regardless of ownership, the rates to be used in determining equipment use costs shall not exceed listed rates prevailing locally at equipment rental agencies, or distributors, at the time the Work is performed.

4. Time and Materials Change Orders.

a. General. The term Time and Materials means the sum of all costs reasonably and necessarily incurred and paid by Contractor for labor, materials, and equipment in the proper performance of Additional Work. Except as otherwise may be agreed to in writing by the City, such costs shall be in amounts no higher than those prevailing in the locality of the Project, and shall include only the following items.

b. Timely and Final Documentation.

i. T&M Daily Sheets. Contractor must submit timesheets, materials invoices, records of equipment hours, and records of rental equipment hours to the City's Representative for an approval signature **each day** Additional Work is performed. Failure to get the City's Representative's approval signature each Day shall result in a waiver of Contractor's right to claim these costs. The City's Representative's signature on time sheets only serves as verification that the Work was performed and is not indicative of City's agreement to Contractor's entitlement to the cost.

ii. T&M Daily Summary Sheets. All documentation of incurred costs ("T&M Daily Summary Sheets") shall be submitted by Contractor within **three (3) Days** of incurring the cost for labor, material, equipment, and special services as Additional Work is performed. Contractor's actual costs shall be presented in a summary table in an electronic spreadsheet file by labor, material, equipment, and special services. Each T&M Daily Summary Sheet shall include Contractor's actual costs incurred for the Additional Work performed that day and a cumulative total of Contractor's actual costs incurred for the Additional Work. Contractor's failure to provide a T&M Daily Summary Sheet showing a total cost summary within three (3) Days but within five (5) Days of performance of the Work will result in the Contractor's otherwise allowable overhead and profit being reduced by 50% for that portion of Additional Work which was not documented in a timely manner. Contractor's failure to submit the T&M Daily Summary Sheet within five (5) Days of performance of the Work will result in a total waiver of Contractor's right to claim these costs.

iii. T&M Total Cost Summary Sheet. Contractor shall submit a T&M Total Cost Summary Sheet, which shall include total actual costs, within **seven (7) Days** following completion of City approved Additional Work. Contractor's total actual cost shall be presented in a summary table in an electronic spreadsheet file by labor, material, equipment, and special services. Contractor's failure to submit the T&M Total Cost Summary Sheet within seven (7) Days of completion of the Additional Work will result in Contractor's waiver for any reimbursement of any costs associated with the T&M Summary Sheets or the performance of the Additional Work.

c. Labor. The Contractor will be paid the cost of labor for the workers used in the actual and direct performance of the Work. The cost of labor will be the sum of the actual wages paid (which shall include any employer payments to or on behalf of the workers for health and welfare, pension, vacation, and similar purposes) substantiated by timesheets and certified payroll for wages prevailing for each craft or type of workers performing the Additional Work at the time the Additional Work is done, and the labor surcharge set forth in the Department of Transportation publication entitled *Labor Surcharge and Equipment Rental Rates*, which is in effect on the date upon which the Work is accomplished and which is a part of the Contract. The labor surcharge shall constitute full compensation for all payments imposed by Federal, State, or local laws and for all other payments made to, or on behalf of, the workers, other than actual wages.

i. Equipment Operator Exception. Labor costs for equipment operators and helpers shall be paid only when such costs are not included in the invoice for equipment rental.

ii. Foreman Exception. The labor costs for foremen shall be proportioned to all of their assigned work and only that applicable to the Additional Work shall be paid. Indirect labor costs, including, without limitation, the superintendent, project manager, and other labor identified in the Contract Documents will be considered Overhead.

d. Materials. The cost of materials reported shall be itemized at invoice or lowest current price at which materials are locally available and delivered to the Project site in the quantities involved, plus the cost of sales tax, freight, delivery, and storage.

i. Trade discounts available to the purchaser shall be credited to the City notwithstanding the fact that such discounts may not have been taken by Contractor.

ii. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the City's Representative.

iii. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on Additional Work items or the current wholesale price for such materials delivered to the Project site, whichever price is lower.

iv. If, in the opinion of the City's Representative, the cost of materials is excessive, or Contractor does not furnish satisfactory evidence of the cost of such materials, then the cost shall be deemed to be the lowest current wholesale price for the total quantity concerned delivered to the Project site less trade discounts.

v. The City reserves the right to furnish materials for the Additional Work and no Claim shall be allowed by Contractor for costs of such materials or Indirect Costs or profit on City furnished materials.

e. Equipment.

i. Rental Time. The rental time to be paid for equipment on the Project site shall be the time the equipment is in productive operation on the Additional Work being performed and, in addition, shall include the time required to move the equipment to the location of the Additional Work

and return it to the original location or to another location requiring no more time than that required to return it to its original location; except that moving time will not be paid if the equipment is used on other than the Additional Work, even though located at the site of the Additional Work.

(a) Rental Time Not Allowed. Rental time will not be allowed while equipment is inoperative due to breakdowns.

(b) Computation Method. The following shall be used in computing the rental time of equipment on the Project site.

(i) When hourly rates are paid, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.

(ii) When daily rates are paid, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation, and any part of an hour in excess of 4 hours will be considered one day of operation.

ii. Rental Rates. Contractor will be paid for the use of equipment at the lesser of (i) the actual rental rate, or (ii) the rental rate listed for that equipment in the California Department of Transportation publication entitled *Labor Surcharge and Equipment Rental Rates*, which is in effect on the date upon which the Contract was executed. Such rental rates will be used to compute payments for equipment whether the equipment is under Contractor's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate (i.e., daily, monthly) resulting in the least total cost to the City for the total period of use. If it is deemed necessary by Contractor to use equipment not listed in the publication, an equitable rental rate for the equipment will be established by the City's Representative. Contractor may furnish cost data which might assist the City's Representative in the establishment of the rental rate.

iii. Contractor-Owned Equipment.

(a) For Contractor-owned equipment, the allowed equipment rental rate will be limited to the monthly

equipment rental rate using a utilization rate of 173 hours per month.

(b) For Contractor-owned equipment, the rental time to be paid for equipment on the Site shall be the time the equipment is in productive operation, unless, in the instance of standby time, the equipment could be actively used by Contractor on another project, then City shall pay for the entirety of the time the equipment is on Site. It shall be Contractor's burden to demonstrate to the City that the equipment could be actively used on another project.

(i) All equipment shall, in the opinion of the City's Representative, be in good working condition and suitable for the purpose for which the equipment is to be used.

(ii) Before construction equipment is used on the Additional Work, Contractor shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the City's Representative, in duplicate, a description of the equipment and its identifying number and the scheduled Additional Work activities planned.

(iii) Unless otherwise specified, manufacturer's rating and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

f. Special Services. Special work or services are defined as that Additional Work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry.

i. Invoices for Special Services. When the City's Representative and Contractor determine that a special service is required which cannot be performed by the forces of Contractor or those of any of its Subcontractors, the special service may be performed by an entity especially skilled in the Additional Work. Invoices for special services based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs, after validation of market values by the City's Representative.

ii. Discount and Allowance. All invoices for special services will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of Overhead and Profit specified herein, a total allowance not to exceed fifteen percent (15%) for Overhead and Profit will be added to invoices for Special Services.

iii. When the City determines, in its sole discretion, that competitive bidding is necessary for certain special services, Contractor shall solicit competitive bids for those special services.

g. Excluded Costs. The term Time and Material shall not include any of the following costs or any other home or field office overhead costs, all of which are to be considered administrative costs covered by Contractor's allowance for Overhead and Profit.

i. Overhead Cost. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, timekeepers, clerks, and other personnel employed by Contractor whether at the Site or in Contractor's principal office or any branch office, material yard, or shop for general administration of the Additional Work;

ii. Office Expenses. Expenses of Contractor's principal and branch offices;

iii. Capital Expenses. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Additional Work and charges against Contractor for delinquent payments;

iv. Negligence. Costs due to the negligence of Contractor or any Subcontractor or Supplier, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including without limitation the correction of Defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property;

v. Other. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in the Contract Documents;

vi. Small Tools. Cost of small tools valued at less than $1,000 and that remain the property of Contractor;

vii. Administrative Costs. Costs associated with the preparation of Change Orders (whether or not ultimately authorized), cost estimates, or the preparation or filing of Claims;

viii. Anticipated Lost Profits. Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings, or unpaid retention;

ix. Home Office Overhead. Costs derived from the computation of a "home office overhead" rate by application of the *Eichleay, Allegheny*, burden fluctuation, or other similar methods;

x. Special Consultants and Attorneys. Costs of special consultants or attorneys, whether or not in the direct employ of Contractor, employed for services specifically related to the resolution of a Claim, dispute, or other matter arising out of or relating to the performance of the Additional Work.

h. Overhead, Profit and Other Charges. The mark-up for overhead (including supervision) and profit on work added to the Contract shall be according to the following:

i. "Net Cost" is defined as consisting of costs of labor, materials, and tools and equipment only excluding overhead and profit. The costs of applicable insurance and bond premium will be reimbursed to the Contractor and subcontractors at cost only, without mark-up. Contractor shall provide City with documentation of the costs, including, but not limited to, payroll records, invoices, and such other information as City may reasonably request.

ii. For Work performed by the Contractor's forces, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the Net Cost of the Work.

iii. For Work performed by a subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the subcontractor's Net Cost of the Work to which the Contractor may add five percent (5%) of the subcontractor's Net Cost.

iv. For Work performed by a sub-subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the sub-subcontractor's Net Cost for Work to which the subcontractor and general contractor may each add an additional five percent (5%) of the Net Cost of the lower tier subcontractor.

v. No additional mark-up will be allowed for lower tier subcontractors, and in no case shall the added cost for

overhead and profit payable by City exceed twenty-five percent (25%) of the Net Cost as defined herein, of the party that performs the Work.

5. All of the following costs are included in the markups for overhead and profit described above, and Contractor shall not receive any additional compensation for: Submittals, drawings, field drawings, Shop Drawings, including submissions of drawings; field inspection; General Superintendence; General administration and preparation of cost proposals, schedule analysis, Change Orders, and other supporting documentation; computer services; reproduction services; Salaries of project engineer, superintendent, timekeeper, storekeeper, and secretaries; Janitorial services; Small tools, incidentals and consumables; Temporary On-Site facilities (Offices, Telephones, High Speed Internet Access, Plumbing, Electrical Power, Lighting; Platforms, Fencing, Water), Jobsite and Home office overhead or other expenses; vehicles and fuel used for work otherwise included in the Contract Documents; Surveying; Estimating; Protection of Work; Handling and disposal fees; Final Cleanup; Other Incidental Work; Related Warranties; insurance and bond premiums.

6. For added or deducted Work by subcontractors, the Contractor shall furnish to the City the subcontractor's signed detailed record of the cost of labor, material and equipment, including the subcontractor markup for overhead and profit. The same requirement shall apply to sub-subcontractors

7. For added or deducted work furnished by a vendor or supplier, the Contractor shall furnish to the City a detailed record of the cost to the Contractor, signed by such vendor or supplier.

8. Any change in the Work involving both additions and deletions shall indicate a net total cost, including subcontracts and materials. Allowance for overhead and profit, as specified herein, shall be applied if the net total cost is an increase in the Contract Price; overhead and profit allowances shall not be applied if the net total cost is a deduction to the Contract Price. The estimated cost of deductions shall be based on labor and material prices on the date the Contract was executed.

9. Contractor shall not reserve a right to assert impact costs, extended job site costs, extended overhead, constructive acceleration and/or actual acceleration beyond what is stated in the Change Order for Work. No claims shall be allowed for impact, extended overhead costs, constructive acceleration and/or actual acceleration due to a multiplicity of changes and/or clarifications. The Contractor may not change or modify the City's change order form in an attempt to reserve additional rights.

10. If the City disagrees with the proposal submitted by Contractor, it will notify the Contractor and the City will provide its opinion of the appropriate price and/or time extension. If the Contractor agrees with the City, a Change Order will be issued by the City. If no agreement can be reached, the City shall have the right to issue a unilateral Change Order setting forth its determination of the reasonable additions or savings in costs and time

attributable to the extra or deleted work. Such determination shall become final and binding if the Contractor fails to submit a claim in writing to the City within fifteen (15) Days of the issuance of the unilateral Change Order, disputing the terms of the unilateral Change Order, and providing such supporting documentation for its position as the City may require.

C. **Change of Contract Times.**

1. The Contract Times may only be changed by a Change Order.

2. All changes in the Contract Price and/or adjustments to the Contract Times related to each change shall be included in Contractor's COR pursuant to this Article. No cost or time will be allowed for cumulative effects of multiple changes. All Change Orders must state that the Contract Time is not changed or is either increased or decreased by a specific number of days. Failure to include a change to time shall waive any change to the time unless the parties mutually agree in writing to postpone a determination of the change to time resulting from the Change Order.

3. Notice of the amount of the request for adjustment in the Contract Times with supporting data shall be delivered within seven (7) Days after such start of occurrence, unless City's Representative allows an additional period of time to ascertain more accurate data in support of the request. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed.

4. City may elect, at City's sole discretion, to grant an extension in Contract Times, without Contractor's request, because of delays or other factors.

5. <u>Use of Float and Critical Path.</u>

   a. Float is for the benefit of the Project. Float shall not be considered for the exclusive use or benefit of either the City or the Contractor.

   b. Contractor shall not be entitled to compensation, and City will not compensate Contractor, for delays which impact early completion. Any difference in time between the Contractor's early completion and the Contract Time shall be considered a part of the Project float.

6. Contractor's entitlement to an extension of the Contract Times is limited to a City-caused extension of the critical path, reduced by the Contractor's concurrent delays, and established by a proper time impact analysis. No time extension shall be allowed unless, and then only to the extent that, the City-caused delay extends the critical path beyond the previously approved Contract Time. If approved, the increase in time required to complete the Work shall be added to the Contract Time.

   a. Contractor shall not be entitled to an adjustment in the Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or

Supplier shall be deemed to be delays within the control of Contractor.

b. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions (as determined by the City), Acts of God, acts or failures to act of utility owners not under the control of City, or other causes not the fault of and beyond control of City and Contractor, then Contractor shall be entitled to an time extension when the Work stopped is on the critical path. Such a non-compensable adjustment shall be Contractor's sole and exclusive remedy for such delays. Contractor must submit a timely request in accordance with the requirements of this Article.

c. Utility-Related Delays.

i. Contractor shall immediately notify in writing the utility owner and City's Representative of its construction schedule and any subsequent changes in the construction schedule which will affect the time available for protection, removal, or relocation of utilities. Requests for extensions of time arising out of utility relocation or repair delays shall be filed in accordance with this Article.

ii. Contractor shall not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if correctly located, as noted in the Contract Documents or by the Underground Service Alert survey.

7. Content for Requests for Contract Extension. Contractor's justification for entitlement shall be clear and complete citing specific Contract Document references and reasons on which Contractor's entitlement is based. At a minimum, each request for a time extension must include:

a. Each request for an extension of Contract Time must identify the impacting event, in narrative form, providing a description of the delay event and sufficient justification as to why the Contractor is entitled to a time extension. Contractor must demonstrate that the delay arises from unforeseeable causes beyond the control and without the fault or negligence of both Contractor and any Subcontractors or Suppliers, or any other persons or organizations employed by any of them or for whose acts any of them may be liable, and that such causes in fact lead to performance or completion of the Work, or specified part in question, beyond the corresponding Contract Times, despite Contractor's reasonable and diligent actions to guard against those effects.

b. Each request for an extension of Contract Time must include a time impact analysis in CPM format, using the Contemporaneous Impacted As-Planned Schedule Analysis to calculate the impact of the delay event.

8. No Damages for Reasonable Delay.

a. City's liability to Contractor for delays for which City is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall City be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs.

b. City and City's Representative, and the officers, members, partners, employees, agents, consultants, or subcontractors of each of them, shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

9. Contractor's failure, neglect, or refusal to comply with the requirements of the Contract Documents, or any portion thereof, shall bar Contractor's request for extensions of the Contract Times. Such failure, neglect, or refusal prejudices City's and City's Representative's ability to recognize and mitigate delay, and such failure, neglect, or refusal prevent the timely analysis of requests for extensions of Contract Times, and whether such extensions may be warranted. Contractor hereby waives all rights to extensions of Contract Times due to delays or accelerations that result from or occur during periods of time for which Contractor fails, neglects, or refuses to fully comply with the requirements of this Article.

10. Contractors submission of daily construction reports and schedule updates in accordance with these Contract Documents is required for the evaluation of the merits of time extension request. Failure of the Contractor to submit daily construction reports and schedule updates shall constitute a waiver of its right to seek a time extension or additional compensation.

ARTICLE 43 FINAL ACCEPTANCE AND PAYMENT

A. Final Inspection. Upon written notice from Contractor that the entire Work is complete, the Engineer will promptly make a final inspection and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

B. Final Acceptance. After Contractor has, in the opinion of the Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as-builts), and other documents required by the Contract Documents, the City shall execute and file with the County in which the Project is located a Notice of

Completion, constituting final acceptance and completion of the Project, except as may be expressly noted.

C. Final Payment.

1. Application for Payment. Upon execution of the Notice of Completion, Contractor may make application for final payment following the procedure for progress payments. The final application for payment shall be accompanied (except as previously delivered) by: all documentation called for in the Contract Documents, including but not limited to a fully completed Conditional Waiver and Release on Final Payment

2. City's Review of Application and Acceptance. If, on the basis of the City's observation of the Work during construction and final inspection, and review of the final Application for Payment and accompanying documentation as required by the Contract Documents, the City is satisfied that the Work has been completed and Contractor has satisfied all other requirements for final payment, the City will process the final payment appllication. Otherwise, the City will return the payment application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the application for payment.

3. Payment Becomes Due. Within sixty (60) Days after the presentation to the City of the proper and complete final application for payment and accompanying documentation, the amount recommended by the Engineer, less any sum the City is entitled to set off pursuant to the Contract Documents, will become due and will be paid by the City to Contractor.

D. Waiver of Claims. The making and acceptance of final payment will constitute a waiver of all Claims by Contractor against the City other than those previously made in accordance with the requirements herein and expressly acknowledged by the City in writing as still unsettled.

ARTICLE 44 OCCUPANCY

The City reserves the right to occupy or utilize any portion of the Work at any time before completion, and such occupancy or use shall not constitute acceptance of any part of Work covered by this Contract.This use shall not relieve the Contractor of its responsibilities under the Contract.

ARTICLE 45 INDEMNIFICATION

To the fullest extent permitted by law, Contractor shall immediately defend (with counsel of the City's choosing), indemnify and hold harmless the City, officials, officers, agents, employees, and representatives, and each of them from and against:

A. Any and all claims, demands, causes of action, costs, expenses, injuries, losses or liabilities, in law or in equity, of every kind or nature whatsoever, but not limited to, injury to or death, including wrongful death, of any person, and damages to or destruction of property of any person, arising out of, related to, or in any manner

directly or indirectly connected with the Work or this Contract, including claims made by subcontractors for nonpayment, including without limitation the payment of all consequential damages and attorney's fees and other related costs and expenses, however caused, regardless of whether the allegations are false, fraudulent, or groundless, and regardless of any negligence of the City or its officers, employees, or authorized volunteers (including passive negligence), except the sole negligence or willful misconduct or active negligence of the City or its officials, officers, employees, or authorized volunteers.

B. Contractor's defense and indemnity obligation herein includes, but is not limited to damages, fines, penalties, attorney's fees and costs arising from claims under the Americans with Disabilities Act (ADA) or other federal or state disability access or discrimination laws arising from Contractor's Work during the course of construction of the improvements or after the Work is complete, as the result of defects or negligence in Contractor's construction of the improvements.

C. Any and all actions, proceedings, damages, costs, expenses, fines, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;

D. Any and all losses, expenses, damages (including damages to the Work itself), attorney's fees, and other costs, including all costs of defense which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of Contractor's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorney's fees, incurred by the indemnified parties in any lawsuit to which they are a party.

Contractor shall immediately defend, at Contractor's own cost, expense and risk, with the City Council's choosing, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the City, its officials, officers, agents, employees and representatives. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against the City, its officials, officers, employees, agents, employees and representatives, in any such suit, action or other legal proceeding. Contractor shall reimburse the City, its officials, officers, agents, employees and representatives for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code section 2782.

ARTICLE 46 PROCEDURE FOR RESOLVING DISPUTES

Contractor shall timely comply with all notices and requests for changes to the Contract Time or Contract Price, including but not limited to all requirements of Article 42, Changes and Extra Work, as a prerequisite to filing any claim governed by this Article. The failure to timely submit a notice of delay or notice of change, or to timely request a change to the Contract Price or Contract Time, or to timely provide any other notice or request required herein shall constitute a waiver of the right to further pursue the claim under the Contract or at law.

A. **Intent.** Effective January 1, 1991, Section 20104 et seq., of the California Public Contract Code prescribes a process utilizing informal conferences, non-binding judicial supervised mediation, and judicial arbitration to resolve disputes on construction claims of $375,000 or less. Effective January 1, 2017, Section 9204 of the Public

Contract Code prescribes a process for negotiation and mediation to resolve disputes on construction claims. The intent of this Article is to implement Sections 20104 et seq. and Section 9204 of the California Public Contract Code. This Article shall be construed to be consistent with said statutes.

B. **Claims.** For purposes of this Article, "Claim" means a separate demand by the Contractor, after a change order duly requested in accordance with Article 42 "Changes and Extra Work" has been denied by the City, for (A) a time extension, (B) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract, or (C) an amount the payment of which is disputed by the City. Claims governed by this Article may not be filed unless and until the Contractor completes all procedures for giving notice of delay or change and for the requesting of a time extension or change order, including but not necessarily limited to the procedures contained in Article 42, Changes and Extra Work, and Contractor's request for a change has been denied in whole or in part. Claims governed by this Article must be filed no later than the date of final payment. The claim shall be submitted in writing to the City and shall include on its first page the following in 16 point capital font: "THIS IS A CLAIM." Furthermore, the claim shall include the documents necessary to substantiate the claim. Nothing herein is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims, including all requirements pertaining to compensation or payment for extra Work, disputed Work, and/or changed conditions. Failure to follow such contractual requirements shall bar any claims or subsequent lawsuits for compensation or payment thereon.

C. **Supporting Documentation.** The Contractor shall submit all claims in the following format:

1. Summary of claim merit and price, reference Contract Document provisions pursuant to which the claim is made

2. List of documents relating to claim:

   Specifications

   Drawings

   Clarifications (Requests for Information)

   Schedules

   Other

3. Chronology of events and correspondence

4. Analysis of claim merit

5. Analysis of claim cost

6. Time Impact Analysis in CPM format

D. **City's Response.** Upon receipt of a claim pursuant to this Article, City shall conduct a reasonable review of the claim and, within a period not to exceed 45 Days, shall provide the Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Any payment due on an undisputed portion of the claim will be processed and made within 60 Days after the City issues its written statement.

1. If the City needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the claim, and the City's governing body does not meet within the 45 Days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the City shall have up to three Days following the next duly publicly noticed meeting of the City's governing body after the 45-Day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

2. Within 30 Days of receipt of a claim, the City may request in writing additional documentation supporting the claim or relating to defenses or claims the City may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of City and the Contractor. The City's written response to the claim, as further documented, shall be submitted to the Contractor within 30 Days (if the claim is less than $15,000, within 15 Days) after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.

E. **Meet and Confer.** If the Contractor disputes the City's written response, or the City fails to respond within the time prescribed, the Contractor may so notify the City, in writing, either within 15 Days of receipt of the City's response or within 15 Days of the City's failure to respond within the time prescribed, respectively, and demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, the City shall schedule a meet and confer conference within 30 Days for settlement of the dispute.

F. **Mediation.** Within 10 business Days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 Days after the City issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business Days after the disputed portion of the claim has been identified in writing, unless the parties agree to select a mediator at a later time.

1. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

2. For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

3. Unless otherwise agreed to by the City and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

4. The mediation shall be held no earlier than the date the Contractor completes the Work or the date that the Contractor last performs Work, whichever is earlier. All unresolved claims shall be considered jointly in a single mediation, unless a new unrelated claim arises after mediation is completed.

G. **Procedures After Mediation.** If following the mediation, the claim or any portion remains in dispute, the Contractor must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code prior to initiating litigation. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits his or her written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference.

H. **Civil Actions.** The following procedures are established for all civil actions filed to resolve claims of $375,000 or less:

1. Within 60 Days, but no earlier than 30 Days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties or unless mediation was held prior to commencement of the action in accordance with Public Contract Code section 9204 and the terms of this Contract. The mediation process shall provide for the selection within 15 Days by both parties of a disinterested third person as mediator, shall be commenced within 30 Days of the submittal, and shall be concluded within 15 Days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.

2. If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1114.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration. In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.

I. **Government Code Claims.** In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra Work, disputed Work, construction claims and/or changed conditions, the Contractor must comply with the claim procedures set forth in Government Code Sections 900, et seq. prior to filing any lawsuit against the City. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra Work, disputed Work, construction claims, and/or changed conditions have been followed by Contractor. If no such Government Code claim is submitted, or if the prerequisite contractual requirements are not satisfied, no action against the City may be filed. **A Government Code claim must be filed no earlier than the date the Work is completed or the date the Contractor last performs Work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved claims unless a new unrelated claim arises after the Government Code claim is submitted.**

J. **Non-Waiver.** The City's failure to respond to a claim from the Contractor within the time periods described in this Article or to otherwise meet the time requirements of this Article shall result in the claim being deemed rejected in its entirety.

ARTICLE 47 CITY'S RIGHT TO TERMINATE CONTRACT

A. **Termination for Cause by the City:**

1. In the sole estimation of the City, if the Contractor refuses or fails to prosecute the Work or any separable part thereof with such diligence as will insure its completion within the time specified by the Contract Documents, or any extension thereof, or fails to complete such Work within such time, or if the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or the Contractor or any of its subcontractors should violate any of the provisions of this Contract, the City may serve written notice upon the Contractor and its Surety of the City's intention to terminate this Contract. This notice of intent to terminate shall contain the reasons for such intention to terminate this Contract, and a statement to the effect that the Contractor's right to perform this Contract shall cease and terminate upon the expiration of ten (10) calendar days unless such violations have ceased and arrangements satisfactory to the City have been made for correction of said violations.

2. In the event that the City serves such written notice of termination upon the Contractor and the Surety, the Surety shall have the right to take over and perform the Contract. If the Surety does not: (1) give the City written notice of Surety's intention to take over and commence performance of the Contract within 15 calendar days of the City's service of said notice of intent to terminate upon Surety; and (2) actually commence performance of the Contract within 30 calendar days of the City's service of said notice upon Surety; then the City may take over the Work and prosecute the same to completion by separate contract or by any other method it may deem advisable for the account and at the expense of the Contractor.

3. In the event that the City elects to obtain an alternative performance of the Contract as specified above: (1) the City may, without liability for so doing, take possession of and utilize in completion of the Work such materials, appliances, plants and other property belonging to the Contractor that are on the site and reasonably necessary for such completion (A special lien to secure the claims of the City in the event of such suspension is hereby created against any property of Contractor taken into the possession of the City under the terms hereof and such lien may be enforced by sale of such property under the direction of the City Council without notice to Contractor. The proceeds of the sale after deducting all expenses thereof and connected therewith shall be credited to Contractor. If the net credits shall be in excess of the claims of the City against Contractor, the balance will be paid to Contractor or Contractor's legal representatives.); and (2) Surety shall be liable to the City for any cost or other damage to the City necessitated by the City securing an alternate performance pursuant to this Article.

B. **Termination for Convenience by the City:**

1. The City may terminate performance of the Work called for by the Contract Documents in whole or, from time to time, in part, if the City determines that a termination is in the City's interest.

2. The Contractor shall terminate all or any part of the Work upon delivery to the Contractor of a Notice of Termination specifying that the termination is for the convenience of the City, the extent of termination, and the Effective Date of such termination.

3. After receipt of Notice of Termination, and except as directed by the City's Representative, the Contractor shall, regardless of any delay in determining or adjusting any amounts due under this Termination for Convenience clause, immediately proceed with the following obligations:

   a. Stop Work as specified in the Notice.

   b. Complete any Work specified in the Notice of Termination in a least cost/shortest time manner while still maintaining the quality called for under the Contract Documents.

   c. Leave the property upon which the Contractor was working and upon which the facility (or facilities) forming the basis of the Contract Document is situated in a safe and sanitary manner such that it does not pose any threat to the public health or safety.

   d. Terminate all subcontracts to the extent that they relate to the portions of the Work terminated.

   e. Place no further subcontracts or orders, except as necessary to complete the continued portion of the Contract.

f. Submit to the City's Representative, within ten (10) calendar days from the Effective Date of the Notice of Termination, all of the usual documentation called for by the Contract Documents to substantiate all costs incurred by the Contractor for labor, materials and equipment through the Effective Date of the Notice of Termination. Any documentation substantiating costs incurred by the Contractor solely as a result of the City's exercise of its right to terminate this Contract pursuant to this clause, which costs the contractor is authorized under the Contract documents to incur, shall: (1) be submitted to and received by the Engineer no later than 30 calendar days after the Effective Date of the Notice of Termination; (2) describe the costs incurred with particularity; and (3) be conspicuously identified as "Termination Costs occasioned by the City's Termination for Convenience."

4. Termination of the Contract shall not relieve Surety of its obligation for any just claims arising out of or relating to the Work performed.

5. In the event that the City exercises its right to terminate this Contract pursuant to this clause, the City shall pay the Contractor, upon the Contractor's submission of the documentation required by this clause and other applicable provisions of the Contract Documents, the following amounts:

a. All actual reimbursable costs incurred according to the provisions of this Contract.

b. A reasonable allowance for profit on the cost of the Work performed, provided Contractor establishes to the satisfaction of the City's Representative that it is reasonably probable that Contractor would have made a profit had the Contract been completed and provided further, that the profit allowed shall in no event exceed fifteen (15%) percent of the costs.

c. A reasonable allowance for Contractor's administrative costs in determining the amount payable due to termination of the Contract under this Article.

C. Notwithstanding any other provision of this Article, when immediate action is necessary to protect life and safety or to reduce significant exposure or liability, the City may immediately order Contractor to cease Work on the Project until such safety or liability issues are addressed to the satisfaction of the City or the Contract is terminated.

ARTICLE 48 WARRANTY AND GUARANTEE OF WORK

A. Contractor hereby warrants that materials and Work shall be completed in conformance with the Contract Documents and that the materials and Work provided will fulfill the requirements of this Warranty. Contractor hereby agrees to repair or replace, at the discretion of the City, any or all Work that may prove to be defective in its workmanship, materials furnished, methods of installation or fail to

conform to the Contract Document requirements together with any other Work which may be damaged or displaced by such defect(s) within a period of one (1) year from the date of the Notice of Completion of the Project without any expense whatever to the City, ordinary wear and tear and unusual abuse and neglect excepted. Contractor shall be required to promptly repair or replace defective equipment or materials, at Contractor's option. All costs associated with such corrective actions and testing, including the removal, replacement, and reinstitution of equipment and materials necessary to gain access, shall be the sole responsibility of the Contractor.

B. For any Work so corrected, Contractor's obligation hereunder to correct defective Work shall be reinstated for an additional one (1) year period, commencing with the date of acceptance of such corrected Work. The reinstatement of the one (1) year warranty shall apply only to that portion of work that was corrected. Contractor shall perform such tests as City may require to verify that any corrective actions, including, without limitation, redesign, repairs, and replacements comply with the requirements of the Contract. In the event of Contractor's failure to comply with the above-mentioned conditions within ten (10) calendar days after being notified in writing of required repairs, to the reasonable satisfaction of the City, the City shall have the right to correct and replace any defective or non-conforming Work and any work damaged by such work or the replacement or correction thereof at Contractor's sole expense. Contractor shall be obligated to fully reimburse the City for any expenses incurred hereunder immediately upon demand.

C. In addition to the warranty set forth in this Article, Contractor shall obtain for City all warranties that would be given in normal commercial practice and assign to City any and all manufacturer's or installer's warranties for equipment or materials not manufactured by Contractor and provided as part of the Work, to the extent that such third-party warranties are assignable and extend beyond the warranty period set forth in this Article. Contractor shall furnish the City with all warranty and guarantee documents prior to final Acceptance of the Project by the City as required.

D. When specifically indicated in the Contract Documents or when directed by the Engineer, the City may furnish materials or products to the Contractor for installation. In the event any act or failure to act by Contractor shall cause a warranty applicable to any materials or products purchased by the City for installation by the Contractor to be voided or reduced, Contractor shall indemnify City from and against any cost, expense, or other liability arising therefrom, and shall be responsible to the City for the cost of any repairs, replacement or other costs that would have been covered by the warranty but for such act or failure to act by Contractor.

E. The Contractor shall remedy at its expense any damage to City-owned or controlled real or personal property.

F. The City shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. The Contractor shall within ten (10) calendar days after being notified commence and perform with due diligence all necessary Work. If the Contractor fails to promptly remedy any defect, or damage;

the City shall have the right to replace, repair or otherwise remedy the defect, or damage at the Contractor's expense.

G. In the event of any emergency constituting an immediate hazard to health, safety, property, or licensees, when caused by Work of the Contractor not in accordance with the Contract requirements, the City may undertake at Contractor's expense, and without prior notice, all Work necessary to correct such condition.

H. Acceptance of Defective Work.

1. If, instead of requiring correction or removal and replacement of Defective Work, the City prefers to accept it, City may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to City's evaluation of and determination to accept such Defective Work and for the diminished value of the Work.

2. If any acceptance of defective work occurs prior to release of the Project Retention, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and City shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work and all costs incurred by City.

3. If the Project Retention is held in an escrow account as permitted by the Contract Documents, Contractor will promptly alert the escrow holder, in writing, of the amount of Retention to be paid to City.

4. If the acceptance of Defective Work occurs after release of the Project Retention, an appropriate amount will be paid by Contractor to City.

I. City May Correct Defective Work.

1. If Contractor fails within a reasonable time after written notice from City's Representative to correct Defective Work, or to remove and replace rejected Work as required by City, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, City may, after seven (7) Days' written notice to Contractor, correct, or remedy any such deficiency.

2. In connection with such corrective or remedial action, City may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which City has paid Contractor but which are stored elsewhere. Contractor shall allow City and City's Representative, and the agents, employees, other contractors, and consultants of each of them, access to the Site to enable City to exercise the rights and remedies to correct the Defective Work.

3. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by City correcting the Defective Work will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions into the Contract Documents with respect to the Work; and City shall be entitled to an appropriate decrease in the Contract Price.

4. Such claims, costs, losses and damages will include, but not be limited to, all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Defective Work.

5. If the Change Order is executed after all payments under the Contract have been paid by City and the Project Retention is held in an escrow account as permitted by the Contract Documents, Contractor will promptly alert the escrow holder, in writing, of the amount of Retention to be paid to City.

6. If the Change Order is executed after release of the Project Retention, an appropriate amount will be paid by Contractor to City.

7. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to City correcting Defective work.

J. Nothing in the Warranty or in the Contract Documents shall be construed to limit the rights and remedies available to City at law or in equity, including, but not limited to, Code of Civil Procedure section 337.15.

ARTICLE 49 DOCUMENT RETENTION & EXAMINATION

A. In accordance with Government Code section 8546.7, records of both the City and the Contractor shall be subject to examination and audit by the State Auditor General for a period of three (3) years after final payment.

B. Contractor shall make available to the City any of the Contractor's other documents related to the Project immediately upon request of the City.

C. In addition to the State Auditor rights above, the City shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the City, for a period of four (4) years after final payment.

ARTICLE 50 SEPARATE CONTRACTS

A. The City reserves the right to let other contracts in connection with this Work or on the Project site. Contractor shall permit other contractors reasonable access and storage of their materials and execution of their work and shall properly connect and coordinate its Work with theirs.

B. To ensure proper execution of its subsequent Work, Contractor shall immediately inspect work already in place and shall at once report to the Engineer any problems with the Work in place or discrepancies with the Contract Documents.

C. Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by the City in prosecution of the Project to the end that Contractor may perform this Contract in the light of such other contracts, if any. Nothing herein contained shall be interpreted as granting to Contractor exclusive occupancy at site of the Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the Engineer shall decide which Contractor shall cease Work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously. The City shall not be responsible for any damages suffered or for extra costs incurred by Contractor resulting directly or indirectly from award, performance, or attempted performance of any other contract or contracts on the Project site.

ARTICLE 51 NOTICE AND SERVICE THEREOF

All notices shall be in writing and either served by personal delivery or mailed to the other party as designated in the Bid Forms. Written notice to the Contractor shall be addressed to Contractor's principal place of business unless Contractor designates another address in writing for service of notice. Notice to City shall be addressed to the City as designated in the Notice Inviting Bids unless City designates another address in writing for service of notice. Notice shall be effective upon receipt or five (5) calendar days after being sent by first class mail, whichever is earlier. Notice given by facsimile shall not be effective unless acknowledged in writing by the receiving party.

ARTICLE 52 NOTICE OF THIRD PARTY CLAIMS

Pursuant to Public Contract Code section 9201, the City shall provide the Contractor with timely notification of the receipt of any third-party claims relating to the Contract. The City is entitled to recover reasonable costs incurred in providing such notification.

ARTICLE 53 STATE LICENSE BOARD NOTICE

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

ARTICLE 54 INTEGRATION

A. **Oral Modifications Ineffective.** No oral order, objection, direction, claim or notice by any party or person shall affect or modify any of the terms or obligations contained in the Contract Documents.

B. **Contract Documents Represent Entire Contract.** The Contract Documents represent the entire agreement of the City and Contractor.

ARTICLE 55 ASSIGNMENT OF CONTRACT

Contractor shall not assign, transfer, convey, sublet or otherwise dispose of the rights or title of interest of any or all of this contract without the prior written consent of the City. Any assignment or change of Contractor's name of legal entity without the written consent of the City shall be void. Any assignment of money due or to become due under this Contract shall be subject to a prior lien for services rendered or Material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering such services or supplying such Materials to the extent that claims are filed pursuant to the Civil Code, the Code of Civil Procedure or the Government Code.

ARTICLE 56 CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY

Should a change be contemplated in the name or nature of the Contractor's legal entity, the Contractor shall first notify the City in order that proper steps may be taken to have the change reflected on the Contract and all related documents. No change of Contractor's name or nature will affect City's rights under the Contract, including but not limited to the bonds.

ARTICLE 57 ASSIGNMENT OF ANTITRUST ACTIONS

Pursuant to Public Contract Code section 7103.5, in entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or subcontractor offers and agrees to assign to the City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 USC, Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to this contract or any subcontract. This assignment shall be made and become effective at the time the City tenders final payment to the Contractor, without further acknowledgment by the parties.

ARTICLE 58 PROHIBITED INTERESTS

No City official or representative who is authorized in such capacity and on behalf of the City to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the project, shall be or become directly or indirectly interested financially in the Contract.

ARTICLE 59 CONTROLLING LAW

Notwithstanding any subcontract or other contract with any subcontractor, supplier, or other person or organization performing any part of the Work, this Contract shall be governed by the law of the State of California excluding any choice of law provisions.

ARTICLE 60 JURISDICTION; VENUE

Contractor and any subcontractor, supplier, or other person or organization performing any part of the Work agrees that any action or suits at law or in equity arising out of or related to the

bidding, award, or performance of the Work shall be maintained in the Superior Court of Santa Clara County, California, and expressly consent to the jurisdiction of said court, regardless of residence or domicile, and agree that said court shall be a proper venue for any such action.

ARTICLE 61 LAWS AND REGULATIONS

A. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on conduct of work as indicated and specified. If Contractor observes that drawings and specifications are at variance therewith, it shall promptly notify the Engineer in writing and any necessary changes shall be adjusted as provided for in this Contract for changes in work. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, it shall bear all costs arising therefrom.

B. Contractor shall be responsible for familiarity with the Americans with Disabilities Act ("ADA") (42 U.S.C. § 12101 et seq.). The Work will be performed in compliance with ADA regulations.

ARTICLE 62 PATENTS

Contractor shall hold and save the City, officials, officers, employees, and authorized volunteers harmless from liability of any nature or kind of claim therefrom including costs and expenses for or on account of any patented or unpatented invention, article or appliance manufactured, furnished or used by Contractor in the performance of this contract.

ARTICLE 63 OWNERSHIP OF CONTRACT DOCUMENTS

All Contract Documents furnished by the City are City property. They are not to be used by Contractor or any subcontractor on other work nor shall Contractor claim any right to such documents. With exception of one complete set of Contract Documents, all documents shall be returned to the City on request at completion of the Work.

ARTICLE 64 NOTICE OF TAXABLE POSSESSORY INTEREST

In accordance with Revenue and Taxation Code section 107.6, the Contract Documents may create a possessory interest subject to personal property taxation for which Contractor will be responsible.

ARTICLE 65 SURVIVAL OF OBLIGATIONS

All reresentations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

00 73 13 – SPECIAL CONDITIONS

1.1 Engineer of Record.

A For purposes of this Project, the Engineer of Record or Engineer shall be:

Tony Ndah, Director of Public Works.

1.2 Location of the Project.

A The Project is located in 1425 North McCarthy Blvd., Milpitas, CA 95035.

B The general location of the Project is shown on:

1. City Drawing Project No. 6078

2. City Drawing Project No. 6103

1.3 Status of the Project Area and Rights-of-Way.

A City, at its expense, will provide all rights-of-way or permits, or both, covering the crossing of private property and public and private rights-of-way necessary for the permanent Work; provided, however, Contractor shall, at its expense, obtain any bonds or insurance policies or pay any fees and enter into any agreements required by a controlling authority, *e.g.*, Caltrans or Southern Pacific Railroad Company, before Contractor enters upon any property or right-of-way under the jurisdiction of any such controlling authority for the purpose of performing Work.

B City has acquired or is negotiating to acquire any rights-of-way, or both, necessary for the permanent Work.

C If such permits are required, all operations of Contractor shall conform to the restrictions, regulations, and requirements set forth in said permits, copies of which will be included in the Contract Documents.

D Contractor may be required, as a condition for receiving final payment, to obtain, and provide City's Representative with copies of, executed damage releases from the owners of public and private property whose property has been damaged by the Work. The damage releases will be on a form provided by City.

E Contractor shall, also, as a condition for receiving final payment, obtain, and provide City's Representative with copies of, executed damage releases from the owners of certain public and private property or areas which have been crossed by the Work or otherwise affected by the Work. The damage releases will be on a form provided by City.

1.4 Site Data.

A The data provided herein is for the information of Contractor and is subject to all limitations and conditions set forth in the Contract Documents.

B Subsurface Exploration Data. The following data are included in the Project Manual:

1. Limited Geotechnical Investigation, City of Milpitas Main Sewage Pump Station Odor Emissions Control Facility, Geocon Consultants, Inc., March 2019, rev. February 2020.

C Other Site Data. The following data are available for inspection at City's office:

1. ____

Copies of these reports, drawings and other materials may be examined at City's office during regular business hours.

1.5 Pre-Purchased or Pre-Negotiated Material.

[RESERVED]

1.6 Designation of City's Representative.

A Unless otherwise modified by City, City's Representative shall be:

Elaine Marshall, Deputy Director of Public Works

1.7 Project Retention

In accordance with Public Contract Code § 7201, City will withhold 5% of each progress payment as retention on the Project.

1.8 Liquidated Damages Due to Contractor Delay.

A Time is of the essence. Should Contractor fail to complete all or any part of the Work within the time specified in the Contract Documents, City will suffer damage, the amount of which is difficult, if not impossible, to ascertain and, pursuant to the authority of Government Code section 53069.85, City shall therefore be entitled to **Five Hundred Dollars and Zero Cents ($500.00)** per Day as liquidated damages for each Day or part thereof that actual completion extends beyond the time specified.

B Liquidated damages may be deducted from progress payments due to Contractor, Project retention or may be collected directly from Contractor, or from Contractor's surety. These provisions for liquidated damages shall not prevent City, in case of Contractor's default, from terminating the Contractor.

1.9 Utility Outages – Notices to Residents.

A Should Contractor's operations require interruption of any utility service, Contractor shall notify City at least ten (10) Days prior to the scheduled outage. Contractor will notify all impacted residents on a form provided by City at least seven (7) Days prior to the scheduled outage.

B Contractor shall be responsible for providing, at its cost, any temporary utility or facilities necessitated by the utility outage.

1.10 Schedule Constraints.

[RESERVED].

1.11 Safety Programs.

[RESERVED].

1.12 Coordination with Other Contractors.

[RESERVED].

END OF SPECIAL CONDITIONS

01 00 00 – GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION

A. The limits of work for this Project shall be confined to the Main Sewage Pump Station located at 1425 North McCarthy Boulevard, Milpitas, CA.

B. The Project includes, but is not limited to, furnishing and installing new biological odor treatment equipment and related piping, valves, instuments, electrical equipment, and controls. All equipment shall be installed in accordance with the manufacturer's requirements and recommendations.

PART 2 [RESERVED]

PART 3 EXECUTION

3.1 LAYOUT OF WORK AND QUANTITY SURVEYS

A. General. The Contractor shall utilize a properly licensed surveyor to perform all layout surveys required for the control and completion of the Work, and all necessary surveys to compute quantities of Work performed.

City and/or the Engineer of Record has established primary control to be used by the Contractor for establishing lines and grades required for the Work.

Primary control consists of benchmarks and horizontal control points in the vicinity of the Work.A listing and identification of the primary control is provided on the Drawings. Before beginning any layout work or construction activity, the Contractor shall check and verify primary control, and shall advise the City Representative of any discrepancies.

B. Quantity surveys. The Contractor shall perform such surveys and computations as are necessary to determine quantities of Work performed or placed during each progress payment period, and shall perform all surveys necessary for the City Representative to determine final quantities of Work in place.The City Representative will determine final quantities based upon the survey data provided by the Contractor, and the design lines and grades.If requested by the City Representative, the Contractor shall provide an electronic copy of data used for quantity computations.

All surveys performed for measurement of final quantities of Work and material shall be subject to approval of City's Representative. Unless waived by City's Representative in each specific case, quantity surveys made by the Contractor shall be made in the presence of City's Representative.

C. Surveying

1. Accuracy. Degree of accuracy shall be an order high enough to satisfy tolerances specified for the Work and the following:

(a) Right-of-way and alignment of tangents and curves shall be within 0.1 foot.

(b) Structure points shall be set within 0.01 foot, except where operational function of the special features or installation of metalwork and equipment require closer tolerances. When formwork has been placed and is ready for concrete, the Contractor shall check the formwork for conformance with the drawings and to ensure that the forms are sufficiently within the tolerance limits for the completed work.

(c) Cross-section points shall be located within 0.1 foot, horizontally and vertically.

(d) Aerial Mapping shall meet National Mapping Standards for 2-foot contour intervals.

D. Records. Survey data shall be recorded in accordance with recognized professional surveying standards. Original field notes, computations, and other surveying data shall be recorded on electronic data collectors or in standard field books and must be of sufficient quality to enable the Contractor to prepare accurate record drawings as required by the Contract Documents.

E. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required for surveys for the layout of work and quantity surveys shall be included in the Schedule of Pay Items for items of work requiring the surveys. No additional compensation shall be made to the Contractor for this Work.

3.2 SCHEDULE

A. Estimated Schedule. Within 21 Days after the issuance of the Notice of Award, Contractor shall prepare a Project schedule and shall submit this to the Engineer for Approval. The receipt or Approval of any schedules by the Engineer or the City shall not in any way relieve the Contractor of its obligations under the Contract Documents. The Contractor is fully responsible to determine and provide for any and all staffing and resources at levels which allow for good quality and timely completion of the Project. Contractor's failure to incorporate all elements of Work required for the performance of the Contract or any inaccuracy in the schedule shall not excuse the Contractor from performing all Work required for a completed Project within the specified Contract time period. If the required schedule is not received by the time the first payment under the Contract is due, Contractor shall not be paid until the schedule is received, reviewed and accepted by the Engineer.

B. Schedule Contents. The schedule shall indicate the beginning and completion dates of all phases of construction; critical path for all critical, sequential time related activities; and "float time" for all "slack" or "gaps" in the non-critical activities. The schedule shall clearly identify all staffing and other resources which in the Contractor's judgment are needed to complete the Project within the time specified for completion. The overall Project Schedule duration shall be within the Contract time.

C. Weather Allowance. The schedule shall allow adequate time for inclement weather.

D. Schedule Updates. Contractor shall continuously update its construction schedule. Contractor shall submit an updated and accurate construction schedule to the Engineer monthly when requested to do so by Engineer. Contractor shall also submit schedules showing a three week detailed look-ahead at bi-weekly meetings conducted with the City. The Engineer may withhold progress payments or other amounts due under the Contract Documents if Contractor fails to submit an updated and accurate construction schedule.

3.3 TEMPORARY FIELD OFFICE

A. Inspector's Field Office. The installation of a field offices are subject to City Building Permit requirements. Contractor shall be responsible for providing the inspector's field office. The office shall be a substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key type lock or padlock clasp. The office shall have heating and air conditioning and shall be equipped with a telephone, a telephone answering machine, high-speed internet connection, and a fax machine at Contractor's expense. A table satisfactory for the study of plans and two chairs shall be provided by Contractor. Contractor shall provide and pay for adequate electric lights, local telephone service, and adequate heat and air conditioning for the field office until authorized removal.

B. Utility Services. Contractor, at its expense, shall arrange for, develop and maintain all utilities, including but not limited to water, electric power, sewage disposal and telephone communications, at the Site to meet the requirements of the Work.

C. Sanitation. The Contractor shall provide sanitary facilities for all persons working on the project. These facilities shall be kept clean and shall not be unsightly or produce odors.

3.4 PROTECTION OF WORK AND PROPERTY

A. All traffic detector loops, fences, walls, culverts, monuments, or other obstructions (except property line monuments within five (5) feet of the centerline of the mains) which are removed, damaged, or destroyed in the course of the Work, shall be replaced or repaired to the original condition at no additional cost to City. Contractor shall be responsible for the cost to repair, replace, relocate, and replacement of utilities whether or not those obstructions have been shown on the Plans, unless otherwise stated herein. It is then the Contractor's responsibility to employ at its expense a Licensed Land Surveyor to restore all property line monuments located more than five (5) feet from the centerline of the mains, which are destroyed or obliterated. Property line monuments located within five (5) feet of the centerline of the mains will be replaced by the City at no expense to the Contractor, provided the City is notified at least 48 hours before the property line monuments are damaged.

B. Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions.

C. Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, and other adjoining property and structures, and to avoid damage thereto, and Contractor shall repair any damage thereto caused by the Work operations. Contractor shall:

1. Enclose the working area with a substantial barricade, and arrange work to cause minimum amount of inconvenience and danger to the public.

2. Provide substantial barricades around any shrubs or trees indicated to be preserved.

3. Deliver materials to the Project site over a route designated by the Engineer.

4. Provide any and all dust control required and follow the Applicable air quality regulations as appropriate. If the Contractor does not comply, the City shall have the immediate authority to provide dust control and deduct the cost from payments to the Contractor.

5. Confine Contractor's apparatus, the storage of materials, and the operations of its workers to limits required by law, ordinances, permits, or directions of the Engineer. Contractor shall not unreasonably encumber the Project site with its materials.

6. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by a civil engineer or land surveyor acceptable to the City, at no cost to the City.

7. Ensure that existing facilities, fences and other structures are all adequately protected and that, upon completion of all Work, all facilities that may have been damaged are restored to a condition acceptable to the City.

8. Preserve and protect from injury all buildings, pole lines and all direction, warning and mileage signs that have been placed within the right-of-way.

9. At the completion of work each day, leave the Project site in a clean, safe condition.

10. Comply with any approved stage construction and traffic control plans. Access to residences and businesses shall be maintained at all times, unless otherwise permitted in writing by the City.

11. Cover and or protect work and project site as may be required to prevent or mitigate schedule delay and to allow work to proceed during wet weather or wet conditions.

D. These precautionary measures will apply continuously and not be limited to normal working hours. Full compensation for the Work involved in the preservation of life, safety and property as above specified shall be considered as included in the prices paid for the various contract items of Work, and no additional allowance will be made therefore.

E. Should damage to persons or property occur as a result of the Work, Contractor shall be responsible for proper investigation, documentation, including video or photography, to adequately memorialize and make a record of what transpired. The City shall be entitled to inspect and copy any such documentation, video, or photographs.

3.5 SITE CONDITIONS SURVEYS

A. Work Included.

Contractor shall conduct thorough pre-construction and post-construction site condition surveys of the entire project area. Site Conditions surveys shall include written documentation of the conditions found, as well as photographs and video recordings of the area within at least 80 feet of any construction area and staging area. The written notes, photographs, and video shall be suitable for forensic purposes to resolve any damage claims that may arise as a result of construction.

B. Submittals.

1. Written documentation of site condition survey at pre-construction and post-construction.

2. Photographs as described herein of pre-construction and post-construction conditions.

3. Video recordings as described herein of pre-construction and post-construction conditions.

4. Submittals shall be made within three days of the surveys. All post-construction data shall be submitted prior to the final project inspection.

C. Site Condition Written Documentation.

Written documentation shall include the time, date, and conditions under which the site survey was made. The documentation shall note the condition of structures, pavement, sidewalks, utilities, fences, and etc. within the work areas.

D. Photographs & Video Recording.

1. General – Prior to starting Work, Contractor shall provide a video recording of the project site. Contract shall take enough photographs during each site survey to provide a record of conditions existing prior to construction and conditions after construction. Pre-construction video and photographs shall be taken prior to any construction or mobilization of equipment, but not more that one week prior to actual start of work. The pre-construction

photographs may be staged at different times to match the progression of the Work.

2. The photographs shall document existing damage to public and private facilities, both prior to and after construction. Conditions to be documented include, but are not limited to: sidewalk cracks, broken curbs, separated property walls, improvements within public right-of-ways, access roads used, utility covers and markings, signs, pavement striping, pavement, unique or unusual conditions, adjacent driveways, landscaping, survey markers, and any feature directed by the Engineer. Private property that is adjacent to the public right-of-way shall be documented to the extent visible from the public right-of-way.

3. Photographs shall include items to indicate scale, as needed. In particular, scales or other items shall be laid next to close ups of structural cracks and other damaged areas being recorded. Scaling shall also be used to document elevation differences, as needed.

4. One set of color prints and the preconstruction site video shall be submitted. Additional sets shall be available for reviewing in settling any construction disputes. A set of photos shall also be furnished in electronic format. The resolution shall be at least equal to 7 mega-pixels. All photos shall be documented as to time and date taken, photographer, project number, location, and orientation. Documentation shall include a brief description of objects photographed.

E. Video Recording.

1. Video recordings shall document the conditions of the entire area affected by construction, as well as nearby structures and facilities. The general documentation requirements for videos are the same as for photographs. Video recorders shall accurately and continuously record the time and date.

2. Video recordings shall include an audio portion made simultaneously during the videoing. The audio recording shall describe the location, time, orientation, and objects being recorded. Special commentary shall be provided for unusual conditions or damage noted.

3. Video equipment shall be capable of producing high resolution images and shall have zoom capabilities.

4. Video recordings shall provide an overall picture of the sites and shall provide detailed images of damaged areas. Video shall extend to the maximum height of structures.

5. The Engineer shall have the right to reject any audio video recordings submitted with unintelligible audio, uncontrolled pan or zoom, or of poor quality. Video recordings shall be repeated when rejected.

6. Video recordings shall be submitted with labels indicating the project, date, recorder, and other pertinent information. Recordings shall be submitted on standard DVDs in a standard format.

F. Timing.

Contractor shall provide written notice of the time scheduled for the site conditions survey and the place it is to begin. Contractor shall obtain the Engineer's concurrence prior to beginning the condition survey. The Engineer reserves the right to cancel the survey due to weather conditions or other problems. Videoing shall be done during times of good visibility and no videoing or photography shall be done during periods of visible precipitation or when standing water obscures pavement. Contractor shall provide the Engineer with an opportunity to have a representative present when taking the photos and provide guidance during photographing.

G. Site Surveyor.

The site condition surveyor(s) shall be experienced in construction and potential damage concerns. The site condition surveyor(s) shall be familiar with the photography and video equipment being used.

H. Field Quality Control.

Prior to submitting videos and photographs, the Contractor shall spot check the photos and videos in the field to insure they accurately reflect the actual conditions and to insure they are correctly labeled.

I. Soils Compaction Testing.

1. All soils compaction testing will be done by a licensed geotechnical engineer furnished by the City. Soils compaction testing will be done for all footings and foundations prior to placement of rebar or concrete.

2. For pipeline construction, soil compaction testing will be done at 100-foot intervals or as ordered by the project soils/geotechnical report at the bottom of the trench prior to placement of pipe bedding; at the top of the pipe bedding above the pipe; every two vertical feet of trench backfill or as otherwise ordered by the project soils/geotechnical report; at the top of the trench backfill, which sould be the bottom of the pavement section; and at the top of the aggregate base prior to pavement construction.

3.6 SUBMITTAL REQUIREMENTS FOR MANUALS AND RECORD DRAWINGS

A. General. The Contractor shall furnish all materials and perform all Work required for furnishing submittals to City in accordance with Contract Documents.The Contractor shall submit Project Record Drawings, Technical Manual, Spare Parts, and other required items within 5 days following completion of project construction, and prior to Contractors request for Project Acceptance.

B. Technical Manuals.

1. The Contractor shall submit technical operation and maintenance information for each item of mechanical, electrical and instrumentation equipment in an organized manner in the Technical Manual. It shall be written so that it can be used and understood by City's operation and maintenance staff.

2. The Technical Manual shall be subdivided first by specification section number; second, by equipment item; and last, by "Category." The Contractor shall furnish to City four (4) identical Technical Manuals. Each set shall consist of one or more volumes, each of which shall be bound in a standard binder.

C. Spare Parts List - The Contractor shall furnish to City six (6) identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. The spare parts list shall include the current list price of each spare part. The spare parts list shall include those spare parts which each manufacturer recommends be maintained by City in inventory. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to assist City in ordering. The Contractor shall cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. The spare parts lists shall be bound in standard size, 3-ring binder.

D. Record Drawings

1. The Contractor shall maintain one record set of Drawings at the Site. On these, it shall mark all Project conditions, locations, configurations, and any other changes or deviations which may vary from the information represented in the original Contract Documents, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the Work as actually constructed. These master record drawings of the as-built conditions, including all revisions made necessary by Addenda and Change Orders shall be maintained up-to-date during the progress of the Project. Red ink shall be used for alterations and notes. Notes shall identify relevant Change Orders by number and date.

2. For all Projects involving the installation of any pipeline, Contractor shall survey and record the top of the pipe at a minimum of every 100 linear feet, and at each bend, recording both the horizontal and vertical locations.

3. Record drawings shall be accessible to City's Representative at all times during the construction period. The record drawings shall be kept up to date and will be checked by the City prior to each progress payment. Failure on the Contractor's part to keep record drawings current could result in withholding partial payment.

4. Upon Completion of the Project and as a condition of final acceptance, the Contractor shall finalize and deliver a complete set of Record Drawings to City's Representative. The information submitted by the Contractor will be assumed to be correct, and the Contractor shall be responsible for, and liable to City, for the accuracy of such information, and for any errors or omissions which may or may not appear on the Record Drawings.

E. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete the Manuals and Record Drawings shall be included in Contractor's bid and distributed in the Schedule of Pay. No additional compensation shall be made to the Contractor for this Work.

3.7 MATERIALS

A. Materials to be Furnished by the Contractor

1. Inspection of Materials. Materials furnished by the Contractor which will become a part of the Project shall be subject to inspection at any one or more of the following locations, as determined by City's Representative: at the place of production or manufacture, at the shipping point, or at the site of the Work. To allow sufficient time to provide for inspection, the Contractor shall submit to City's Representative, at the time of issuance, copies of purchase orders or other written instrument confirming procurement of the materials, including drawings and other pertinent information, covering materials on which inspection will be made.

2. No later than fourteen (14) Days prior to manufacture of material, Contractor shall inform City's Representative, in writing, the date the material is to be manufactured.

3. Contractors Obligations. The inspection of materials at any of the locations specified above or the waiving of the inspection thereof shall not impact whether the materials and equipment conform to the Contract Documents. Contractor will not be relieved from furnishing materials meeting the requirements of the Contract Documents due to City's inspection or lack of inspection of the equipment or materials. Acceptance of any materials will be made only after materials are installed in the Project.

4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to accommodate City's testing efforts, including any travel required by Contractor's forces, shall be included in Contractor's bid and distributed in the Schedule of Pay Items related to the materials requiring testing. No additional compensation shall be made to the Contractor for this Work.

3.8 LOCAL CONDITIONS AND REQUIREMENTS

A. Access to Work and Haul Routes

1. General. All work on the rights-of-way necessary for access to the Site shall be performed by the Contractor. Contractors anticipated Haul Routes

shall be in compliance with the City's approved Truck Routes available from the Engineer.

2. Access, Damage, Restoration. The Contractor shall make his own investigation of the condition of available public or private roads and of clearances, restrictions, bridge-load limits, permit or bond requirements, and other limitations that affect or may affect transportation and ingress or egress at the Site.

3. The Contractor shall maintain and repair any damage arising out of Contractor's operations to all roads used during construction of the Project, and upon completion of all Work, but prior to final acceptance, the roads shall be restored to their original condition. Prior to using any road for access to the Site, the Contractor shall conduct a photograph and/or video survey of the roadway with a copy submitted to City's Representative.

4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

B. Power. Contractor shall provide at its own expense all necessary power required for operations under the contract. The Contractor shall provide and maintain in good order such modern equipment and installations as shall be adequate in the opinion of the Engineer to perform in a safe and satisfactory manner the Work required by the contract.

C. Construction Water.

1. Construction water shall not be used for purposes other than those required to satisfactorily complete the contract.

2. Construction recycled water will be made available to the contractor from one of three fill locations within the city limits. If there is a need for construction recycled water during construction, the contractor shall apply for a city construction recycled water meter at the city hall finance counter prior to the beginning of work. A security deposit of $2,000.00 is required for the construction water meter from which the meter rental fee and cost of water will be deducted. if the rental fee and the water costs exceed the $2,000.00 deposited, an invoice will be issued to the contractor for payment.

3. Construction potable water will only be made available to the contractor if it can be demonstrated that recycled water cannot be used for the construction activities. potable water will be made available from existing city fire hydrant(s) nearest the proposed construction site as approved by the engineer, or by such other means as may be expressly approved in writing by the engineer. If there is a need for water during construction, the contractor shall apply for a city construction water meter at the city hall finance counter prior to the beginning of work. a security deposit of $2,000 is required for the construction water meter from which the meter rental fee

and cost of water will be deducted. If the rental fee and the water costs exceed the $2,000.00 deposited, an invoice will be issued to the contractor for payment.

4. All required water, all work and materials required for obtaining, pumping, transporting and applying and otherwise disposing of said water shall be in an approved manner and shall be performed by, and at the expense of the contractor and no extra or separate compensation will be made thereof.

D. Operation of Existing Water Facilities

1. The Contractor shall not operate any of the existing water systems, including pumps, motors, valves, and hydrants, but shall contact the City two (2) working days in advance with a list and location of the water system facilities that will require operating, opening, stopping, or closure by the City.

2. At the option of the Engineer, the Contractor may be permitted to operate valves for the purpose of making connections to existing mains. The City will perform all notification to existing customers regarding temporary loss of service.

3. Contractor shall submit a request on City's standard form for any shut-down of existing water facilities.

E. Construction at Existing Utilities

1. General. Where the Work to be performed crosses or otherwise interferes with water, sewer, gas, or oil pipelines; buried cable; or other public or private utilities, the Contractor shall perform construction in such a manner so that no damage will result to either public or private utilities. It shall be the responsibility of the Contractor to determine the actual locations of, and make accommodates to maintain, all utilities.

2. Permission, Notice and Liability. Before any utility is taken out of service, permission shall be obtained by the Contractor from the owner. The owner, any impacted resident or business owner and the City Representative will be advised of the nature and duration of the utility outage as well as the Contractor's plan for providing temporary utilities if required by the owner. The Contractor shall be liable for all damage which may result from its failure to maintain utilities during the progress of the Work, and the Contractor shall indemnify City as required by the Contract Documents from all claims arising out of or connected with damage to utilities encountered during construction; damages resulting from disruption of service; and injury to persons or damage to property resulting from the negligent, accidental, or intentional breaching of utilities.

3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

F. Traffic Control

1. General. Contractor shall abide by traffic control plans approved by the City.

2. Protections. Roads subject to interference by the Work shall be kept open or suitable temporary passages through the Work shall be provided and maintained by the Contractor. The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient flasher lights, flag persons, danger signals, and signs, and shall take all necessary precautions for the protection of the Work and the safety of the public. No construction work along public or private roads may proceed until the Contractor has proper barricades, flasher lights, flag persons, signals, and signs in place at the construction site.

3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

G. Cleaning Up

1. Contractor at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment. Contractor shall not store debris under, in, or about the premises. Contractor shall also clean all asphalt and concrete areas to the degree necessary to remove oil, grease, fuel, or other stains caused by Contractor operations or equipment, including all USA markings. The use of water, resulting in mud on streets, will not be permitted as substitute for sweeping or other methods. Dust control may require having a water truck onsite for the duration of the project, and/or use of temporary hoses and pipelines to convey water.

2. Contractor shall fully clean up the site at the completion of the Work. If the Contractor fails to immediately clean up at the completion of the Work, the City may do so and the cost of such clean up shall be charged back to the Contractor.

3.9 ENVIRONMENTAL QUALITY PROTECTION

A. Environmental Conditions

[RESERVED].

B. Landscape and Vegetation Preservation

1. General. The Contractor shall exercise care to preserve the natural landscape and vegetation, and shall conduct operations so as to prevent unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the Work.

2. Damage and Restoration. Movement of crews and equipment within the rights-of-way and over routes provided for access to the Work shall be performed in a manner to prevent damage to property. When no longer required, construction roads shall be restored to original contours.

3. Upon completion of the Work, and following removal of construction facilities and required cleanup, land used for construction purposes and not required for the completed installation shall be scarified and regraded, as required, so that all surfaces are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.

4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

C. Protected Species

1. General. If, in the performance of the Work, evidence of the possible occurrence of any State or Federally listed threatened or endangered plant or animal is discovered, the Contractor shall notify the City Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to City within 2 Days.

2. Procedures. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the endangered plant or animal.

   If directed by the City Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or alter its performance to ensure full compliance with all applicable permits, laws and regulations. Any City directed changes to the Work as a result of a siting will be pursuant to the Contract Documents.

3. False Siting. Any costs or delays incurred by City or the Contractor due to unreasonable or false notification of an endangered plant or animal will be borne by the Contractor.

4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

D. Preservation of Historical and Archeological Resources

1. General. If, in the performance of the Work, Contractor should unearth cultural resources (for example, human remains, animal bones, stone tools, artifacts and/or midden deposits) through excavation, grading, watering or other means, the Contractor notify the

Construction/Archeological Monitor and/or the City Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to the Construction/Archeological Monitor and/or City within 2 Days.

2. Procedures. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the cultural resource.

   If directed by the City Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or re-sequence and/or alter its performance to ensure full compliance with all applicable permits, laws and regulations. Should the presence of cultural resources be confirmed, the Contractor will assist the City Representative and the Construction/Archeological Monitor in the preparation and implementation of a data recovery plan. The Contractor shall provide such cooperation and assistance as may be necessary to preserve the cultural resources for removal or other disposition. Any City directed changes to the Work as a result of the cultural resource will be pursuant to the Contract Documents.

3. Contractor's Liability. Should Contractor, without permission, injure, destroy, excavate, appropriate, or remove any cultural resource on or adjacent to the Site, it will be subject to disciplinary action, arrest and penalty under applicable law. The Contractor shall be principally responsible for all costs of mitigation and/or restoration of cultural resources related to the unauthorized actions identified above. Contractor shall be required to pay for unauthorized damage and mitigation costs to cultural resources (historical and archeological resources) as a result of unauthorized activities that damage cultural resources and shall indemnify City pursuant to the Contract Documents.

4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

E. Dust and Pollution Control

1. Contractor shall provide all necessary material, equipment and labor to prevent and control the emission of dust and any other potential pollutant on site. Contractor shall remove construction caused debris from streets and sidewalks as directed by the Engineer.

2. Contractor shall not discharge into the atmosphere from any source smoke, dust or other air contaminants in violation of the law, rules, and regulations of the governing agency.

3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph,

shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

F. Management of Storm, Surface and Other Waters

1. Storm water, surface water, groundwater, and nuisance, or other waters may be encountered at various times during construction of the Project. Federal and State laws require the City and its contractors to manage such waters pursuant to the requirements of California State Water Resources Control Board Order Number 2009-0009-DWQ, the Federal Clean Water Act, and the California Porter Cologne Water Quality Control Act. Contractor acknowledges that it has investigated the risk arising from such waters in conjunction with the Project, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.

2. The Contractor shall keep itself and all subcontractors, staff, and employees fully informed of and in compliance with all local, state and federal laws, rules and regulations that may impact, or be implicated by the performance of the Work including, without limitation, all applicable provisions of the City's ordinances regulating discharges of storm water; the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.); the California Porter-Cologne Water Quality Control Act (Water Code § 13000 et seq.); and any and all regulations, policies, or permits issued pursuant to any such authority. These include, but are not limited to the San Francisco Bay Regional Water Quality Control Board Order No. R2-2015-0049 (NPDES Permit No. CAS 612008), and State Water Resources Control Board Order No. 2010-0014-DWQ, Order No. 2009-0009-DWQ, and Order No. 2012-0006-DWQ, and any amendment or renewal thereof ("Construction General Permit"). Contractor must perform all construction operations in such a manner as to comply, and ensure all subcontractors to comply, with all applicable Federal, State, and local laws, orders, and regulations concerning the control and abatement of water pollution; and all terms and conditions of any applicable permits issued for the Project. In the event there is a conflict between Federal, State, and local laws, regulations, and requirements, the most stringent shall apply.

3. Compliance with Construction General Permit. Contractor must comply with all aspects of the Construction General Permit, State Water Resources Control Board (State Board) Water Quality Order No. 2009-0009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ, and any amendment or renewal thereof (NPDES CAS000002), for all projects that involve construction on or disturbance of one acre or more of land or which are part of a larger common plan of development or sale.

   (a) Permit registration. Unless otherwise specified in the Special Conditions, Contractor must prepare the Notice of Intet for coverage under the Construction General Permit and all Permit Registration Documents (PRDs), including but not limited to the Storm Water Pollution Prevention Plan (SWPPP), as those terms are defined in the Construction General Permit. Contractor must coordinate

submittal of all PRDs with the City's Legally Responsible Person and/or Authorized Signatory, as those terms are defined in the Construction General Permit. The Contractor must submit the PRDs, including the SWPPP to the City Representative for review not less than fifteen (15) Days prior to the start of on- site construction work. City will file the Notice of Intent and PRDs and pay the filing fee.

(b) Before any Construction General Permit related documents may be submitted to the State Board or implemented on the Project site, they must first be reviewed and accepted by City. Acceptance by the City does not relieve the Contractor from ensuring such documents comply with all lawsapplicable laws, regulations, and orders.

(c) Contractor must ensure that the SWPPP is developed by a Qualified SWPPP Developer and implemented by a Qualified SWPPP Practitioner as those terms are defined in the Permit. Contractor must implement the SWPPP and all other provisions of the Construction General Permit, including the monitoring and reporting requirements, preparing and submitting all reports, plans, inspections, and monitoring information in compliance with the Construction General Permit. The SWPPP must include industry standard requirements for water quality control including but not be limited to the following:

(1) Sediment and erosion control measures to manage sediment and erosion including vegetative practices, structural control, silt fences, straw dikes, sediment controls or operator controls as appropriate.Storm water management measures shall be instituted as required, including velocity dissipaters, and solid waste controls shall address controls for building materials and offsite tracking of sediment.

(2) Wastewater and storm water management controls to divert offsite surface flows around the Project site and to divert surface flows within the Project area away from areas of open earth or stockpiles of building and other materials. Wastewater from general construction activities, such as drain water collection, aggregate processing, concrete batching, drilling, grouting, or other construction operations, shall not enter flowing or dry watercourses without having met the authorized non-storm water discharge requirements listed in State Board Water Quality Order No. 2009-0009-DWQ, Section III.C., including proper notification to the Regional Water Board.

(3) Pollution prevention measures including methods of dewatering, unwatering, excavating, or stockpiling earth and rock materials which include prevention measures to control

silting and erosion, and which will intercept and settle any runoff of sediment-laden waters.

(4) Turbidity prevention measures for prevention of excess turbidity including, but are not restricted to, intercepting ditches, settling ponds, gravel filter entrapment dikes, flocculating processes, recirculation, combinations thereof, or other approved methods that are not harmful to aquatic life. All such wastewaters discharged into surface waters, shall contain the least concentration of settleable material possible, and shall meet all conditions of section 402, the National Pollutant Discharge Elimination System (NPDES) permit.

(5) Overall construction site management measures to address changes at the Project site as the Project moves through different phases and changes that account for rainy and dry season management practices.

(6) Pollution control measures and construction activity methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, or other pollutants or wastes, into streams, flowing or dry watercourses, lakes, wetlands, reservoirs, or underground water sources. Such pollutants and wastes include, but are not restricted to: refuse, garbage, cement, sanitary waste, industrial waste, hazardous materials, radioactive substances, oil and other petroleum products, aggregate processing, tailings, mineral salts, and thermal pollution.

(7) Control measures for stockpiled or deposited materials prohibiting the stockpile or deposit of excavated materials, or other construction materials, near or on stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff, or can, in any way, encroach upon the watercourse.

(8) Develop and implement a Rain Event Action Plan (REAP), if required, that must be designed and implemented to protect all exposed portions of the site 48 hours prior to any likely precipitation event.

(9) Monitoring, reporting and record keeping, as necessary to achieve compliance with applicable Permit requirements, including but not limited to annual reports and rain event reports.

(d) City retains the right to procure and maintain coverage under the Construction General Permit for the Project site if the Contractor fails to draft a SWPPP or other Construction General Permit related document, or fails to proceed in a manner that is satisfactory to City.

City reserves the right to implement its own SWPPP at the Project site, and hire additional contractors to maintain compliance. Whether Contractor has adequately maintained compliance with the Construction General Permit shall be City's sole determination. In the event that Contractor has failed or is unable to maintain compliance with the Construction General Permit, any costs or fines incurred by City in implementing a SWPPP, or otherwise maintaining compliance with the Construction General Permit shall be paid by the Contractor.

4. For those Work sites where construction activity results in the disturbance of less than one acre of total land area and/or do not need coverage under the Construction General Permit, the Contractor shall be responsible for preparing and implementing construction industry best management practices to eliminate or reduce the discharge of pollutants from construction sites, such as the best management practices set forth in the CASQA Construction BMP Handbook.

5. In addition to compliance with the Permit, Contractor shall comply with the lawful requirements of any applicable municipality, district, drainage district, flood control district, and other local agencies regarding discharges of storm water, surface water, groundwater or other nuisance waters off of the Project site.

6. Contractor violations.

   (a) Failure to implement the SWPPP or otherwise comply with the Construction General Permit or local state and federal laws is a violation of this Contract. Notwithstanding any other indemnity contained in this Agreement, Contractor agrees to indemnify, defend – with counsel acceptable to the City – and hold harmless the City, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which the City, its officials, officers, agents, employees and authorized volunteers may sustain or incur for noncompliance with the laws, regulations, and ordinances listed above, arising out of or in connection with the Work, except for liability resulting from the sole established negligence, willful misconduct or active negligence of the City, its officials, officers, agents, employees or authorized volunteers.

   (b) City reserves the right to defend any enforcement action or civil action brought against the City for Contractor's failure to comply with any applicable water quality law, regulation, or policy. Contractor hereby agrees to be bound by, and to reimburse the City for the costs associated with, any enforcement action and/or settlement reached between the City and any relevant enforcement entity.

   (c) City may seek damages from Contractor for delay in completing the Contract in accordance with the Contract Documents, caused by

Contractor's failure to comply with the the laws, regulations and policies described in this Article, or any other relevant water quality law, regulation, order, or policy.

(d) If noncompliance with any relevant law, regulation or permit, order, or policy occurs, the Contractor shall report this to the City Representative immediately, with the specific information submitted in writing within 2 Days. Consistent violations of applicable Federal, State, or local laws, orders, regulations, or Water Quality Standards may result in City stopping all site activity until compliance is ensured. The Contractor shall not be entitled to any change in Contract Price or Contract Times, claim for damage, or additional compensation by reason of such a work stoppage. Corrective measures required to bring activities into compliance shall be at the Contractor's expense.

7. Oil storage tanks management.

(a) Storage tank placement. All oil or other petroleum product (hereinafter referred to collectively as oil) storage tanks shall be placed at least 20 feet from streams, flowing or dry watercourses, lakes, wetlands, reservoirs, and any other water source.

(b) Storage area dikes. Storage areas shall be diked at least 12 inches high or graded and sloped to permit safe containment of leaks and spills equal to the capacity of all tanks and/or containers located within each area, plus a sufficient amount of freeboard to contain the 25-year rainstorm.

(c) Diked area barriers. Diked areas shall have an impermeable barrier at least 10 mils thick. Areas used for refueling operations shall have an impermeable liner at least 10 mils thick buried under 2 to 4 inches of soil.

(d) Spill Prevention Control and Countermeasure Plan (SPCC). Where the location of a construction site is such that oil from an accidental spillage could reasonably be expected to enter into or upon the navigable waters of the United States or adjoining shorelines, and the aggregate storage of oil at the site is over 1,320 gallons or a single container has a capacity in excess of 660 gallons, the Contractor shall prepare an SPCC Plan. The Contractor shall submit the SPCC Plan to the Engineer at least 30 days prior to delivery or storage of oil at the site. The Plan must have been reviewed and certified by a registered professional engineer in accordance with 40 C.F.R., part 112

8. Underground tank prohibition. The Contractor shall not use underground storage tanks.

9. Construction safety standards. The Contractor shall comply with the sanitation and potable water requirements of Section 7 of United States

Bureau of Reclamation's publication “Reclamation Safety And Health Standards.”

10. Other Permits.

    (a) Other permits applicable to the Project are listed in the Special Conditions. The Contractor shall obtain all other necessary licenses and permits.

    (b) Monitoring. The Contractor is required to conduct monitoring in order to meet the requirements of the permits, which may include sampling, testing and inspections.

    (c) Recordkeeping. The Contractor shall retain all records and data required by the permits for the time specified in the contract.

11. Cost. Except as specified herein, the cost of complying with this section shall be included in the Schedule of Pay Items for work which necessitate the water pollution prevention measures required by this paragraph.

END OF GENERAL REQUIREMENTS

EXHIBIT "A"
CHANGE ORDER FORM

City of Milpitas
455 E. Calveras Boulevard
Milpitas, California 93035

CONTRACT CHANGE ORDER NO. __

Date: [INSERT]

To: [CONTRACTOR NAME]

[ADDRESS]

[ADDRESS]

Attn: [CONTRACTOR REP]

Project: NIB No. 2511 - CONSTRUCTION OF MAIN LIFT ODOROUS EMISSIONS CONTROL FACILITY

This Change Order covers changes to the contract as described herein. The Contractor shall construct, furnish equipment and materials, and perform all work as necessary or required to complete the Change Order items for the amount agreed upon between the Contractor and City of Milpitas and set forth herein.

Item No.	Description of Changes	Increase/ (Decrease) in Contract Amount	Contract Time Extension, Days
1			
2			
	Totals	**$**	

Original Contract Amount:	$XX.00
Change by Previous Change Order(s):	$XX.00
Contract Price Prior to this Change Order:	$XX.00
Current Change Order Amount:	$XX.00
Revised Contract Amount including this Change Order:	$XX.00

The Contract Price and Contract Time shall be adjusted as set forth above. The undersigned Contractor approves the foregoing Change Order as to the changes, if any, in the contract price specified for each item including any and all supervision costs and other miscellaneous costs relating to the change in work, and as to the extension of time allowed, if any, for completion of the entire work on account of said Change Order. The Contractor agrees to furnish all labor and materials and perform all other necessary work, inclusive of the directly or indirectly related to the approved time extension, required to complete the Change order items. This document will become a supplement of the contract and all provisions will apply hereto. It is understood that the Change Order shall be effective when approved by the City.

Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising out of or related to the subject of this Change Order and acknowledges that the compensation (time and cost) set forth herein comprises the total compensation due for the work or change defined in the Change Order, including all impact on any unchanged work. By signing this Change Order, the Contractor acknowledges and agrees that the stipulated compensation includes payment for all Work contained in the Change Order, plus all payment for any acceleration or interruption of schedules, extended overhead costs, delay, and all impact or cumulative impact on all Work under this Contract. The signing of this Change Order acknowledges full mutual accord and satisfaction for the change and that the stated time and/or cost constitute the total equitable adjustment owed the Contractor as a result of the change. The Contractor hereby releases and agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim or request for equitable adjustment of any type, for any reasonably foreseeable cause that shall arise out of, or as a result of, this Change Order and/or its impact on the remainder of the Work under the Contract.

Accepted:

(Signature) Contractor's Authorized Representative — Date

Recommended:

(Signature) Glen Campi, Public Works Manager — Date

Approved:

(Signature) Tony Ndah, Director of Public Works — Date

This Contract Change Order consists of XX **pages** and any exhibits attached to this Contract Change Order shall not be part of the Contract Change Order unless specifically initialed by or on behalf of both the Contractor and the City of Milpitas.

Contract Change Order #

Technical Specifications

[BEGINS ON FOLLOWING PAGE]

Attachment A – Technical Specifications

Attachement B – 100% Submittal Plans

CITY OF MILPITAS

MILPITAS, CALIFORNIA

CONTRACT DOCUMENTS AND SPECIFICATIONS FOR

MAIN SEWAGE PUMP STATION
ODOR EMMISSION CONTROL FACILITY

MAY 2021

CONFORMED TO ADDENDA

CITY OF MILPITAS, CALIFORNIA
MAIN LIFT ODOROUS EMISSIONS CONTROL FACILTIY

ATTACHMENT A – TECHNICAL SPECIFICATIONS

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SECTION 01110

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. General description of the Project and the Work to be performed by the Contractor.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. None

1.03 WORK COVERED BY CONTRACT

A. The Work covered under this Contract will be performed at the site of the City of Milpitas's Main Sewage Pump Station, (1425 North McCarthy Boulevard, Milpitas, CA). The project location is indicated on the Drawings.

B. The Work to be performed by the Contractor generally includes:

1. Furnishing all labor, superintendence, materials, power, water, tools, equipment and services required by the Contract Documents or required to complete the Work.
2. Coordinate work of all trades.
3. Furnishing and installing miscellaneous items incidental to or necessary for completion of the Work, whether these items are specifically indicated in the Contract Documents or not.

C. The Work consists of construction of the following items:

1. Site preparation and cleaning.
2. Procurement and installation of biotrickling filter odor control system, including connection of ductwork, water piping, drainage piping, and power and control wiring in accordance with the manufacturer's installation instructions.
3. Construction of concrete pad for placement of the biotrickling filter and supply and installation of system anchor bolts.
4. Construction of concrete equipment pads for foul air blower and supply and installation of anchor bolts.
5. Installation of water piping and drain piping to and from the biotrickling filter.
6. Supply and installation of odorous air ductwork, including flex connectors and damper valves.

7. Demolition and disposal of existing pump station wet well exhaust fan.
8. Procurement and installation of temporary piping required for the biotrickling filter startup system.
9. Power supply to the electrical control panel.
10. Water supply to the water panel.
11. Miscellaneous utility and site improvements to accommodate the improvements listed above.

1.04 OTHER CONTRACTS

A. The Owner may be undertaking other projects at the pump station site simultaneously with the Work to be completed under this project. Coordination with the contractors undertaking related work or un-related work within the site is the responsibility of the Contractor.

B. There are no known projects at the pump station site that will be executed in the timeframe for construction of this project.

1.05 SPECIFICATION LANGUAGE

A. Specifications may be written in the imperative mood and streamlined form in accordance with practices and principals of the Construction Specifications Institute.

B. Imperative language is directed to the Contractor unless specifically noted otherwise.

C. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.

1.06 REGULATORY REQUIREMENTS

A. Comply with all Federal, State, and local laws, regulations, codes, and ordinance applicable to the work.

B. References in the Contract Documents to local codes shall mean those of the City of Milpitas.

C. Other standards and codes that apply to the work are designated in the Specifications.

1.07 ACCESS BY GOVERNMENT OFFICIALS

A. Authorized representatives of governmental agencies shall have access to the work area at all times. Provide proper facilities for access and inspection.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01140

WORK SEQUENCE AND CONSTRAINTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Schedule requirements, construction constraints, and a suggested Work sequence for specific elements of the Project.

1.02 REFERENCED SECTIONS

A. The following Section is reference in this Section

1. Section 01999 – Reference Forms

1.03 GENERAL SEQUENCING REQUIREMENTS

A. The sequencing requirements and construction constraints described are critical elements of the Work and are presented to underscore the importance of proper management, planning, scheduling, coordination, and execution of the Work.

B. Sequencing requirements and construction constraints have been defined in this Section for only certain structures, facilities, and elements of the Work. All work, whether or not addressed in this Section, shall be governed by applicable specified requirements. If additional shutdown constraints are necessary to allow implementation of Contractor's construction procedures and schedule, the Engineer will establish such constraints.

C. Contractor's Construction Schedule:

1. Clearly illustrate the proposed sequence of construction.

2. Conform to the sequencing requirements and limitations specified in this Section where specified.

3. Modify or adapt the suggested sequencing as necessary to complete the project provided all environmental and service continuity requirements are met.

1.04 OPERATIONAL CONTINUITY

A. The City of Milpitas owns and operates the Main Sewage Pump Station facilities. The Work under this project will interface with these existing facilities.

B. The existing pump station continuously receives and conveys wastewater. Do not interrupt functions necessary to maintain operation of these facilities except as approved by the Engineer through review of the Contractor's Facility Outage Plan and as specified herein.

C. Coordinate the Work to minimize interference and interruption of the normal operation of the Owner's existing facilities through proper planning and by making temporary connections.

D. Except for allowable out-of-service periods as specified, maintain operation of sanitary and storm sewers, service laterals, catch basins, manholes, and similar facilities.

1. Provide temporary pumps, piping, power, bulkheads, plugs, and other devices that are required to keep such facilities in operation when these must be temporarily taken out of service in order to conduct the Work.

2. Notify the Engineer in writing 3 days in advance of the time it is necessary to take utilities out of service.

3. Notify public agencies and utility companies when service to customers will be temporarily interrupted to perform the Work and coordinate shutdowns with these agencies.

1.05 ACCESS

A. The existing facility where Contractor's work is to be done will be occupied by the Owner throughout the construction period. Access to the site by the Owner's personnel is required for daily operations, maintenance, and administration. Additionally, regular traffic into and out of the site is to be expected.

B. Contractor shall provide all necessary access to the Owner's personnel as required to safely and efficiently operate/maintain the facilities. At all times during the Contract duration, the Contractor is to provide the Owner's personnel and representatives safe and immediate access to all process control equipment.

C. Contractor shall provide for unimpeded access for all delivery vehicles transporting materials, chemicals and equipment to the facility for the Owner's operations. Contractor shall coordinate the work to avoid interference with vehicular access to the existing plant site and normal operation of plant equipment and processes.

1.06 FACILITY OUTAGE PLAN

A. Prepare and submit a detailed Facility Outage Plan when removal of an existing facility from service is necessary to complete the Work.

B. Submit the Facility Outage Plan to the Engineer for review and approval at least 2 weeks prior to the scheduled outage. Develop the Facility Outage Plan to satisfy the Work Sequence restrictions and conditions specified in this Section. Do not proceed with any Work involving facility outages until the Outage Plan has been approved by the Engineer.

C. The Facility Outage Plan shall describe, as applicable, a listing of existing facilities that will be taken out of service, methods for preventing bypassing of other treatment units, the length of time required to complete the operation, and the necessary personnel and equipment which will be provided in order to successfully complete the operation.

D. A System Outage Request (SOR) form shall accompany each outage or bypass plan (See Section 01999). Coordinate the outage schedule with the overall construction schedule.

1.07 REMOVING EXISTING FACILITIES FROM SERVICE

A. Existing systems or individual equipment items shall be isolated, decommissioned, de-energized, or depressurized only by the Owner's operations personnel. This work will be done in accordance with the Facility Outage Plan and schedule prepared by the Contractor.

B. The Contractor shall design and provide all necessary bulkheads, cofferdams, and support structures to allow isolation of work areas from tanks, pipes, and/or channels that are in service. Bulkheads, cofferdams, and support structures shall conform to applicable OSHA requirements.

C. The Contractor shall provide all necessary temporary pumps, piping, power, electrical wiring, controls, and labor during and subsequent to all shutdown activities as required. Maintain adequate access to the plant facilities, utilities, and equipment during construction to allow continued operation and maintenance by Owner's personnel to take place.

D. Prior to any shutdown or flow diversion, all materials, bypass pumps, fittings, supports, equipment and tools shall be on the site and all necessary skilled labor scheduled prior to starting any connection work.

E. If valves or gates need to be opened or closed, or mechanical equipment turned off or turned on, or similar operations performed to allow construction to proceed, this is to be performed by the Owner's operations staff working in coordination with Contractor personnel. Valves and gates that may be used to isolate lines and facilities may not completely seal. Contractor shall allow for leakage in planning the Work. Contractor shall clean the work areas as required to perform the work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 WORK COORDINATION

A. Schedule and coordinate the overall Work and construction operations, including the work of subcontractors and the timely provision of products and supplies.

B. Perform Work in an orderly and logical sequence. Individual specification Sections may identify specific requirements that are related to Work sequence. These types of constraints are not repeated in this Section but shall be followed by the Contractor.

3.02 WORK CONSTRAINTS

A. Work Hours

1. Except as otherwise required for the safety or protection of persons and except as otherwise stated in the Contract Documents, Work may only be performed Monday through Friday during the hours of 7:00 am and 6:00 pm. Contractor will not perform of Work on a Sunday or any legal holiday defined by the City of Milpitas without written consent from the Owner.

2. Legal holidays are defined as:

   a. New Year's Day on January 1.

   b. Memorial Day on the last Monday in May.

   c. Independence Day on July 4.

   d. Labor Day on the first Monday in September.

   e. Thanksgiving Day on the fourth Thursday in November.

   f. Christmas Day on December 25.

   g. When a holiday falls on Sunday, the following Monday is recognized as the legal holiday. When a holiday falls on a Saturday, the preceding Friday is recognized as the legal holiday.

B. Contractor shall undertake the Work in compliance with the constraints defined in the following paragraphs:

1. Exhaust fan blower may be taken out of service for a maximum of 24 hours.

3.03 SUGGESTED WORK SEQUENCE

A. The following work sequence is one suggested means of constructing the project, and shall be followed in general unless another suitable method of completing the work is developed by the Contractor and approved by the Owner. This suggested work sequence is general in nature and does not include all work activities required by this Contract for completion of the work. The suggested work sequence shall be coordinated with the requirements of other specification Sections and the Drawings in order to complete the Work in a timely and satisfactory manner.

B. Suggested Work Sequence

1. Construct concrete pad for biotrickling filter system.

2. Install biotrickling filter system, including associated irrigation and drain piping.

3. Install foul air duct from the pump station wet well to the new biotrickling filter.

4. Install new exhaust fans at new concrete pad and connect foul air duct, valves, and instrumentation associated with the fans.

5. Decommission and remove the existing wet well exhaust fan and connect the new foul air duct to the existing elbow which draws air from the wet well.

6. Install temporary piping and instrumentation required for the biotrickling filter startup period.

7. Start up the fans and biotrickling filter system using the manufacturer supplied start up system.
8. Following successful startup of the biotrickling filter system, remove the temporary piping, instrumentation, and startup system. Provide the startup system to the City.
9. Begin normal operation of the odor control system.

END OF SECTION

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SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Methods of measurement and payment for specific items of Work under this Contract. Refer also to General Conditions for administrative aspects of payments by the Owner to the Contractor.

1.02 BID COMPONENTS AND PAYMENT

A. The Bid Form is comprised of the following components:

1. Lump Sum Work
2. Allowances
3. Unit Price Work

B. Contractor's cost for "Lump Sum Work" shall cover all Work indicated by the Contract Documents with the exception of cash allowances and specific items of work that are to be paid on a Unit Price basis as indicated on the Bid Form. Lump Sum Work will be paid for on a progress payment basis in accordance with the provisions of the General Conditions.

C. "Allowances" are budgets that have been established to reimburse Contractor for costs associated with Work that is undefined at the time of Bid. Allowances are not a ceiling and are used only to provide a figure in the Contract price. Allowances do not limit payment to the Contractor to the stated maximum amount, nor does the allowance entitle the Contractor to the stated amount in the event the allowance is used. Allowances will be administered as part of the partial payment process. Contractor shall show allowances as separate line items on the Schedule of Values and payments will be made on these items only for work undertaken. If the maximum allowance is reached, further work may be authorized and administered as a change order in accordance with the General Conditions. Specific Allowances are described below.

D. "Unit Price Work" is Work indicated on the Drawings or specified. The price of each unit of Work is to be defined by the Bidder in the Unit Price Bid Schedule in the Bid Form and shall include all materials, labor, equipment, and incidentals required to complete each Work Item. When actual Work differs from the basis of the Work Item, costs shall be adjusted on a pro-rata basis or other method suited for the particular condition. Work Items established for this Work have been identified on the Bid Form and are described as follows:

1. Work Item No. 1: Mobilization/Demobilization

   a. Bid Item 1 includes payment for all work, equipment, and materials, not included in other bid items, necessary to complete project.

   b. Payment will be "Lump Sum" and shall be full compensation for, but not limited to, the following:

      1) Obtaining all bonds.

      2) Obtaining required permits, licenses, agreements and certifications.

      3) Moving onto the site of equipment, materials and staff including set up of Contractor's staging area/yard.

      4) Furnishing and erecting needed construction facilities, fencing, and project security.

      5) Demobilization.

      6) Work as required for the proper performance and completion of the project, including preconstruction photographs, video recording of surface features, progress schedules and reports, contract meetings, and record drawings.

   c. Bid Item 1 shall not exceed six percent (6%) of the total bid price.

   d. In the event the Contractor writes in a Mobilization/Demobilization price greater than six percent (6%) on the Bid Sheet found in the Proposal, the Owner will pay any excess with the final Progress Payment

   e. Contractor may apply for payment of mobilization on a percent complete basis as the items covered in the Mobilization are being completed.

   f. Contractor may apply for payment of demobilization after the overall project substantial completion is achieved and the project begins to demobilize.

2. Work Item No. 2: Diversion of Recyclable Waste Materials

3. Work Item No. 3: Worker Protection and Safety/Shoring

   a. Bid Item 2 includes payment for providing a detailed plan of worker safety and maintaining safety during construction.

   b. Includes all work, equipment, and materials necessary to provide sheeting shoring, and bracing in conformance with Federal and California safety codes.

   c. No measurement will be made. Payment shall be "Lump Sum" and shall be full compensation for, but not limited to, the following:

      1) All submittals.

      2) Design, procurement, installation and removal of sheeting, shoring, and bracing.

      3) Abandonment of sheeting and shoring where required.

4) Other excavation supports in place necessary to complete all work under the Contract in conformance with Federal and California Safety and Health Standards, Sections 6700-6708 of the Labor Code and these Specifications.

4. Work Item No. 4: All equipment and services in accordance with Section 11302

   a. The lump sum amount for performing all work in accordance with Section 11302 of the Contract Documents, with the exception of work included under Bid Items 1, 2, and 3.

   b. The lump sum price shall be full compensation for the preparation and installation or submittal of these materials, and for all labor, equipment, tools and incidentals to complete this item.

5. Work Item No. 5: All other work in accordance with the Contract Documents, with the exception of work included under items 1 through 4

   a. The lump sum amount for performing all work in accordance with the Contract Documents, with the exception of work included under Bid Items 1 through 4.

   b. The lump sum price shall be full compensation for the preparation and installation or submittal of these materials, and for all labor, equipment, tools and incidentals to complete this item.

1.03 SCHEDULE OF VALUES

A. Format: Identify each line item in the Schedule of Values with number and title of the major Specification sections. Submit typed schedule on 8½ x 11-inch paper; Contractor's standard form or media-driven printout will be considered on request.

B. At the pre-construction meeting, submit a preliminary Schedule of Values to the Owner's Representative for review. The Contractor shall incorporate any review comments from the Owner's Representative, and submit a final Schedule of Values at least 21 days prior to submitting the first Application for Payment.

C. The Schedule of Values shall assign a fair, reasonable and equitable dollar value for each activity on the Contractor's construction schedule. The Schedule of Values shall include anticipated progress payments for each item in the bid schedule through the final payment. In addition, a detailed breakdown of lump sum prices shall be included in the Schedule of Values.

D. The Schedule of Values shall specifically indicate installed cost for materials and equipment for each bid and sub-bid item.

E. Each activity's assigned value shall consist of labor, equipment and materials cost and a prorata contribution to overhead and profit. Breakdown shall be so organized as to facilitate assessment of work and payment of subcontractors.

F. The sum of the assigned values shall equal the lump sum price of the activity.

G. If, in the opinion of the Owner's Representative or Owner, the Schedule of Values is not balanced, the Contractor shall provide documentation substantiating the cost

allocations of those activities believed to be unbalanced. Cost allocation will be considered unbalanced if an activity on the construction schedule has been assigned a disproportionate allocation of labor, direct, or overhead and profit costs which result in progress payment request(s) which would create a condition where insufficient funds are available to complete the unfinished work. Upon request by Owner, support values shall be given with data that will substantiate their accuracy. Upon Owner's request, the Contractor shall submit additional detailed cost information.

H. Upon acceptance of the Schedule of Values, it shall be used as a basis for processing all progress payment requests.

1.04 PROGRESS PAYMENT REQUESTS

A. Submit Progress Payment Requests during the course of the project in conformance with the General Condition.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01330

SUBMITTALS

PART 1 - GENERAL

1.01 SUMMARY

A. Requirements for the submittal of information that will enable determination of whether the Contractor's proposed materials, equipment or methods of work are in general conformance to the design concept and in compliance with the Contract Documents.

B. Furnish drawings, specifications, descriptive data, certificates, samples, test results, methods, schedules, manufacturer's installation instructions and other information to fully demonstrate that the materials and equipment to be furnished and the methods of work comply with the provisions and intent of the Contract Documents.

C. Requirements for furnishing submittals (except physical samples) electronically in PDF format. For Division 16 submittals which require hard copy submittals, refer to Section 16010.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01999 – Reference Forms
2. Section 16010 – Electrical

1.03 CONTRACTOR'S RESPONSIBILITIES

A. Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the materials and equipment incorporated into the Work, or the methods of performing the Work shall be as described in the accepted submittals.

B. Verify that all features of all products conform to the specified requirements. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment that are being submitted for review. Extraneous materials shall be crossed out or otherwise obliterated.

C. Coordinate submittals among subcontractors and suppliers. Ensure that there is no conflict with other submittals and notify the Construction Manager in each case where his submittal may affect the work of another contractor or the Owner, including those submittals complying with unit responsibility requirements specified in applicable technical sections.

D. Coordinate submittals with the Work so that work will not be delayed. Coordinate and schedule different categories of submittals, so that one will not be delayed for

lack of coordination with another. No extension of time will be allowed because of failure to properly schedule submittals.

E. Do not proceed with work related to a submittal until the submittal process is complete and the submittal has received a response "No Exceptions Taken" or "Make Corrections Noted."

F. Certify on each submittal document that the Contractor has reviewed the submittal, verified field conditions, and complied with the contract documents.

1. Include a copy of the specification section with addendum updates, all referenced and applicable sections, and each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements.

a. Use check marks (✓) to denote full compliance with a paragraph as a whole.

b. If deviations from the specifications are indicated and, therefore requested by the Contractor, underline each deviation and denote by a number in the margin to the right of the identified paragraph.

c. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications.

d. Include a detailed, written justification for each deviation.

2. Failure to comply with this paragraph is sufficient cause to reject the entire submittal.

1.04 REVIEW COSTS

A. The Owner's cost for review of submittals for the same proposed materials, equipment or work will be apportioned as follows:

1. The cost of review of the initial submittal and the first revised submittal will be borne by the Owner.

2. The cost to review all additional revised submittals after the first revised submittal will be charged to the Contractor. The cost of review shall include, without limitation, administrative, design and engineering activities directly related to review of submittals.

1.05 SUBMITTAL INDEX

A. Within 30 days of the Notice to proceed, submit a list, by specification section, of all submittals to be submitted.

B. Update and resubmit the submittal index on a monthly basis where additional submittals are identified, or as necessary

1.06 CATEGORIES OF SUBMITTALS

A. General

1. Submittals fall into two general categories;

a. Submittals for review and comment require action by the Engineer.

b. Submittals that are primarily for information only do not require Engineer's approval.

B. Submittals for Review and Comment

1. Transmit submittals for review and comment to the Construction Manager. The Engineer will review the submittal for compliance with the Contract requirements and will provide written comments regarding acceptability.

C. Submittals for Information Only

1. Where specified, furnish submittals to the Construction Manager for information only. The Engineer may, at the Engineer's option, review and comment on any product data.

2. Incomplete or inadequate product data will be returned to the Contractor for resubmittal.

1.07 TRANSMITTAL PROCEDURE

A. General

1. Transmit submittals regarding material and equipment under cover of a Shop Drawing/Transmittal Form (See Section 01999).

2. Use a separate form for each specific item, class of material, equipment, and items specified in separate, discrete sections, for which the submittal is required.

3. Identify submittal documents common to more than one piece of equipment with all the appropriate equipment numbers.

4. Make submittals for various items with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.

5. Assign a unique sequential number on the transmittal form accompanying each item submitted.

a. Use the following format for original submittal numbers: "XXX"; where "XXX" is the sequential number assigned by the Contractor.

b. Use the following format for resubmittals: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter assigned for resubmittals, i.e., A, B, or C being the 1st, 2nd, and 3rd resubmittals, respectively. Submittal 25B, for example, is the second resubmittal of submittal 25.

B. Electronic Submittals

1. Electronic submittals are preferred except as otherwise indicated.

2. Prepare electronic submittals and Shop Drawings in electronic (*.pdf) format including half-sized and full-sized drawings, catalog information and other required submittal information.

3. Break down submittals that are larger than 10 megabytes into smaller sections, using logical division points to create sections.

4. Electronically bookmark electronic submittals greater than 30 pages in length by major submittal section to facilitate ease of navigation.

C. Deviation from Contract

1. If the Contractor proposes to provide material, equipment, or method of work that deviates from the project manual, so indicate under "Proposed Deviations" on the transmittal form accompanying the submittal copies.

D. Submittal Completeness

1. Submittals that do not have all the information required to be submitted, including deviations, are not acceptable and will be returned without review.

1.08 SUBMITTAL CONTENT

A. Prepare submittals in compliance with individual Specification Sections and as indicated herein.

B. Shop Drawings:

1. Develop project-specific, scaled drawings to fully identify materials and products that will be provided and their relationship to other products that will be furnished and installed.

2. Do not utilize reproductions of the Contract Documents as the basis for the submittal.

3. Identify products, assemblies, equipment and systems.

4. Provide equipment identification numbers or tag numbers, wiring diagrams, and setting diagrams.

5. Identify critical dimensions.

C. Product Data:

1. Provide information necessary to demonstrate conformance with the specified requirements. Include performance curves, specifications, and wiring diagrams.

2. Product data may consist of manufacturer's standard catalog information and data sheets, marked to indicate the specific products that will be provided.

3. Provide supplemental information as necessary to fully demonstrate how products will be modified from the manufacture's standard products to meet the specification requirements.

D. Bill of Materials with quantity, originating manufacturer and part number, and description. An itemized list of spare parts for each equipment components shall be listed separately at the end of the Bill of Materials list. Spare parts shall not be delivered to the work site until the list has been approved by the Engineer.

E. Manufacturer's Instructions: Written or published information that establishes the manufacturer's recommendations, guidelines and procedures for handling and installation of products, equipment and assemblies.

F. Samples: Mount, display or package samples in a manner that will facilitate review and establish workmanship and quality of materials.

1.09 REVIEW PROCEDURE

A. General

1. Submittals are specified for those features and characteristics of materials, equipment, and methods of operation that can be selected based on the Contractor's judgment of their conformance to the specified requirements. Other features and characteristics are specified in a manner that enables the Contractor to determine acceptable options without submittals. The review procedure is based on the Contractor's guarantee that all features and characteristics not requiring submittals conform as specified.

2. Review does not extend to means, methods, techniques, sequences or procedures of construction, or to verifying quantities, dimensions, weights or gages, or fabrication processes (except where specifically indicated or required by the Project Manual) or to safety precautions or programs incident thereto.

3. Review of a separate item, as such, will not indicate approval of the assembly in which the item functions.

4. When the Contract Documents require a submittal, submit the specified information as follows:

a. Submittals for Review and Comment:

1) Submit one electronic pdf submittal via e-mail.

b. Submittals for Information Only:

1) Submit one electronic pdf submittal via e-mail.

B. Submittals for Review and Comment

1. Unless otherwise specified, within 30 calendar days after receipt of a submittal for review and comment, the Engineer will review the submittal and return a signed submittal response document, in pdf format, to the Construction Manager. The returned submittal shall indicate one of the following actions:

a. If the review indicates that the material, equipment or work method complies with the project manual, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may

begin to implement the work method or incorporate the material or equipment covered by the submittal.

b. If the review indicates limited corrections are required, copies will be marked "AMEND AS NOTED." The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in O&M data, provide a corrected copy.

c. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AS NOTED AND RESUBMIT." Except at its own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

1) Contractor shall include a typed letter responding to each of the Engineer's review comments in each resubmittal.

d. If the review indicates that the material, equipment, or work method does not comply with the project manual, copies of the submittal will be marked "REJECTED - RESUMBIT." Submittals with deviations that have not been identified clearly may be rejected. Except at its own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "AMEND AS NOTED."

C. Submittals for Information Only

1. Submittals for Information Only, if complete and adequate, will be returned marked "ACCEPTED FOR RECORD".

1.10 PROCESSING TIME

A. Prepare submittals and transmit to Construction Manager for review in sufficient time to allow Engineer's review; manufacture, fabrication or assembly of materials and systems; and shipping of material to the site in time for installation in accordance with the Contractor's schedule.

B. Engineer's time for review will begin upon receipt of a complete and comprehensive submittal containing all required information.

C. Engineer will review submitted information and transmit a response to Contractor within the time indicated in paragraph 1.09 above.

1. In some instances, review times for specific submittals may be modified by the individual specification Section.

2. Resubmittals will be subject to the same review time.

D. No adjustment of Contract Time or Contract Price will be allowed due to delays in the progress of the Work that are caused by rejected submittals and subsequent resubmittals.

1.11 EFFECT OF REVIEW OF CONTRACTOR'S SUBMITTALS

A. The purpose of submittals is to demonstrate how Contractor intends to conform to the Contract Documents and design concepts. Engineer is entitled to rely upon the accuracy and completeness of designs, calculations, or certifications made by licensed professionals whether or not a stamp or seal is required by the Contract Documents.

B. The review procedure is based on the Contractor's guarantee that all features and characteristics not requiring submittals conform to the contract documents.

C. Review of contract drawings, methods of work, or information regarding materials or equipment the Contractor proposes to provide, does not relieve the Contractor of its responsibility for

1. Fulfilling the requirements of the Contract,
2. Proper operation of the equipment,
3. Correction of defective work

D. Reviews shall not be regarded as an assumption of risk or liability by the Engineer or the Owner.

E. A mark of "NO EXCEPTIONS TAKEN" or "AMEND AS NOTED" means that the Owner has no objection to the Contractor, upon its own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

F. The Engineer's review of shop drawings, samples, or test procedures will be only for conformance with design concepts and for compliance with information given in Contract Documents. The Engineer's review does not extend to:

1. Accuracy of dimensions, quantities, or performance of equipment and systems designed by Contractor.
2. Contractor's means, methods, techniques, sequences, or procedures except when specified, indicated on the Drawings, or required by Contract Documents.
3. Safety precautions or programs related to safety which shall remain the sole responsibility of the Contractor.

G. Review of a separate item does not indicate approval of the assembly in which the item functions.

1.12 SUBSTITUTIONS OR “OR EQUAL” ITEMS

A. Named or Sole Source Times

1. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required.

2. Unless the name designated a "sole source" and/or is followed by words indicating that no substitution is permitted, materials, or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following requirements:

   a. The burden of proof as to the type, function, and quality of any such substitution product, material or equipment shall be upon the Contractor.

   b. The Engineer will be the sole judge as to the type, function, and quality of any such substitution and the Engineer's decision shall be final.

   c. The Engineer may require the Contractor to furnish additional data about the proposed substitution.

   d. The Owner may require the Contractor to furnish a special performance guarantee or other surety with respect to any substitution.

   e. Acceptance by the Engineer of a substitution item proposed by the Contractor shall not relieve the Contractor of the responsibility for full compliance with the Contract Documents and for adequacy of the substitution.

   f. The Contractor shall pay all costs of implementing accepted substitutions, including Engineer's and Owner's review costs and costs of redesign and changes to contemplated Work necessary to integrate the proposed substitution into the Work.

B. Initiating Substitution Request

1. To propose to furnish or use a substitute item of material or equipment, Contractor shall use the Proposed "Or Equal" Substitution Submittal Transmittal Form found in Section 01999.

2. Submit the Substitution Submittal form to Construction Manager for acceptance, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified.

3. State that the evaluation and acceptance of the proposed substitute will not prejudice Contractor's achievement of Substantial Completion on time, whether acceptance of the substitute for use in the Work will require:

a. A change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for Work on the Project) to adapt the design to the proposed substitute.

b. Incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.

4. Identify all variations of the proposed substitution from that specified

5. Identify available maintenance, repair, and replacement service

6. Provide an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change

7. The Owner or Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed substitute.

8. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may propose to furnish or utilize a substitute means, method, sequence, technique or procedure of construction. Submit sufficient information to allow Engineer to determine that the proposed substitution is equivalent to that indicated or required by the Contract Documents.

9. Without any increase in cost to the Owner, the Contractor shall be responsible for and pay all costs in connection with proposed substitutions and of inspections and testing of equipment or materials submitted for review prior to the Contractor's purchase thereof for incorporation in the Work, whether or not the Engineer accepts the proposed substitution or proposed equipment or material. The Contractor shall reimburse the Owner for the charges of the Engineer for evaluating each proposed substitution.

C. Review Procedure

1. The procedure for review of substitutions by Engineer will be similar to that provided in this Section.

2. Requests for substitutions may only be submitted by the Contractor.

3. All requests for substitution shall be submitted within thirty (30) calendar days after the date of Notice to Proceed unless the Owner has agreed in writing to a later submittal date and the Contractor agrees to comply with all conditions of the Owner for the late submittal.

4. The Owner's agreement to a later submittal date shall not be construed as favorable review or acceptance of the proposed "or equal" substitution.

5. The Engineer will respond to all requests for substitutions within thirty (30) days following receipt of an acceptable substitution submittal, unless the Engineer notifies the Contractor within fourteen (14) days after receipt of the proposed "or equal" substitution submittal that more time is needed to complete a thorough review.

6. The Engineer and Owner will be the sole judge of acceptability, and no proposed "or equal" substitution item or service will be ordered, installed or utilized without Engineer's prior written acceptance that will be evidenced by either a Change Order or an accepted Shop Drawing.

7. As a condition of acceptance, the Owner may require Contractor to furnish, at Contractor's expense, a special performance guarantee or other surety with respect to a proposed "or equal" substitution item or service.

D. Modification due to Substitutions

1. All costs for redesign required by the implementation of the proposed substitute shall be borne by the Contractor.

2. All costs associated with incorporating a substitution into the project shall be borne by the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01340

REQUESTS FOR INFORMATION AND CLARIFICATIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedures for submitting requests for information and clarifications when Contractor discovers apparent conflicts, omissions, or errors in the Contract Documents, or upon having any questions concerning interpretation of the Contract Documents.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01999 – Reference Forms

1.03 PROCEDURES

A. Notification:

1. Notify the Construction Manager in writing and request interpretation, clarification, or additional detailed instructions concerning the Work.

2. Ask for clarification or request information immediately upon discovery, but no less than seven working days prior to the start date of the activities related to the clarification, based on the latest updated version of the official contract schedule.

B. Form:

1. Submit requests for clarification and/or additional information in writing to the Construction Manager using the Request for Information (RFI) form provided in Section 01999.

2. Provide a detailed statement indicating the nature of the information requested. Reference specific Drawings and Specifications as appropriate.

3. Limit each written request to one topic.

4. Electronic (*.pdf) format RFIs are preferred. Prepare RFIs and any attachments in electronic format. Transmit electronic RFIs via email to the Construction Manager. Break down RFIs that are larger than 4 megabytes into smaller sections, using logical division points to create sections.

5. Hard copy RFIs are an acceptable alternative to electronic RFIs if the Contractor demonstrates, to the satisfaction of the Construction Manager, that electronic format presents a hardship. If hard copies are used, furnish six (6) copies of each RFI.

C. Numbering:

1. Use consecutive numbers for each new form submitted. When RFI's are re-submitted to request additional information on the same topic, add a letter A, B, C, etc. to the numbering system for each subsequent RFI until the subject is resolved.

1.04 REASONS FOR SUBMITTAL

A. Submit an RFI if one of the following conditions occur:

1. An unforeseen condition or other circumstance that is not described in the Contract Documents.

2. An apparent conflict or discrepancy between portions of the Contract Documents.

3. An apparent omission from the Contract Documents.

4. Information presented in the Contract Documents is unclear or additional details are needed to undertake the Work.

1.05 RESPONSE TIME

A. The Construction Manager will resolve the RFI and issue instruction to the Contractor within 14 calendar days.

B. Response time may need to be lengthened; or shortened for emergency situations as mutually agreed upon by all parties.

C. Do not proceed with the affected work before receipt of a response from the Construction Manager. Should the Contractor elect to proceed with the Work affected by the RFI, any portion of the Work that is not done in accordance with the Construction Manager's interpretation, clarifications, instructions or decisions will be subject to removal or replacement at the Contractor's expense.

1.06 REJECTIONS

A. RFI's submitted by the Contractor may be rejected by the Construction Manager for the following reasons:

1. The RFI is submitted as a substitute for a submittal.

2. Under the pretense of a Contract Documents discrepancy or omission without thoroughly reviewing the documents.

3. In a manner that suggests that specific portions of the Contract Documents are assumed to be excluded, or be taken as an isolated portion of the Contract Documents in part rather than whole.

4. In an untimely manner without proper coordination and scheduling of work or related trades.

1.07 ADDITIONAL DETAILED INSTRUCTIONS (CLARIFICATIONS)

A. The Owner may furnish additional detailed written instructions to further explain the Work and these instructions shall become part of the Contract Documents. Clarifications will be issued using the above RFI system.

B. When, in the opinion of the Contractor, the Construction Manager's response in the RFI constitutes additional work beyond the scope of the Contract, the Contractor shall notify the Construction Manager in writing following receipt of the RFI and prior to initiating the Work affected by the RFI. The process for submitting claims of additional Work shall be followed as defined in the General Conditions. Lack of compliance with this notification requirement will cause Contractor to forfeit any claim for additional compensation or extension of the schedule.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01500

CONSTRUCTION FACILITIES AND UTILITIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for Contractor's temporary facilities at the job site and for the prosecution of the Work.

1.02 CONTRACTOR'S CONSTRUCTION OFFICE

A. Maintain a suitable office at the site.

B. Temporary office will be considered as the headquarters of the Contractor's representative whom is authorized to receive drawings, instructions, or other communication or articles. Any communication given to the representative or delivered at Contractor's temporary office at the site in his absence is deemed to have been delivered to the Contractor.

C. Maintain copies of the Drawings, Specifications, and other Contract documents at Contractor's temporary office at the site and make these available for use at all times.

1.03 STAGING AREA

A. Before starting the work, submit a proposed plan and layout for all temporary offices, sanitary facilities, storage areas, temporary water service and distribution, and temporary power service and distribution.

B. Erect temporary security fence as appropriate. Contractor is responsible for the security of the staging area. Owner and Engineer do not take any responsibility for missing or damaged equipment, tools or personal belongings.

C. Store only those materials and equipment that are related to the construction within the staging area.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 TEMPORARY ELECTRIC POWER

A. Contractor shall make provisions to obtain temporary electric power for use during construction. The Contractor shall be responsible for obtaining a source of electric power for construction.

B. Cost of electric power shall be borne by the Contractor.

C. The temporary electric power installation shall meet the construction safety requirements of OSHA, state, and other governing agencies.

3.02 TEMPORARY TELEPHONE SERVICE

A. Provide telephone service at the construction site office. Cellular telephone service is acceptable.

B. The Contractor is not permitted to use the Owner's telephone service.

3.03 TEMPORARY SANITARY FACILITIES

A. Provide toilet and wash-up facilities for the construction work force at the site of work.

B. Facilities shall comply with applicable laws, ordinances, and regulations pertaining to the public health and sanitation of construction field offices, dwellings, and camps.

3.04 TEMPORARY WATER SUPPLY

A. Use potable water for soil moisture conditioning, pipeline pressure testing and other construction uses.

B. Obtain approvals and authorizations from the owner of the public water distribution system for use of water and pay all fees associated with consumption of the potable water.

1. Make the necessary connections to the public water supply and install all conveyance piping and truck filling facilities that are required to transport water for the work.

2. Temporarily install valves, flow meters, air gaps, backflow preventers and other appurtenances required by the owner of the public water distribution system to maintain the integrity of the existing water systems.

3. Remove temporary water facilities when no longer needed.

END OF SECTION

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.01 MOBILIZATION

A. Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the site; for the establishment of all facilities necessary for work on the project; and for all other work and operations which must be performed, or costs incurred prior to beginning work, on the various items on the project site.

B. Mobilization shall also include the construction of temporary access ways; temporary fencing; and the necessary preparatory work required to allow for the safe and stable movement of all vehicles that are required to construct the improvements as shown.

1.02 DEMOBILIZATION

A. Demobilization shall consist of work and operations necessary to disband all mobilized items and clean up the site. The removal of all temporary access ways, signs, temporary fencing, and temporary facilities or works and the restoration of surfaces to an equal or better than existing condition shall also be included as part of demobilization.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01560

ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Environmental controls to be maintained during construction.

1.02 APPLICABLE LAWS AND REGULATIONS

A. Comply with applicable Federal, State and local environmental, health and safety laws and regulations.

1.03 SITE CLEANLINESS

A. Maintain work sites, staging areas, public roadways and private property clean and free of rubbish and debris. Remove materials and equipment from the site when they are no longer necessary for the Work.

B. Keep buildings that are occupied by the Contractor clear of refuse and debris and in a reasonably neat condition.

C. Upon completion of the work and before final acceptance, clear work areas of equipment, unused materials, and rubbish to present a clean and neat appearance.

1.04 HAZARDOUS MATERIALS

A. Handle paints, solvents, and other construction materials with care to prevent contaminants from entering into sewers, storm drains, surface waters, or soils.

B. Develop an emergency response plan for spills of sewage, paint, oil, and other hazardous materials.

C. In the event of a spill, immediately notify the Engineer, Owner and jurisdictional agencies. Take proper measures to clean up spills of hazardous materials in accordance with the emergency response plan, State, Federal, and local regulations and manufacturer's recommendations.

1.05 AIR POLLUTION CONTROL

A. Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the air pollution regulations for the area.

B. Do not idle internal combustion engines for prolonged periods of time.

C. Minimize dust nuisance by cleaning, sweeping and sprinkling work areas, exposed soil, and haul roads with water or by powered brushing.

1.06 NOISE CONTROL

A. Comply with local controls and noise level rules, regulations, and ordinances which apply to any work performed pursuant to the Contract.

1.07 DIRT AND MUD CONTROL

A. Contractor is responsible for preventing dirt, mud, and debris from accumulating on streets, sidewalks, parking areas, or other paved surfaces and for maintaining the cleanliness of these areas.

1. Track Out: Clean vehicle tires of mud and dirt before exiting the site.

2. Cover all dump truck loads and other loads that may result in debris falling from the vehicle.

3. Sweeping Paved Areas:

a. Maintain cleanliness of paved areas used by the Contractor for the duration of the project.

b. Sweep paved areas that have been used since the previous cleaning on at least a weekly basis, or more frequently when directed by the Engineer. Utilize regenerative air or vacuum pickup sweepers together with proper dust control methods to remove sediment, dust, dirt, and other matter from paved areas. Do not use excessive water resulting in mud on public streets.

1.08 OIL SPILL PREVENTION AND CONTROL

A. Store fuel and oil in accordance with requirements of the Uniform Fire Code and applicable National Fire Protection Association standards.

B. Assume responsibility for the prevention, containment, and cleanup of spilled oil, fuel, and other petroleum products used in the Contractor's operations. Prevention, containment and cleanup costs shall be borne by the Contractor.

C. Periodically inspect fuel hoses, lubricating equipment, hydraulically operated equipment, oil drums, and other devices for drips, leaks or signs of damage. Maintain and properly store to prevent spills and vandalism.

D. Construct dikes around storage tanks, or locate tanks to prevent spills from escaping to surface waters or drainage ditches.

E. Remove oils on land using sand, clay, sawdust or other absorbent material and dispose in an acceptable manner. Store waste materials in drums or other leak proof containers after cleanup and during transport to disposal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01610

SEISMIC ANCHORAGE AND BRACING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for seismic anchorage and bracing for equipment, tanks and nonstructural components.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 05501 – Anchor Bolts and Anchoring Devices
3. Section 11002 – Equipment Mounting
4. Section 15097 – Seismic Restraints for Piping

1.03 AREAS OF DESIGN RESPONSIBILITY

A. The Contractor shall be responsible for designing all seismic attachments, braces, and anchors to the structure for tanks, mechanical equipment and electrical equipment included in the Work that weigh more than 20 pounds.

B. Equipment manufacturers may provide standard design calculations and details for their specific pieces of equipment as part of the submittal for that equipment. Project-specific design calculations and details need not be produced unless the manufacture does not already have standard designs already prepared.

C. Design of seismic anchorage and bracing for piping systems and ventilation ducting is also included in the Contractor's responsibility for seismic design. Refer to Sections 15097 for additional requirements pertaining to seismic anchorage and bracing of piping and HVAC systems.

1.04 REFERENCES

A. The following is a list of standards which may be referenced in this section.

1. International Code Council (ICC)
   a. International Building Code (IBC)
   b. California Building Code (CBC)
   c. Evaluation Service (ICC-ES) Reports and Legacy Reports
2. American Society of Civil Engineers (ASCE)
   a. ASCE 7, Minimum Design Loads for Building and Other Structures.

1.05 SUBMITTALS

A. Comply with Section 01330.

B. Seismic Anchorage and Bracing Calculations

1. Submit manufacturer's engineered seismic hardware data and installation requirements.

2. Provide calculations for seismic attachments, braces and anchorages clearly showing the criteria used for the design. Calculations for anchorage of components shall be signed and sealed by a registered Professional Engineer.

C. Shop Drawings: Show details of seismic attachment assemblies including connection hardware, bracing, and anchor bolts.

1.06 DESIGN AND PERFORMANCE REQUIREMENTS

A. In accordance with CBC, tanks, mechanical and electrical components, and other elements of the Work that are permanently attached to structures shall be designed and constructed to transfer the component seismic forces specified in ASCE 7, Chapter 13 to the structure.

B. Seismic attachments, braces, and anchorages shall be designed in accordance with the provisions of the CBC and the site-specific seismic criteria in indicated in the contract drawings.

C. Comply with Sections 11000 and 11002.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Attachments and supports transferring seismic loads to the structure shall be constructed of materials and products suitable for the application and designed and constructed in accordance with the design criteria shown on the Drawings and nationally recognized standards.

B. Do not use powder driven fasteners and sleeve anchors for seismic attachments and anchorages where resistance to tension loads is required.

C. Anchor Bolts: In accordance with Section 05501.

PART 3 - EXECUTION

3.01 GENERAL

A. Design seismic anchorage systems to provide restraint in all directions, for each component or system so anchored.

B. Anchor tall and narrow equipment such as motor control centers and electrical control panels at the base and within 12 inches from the top of the equipment.

C. Mechanical and electrical components shall not be attached to more than one element of a building structure at a single restraint location where such elements may respond differently during a seismic event. Such attachments shall also not be made across building expansion and contraction joints.

D. Provide and install seismic attachments and braces in accordance with the size and number of braces determined by the design calculations prepared by the Contractor.

E. Provide and install anchor bolts and concrete and masonry anchors for the anchorage of equipment in accordance with the bolt sizing, minimum embedment, and spacing requirements determined by the calculations prepared by the Contractor.

END OF SECTION

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SECTION 01611

SEISMIC DESIGN REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. The following primary and secondary structural system elements, non-structural components, and/or equipment supported by structures.

1. Mechanical, electrical, and plumbing equipment and appurtenances.
2. Un-buried Conduit, piping, cable trays, raceways, ducts and similar systems.
3. Un-buried tanks and vessels (include contents), including support systems.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 05501 – Anchor Bolts and Anchoring Devices

1.03 REFERENCES

A. 2019 California Building Code (CBC)

1.04 DEFINITIONS

A. Engineer of Record: The Engineer responsible for the preparation of Contract Documents.

B. Specialty Engineer: Structural or Civil Engineer provided by the Contractor licensed in the State where the project is being built responsible for specific elements of the primary structural system, the secondary structural system, non-structural elements and/or equipment supported by structures.

1.05 GENERAL DESIGN REQUIREMENTS

A. The Contractor is responsible for producing designs that resist the total seismic forces in accordance with the seismic design criteria.

B. The Contractor is responsible for coordinating between the Engineer of Record and the Specialty Engineer.

C. The seismic design for non-structural components and equipment shall be in accordance with the CBC Chapter 16, and the required coefficients and factors for determining the total design seismic forces are provided in the Seismic Design Criteria in Paragraph D below.

D. Coordinate the layout so that adequate space is provided between items for relative motion. Provide additional supports and restraints between items of different systems when necessary to prevent seismic impacts or interaction.

E. Seismic forces shall be determined in accordance with the following seismic design criteria:

1. Site-Specific Spectral Response Coefficients

   a. Short Period Mapped Maximum Considered Earthquake, 5 Percent Damped: Ss=2.056g

   b. Short Period Mapped Maximum Considered Earthquake, 5 Percent Damped: S1=0.791g

   c. Short Period Design Spectral Response Acceleration, 5 percent Damped: SDS = 1.371g

2. Site Class: D

3. Seismic Design Category: E, unless noted otherwise

4. Risk Category: III, unless noted otherwise

5. Component Importance Factor, Ip:

   a. Mechanical and Electrical Equipment: Use 1.5.

   b. Tanks and Tank Anchorage: Use 1.5.

   c. Components that contain hazardous materials: Use 1.5.

   d. Components that are required for life safety: Use 1.5.

   e. Components that must remain functional after an earthquake, such as fire protection sprinkler systems: Use 1.5.

6. Do not use more than 60 percent of the weight of tanks and mechanical and electrical equipment for designing anchors for resisting overturning due to seismic forces.

7. Do not use friction to resist sliding due to seismic forces.

1.06 DESIGN REQUIREMENTS FOR PIPING, CONDUIT, AND DUCTS

A. The Contractor is responsible for producing designs for support of piping, conduit, duct or other systems to resist total seismic forces based on the seismic design criteria coefficients specified above, unless shown on the Contract Documents. Except where the technical specifications give specific exemption from resistance of seismic forces, all supports shall be designed to meet seismic criteria.

B. Where possible, pipes, conduit, and their connections shall be constructed of ductile materials (e.g., copper, ductile iron, steel or aluminum and brazed, welded or screwed connections). Pipes, conduits and their connections, constructed of nonductile materials (e.g., cast iron, no-hub pipe and plastic), shall have the brace spacing reduced to one-half of the spacing allowed for ductile material.

C. Seismic restraints may be omitted for the following conditions, where flexible connections are provided between components and the associated ductwork, piping and conduit:

1. Where the nominal pipe size is 1 in. or less.

2. Piping, conduit or ducts suspended by individual hangers 12 inches or less in length from the top of the component to the bottom of the structural support. Where rod hangers are used, they shall be equipped with swivels.

3. Air-handling ducts less than 6 square feet in cross-sectional area.

4. See the CBC for additional requirements related to the omitting of seismic bracing.

D. All trapeze assemblies supporting pipes, ducts and conduit shall be braced to resist the total seismic forces considering the weight of the elements on the trapeze. Pipes, ducts and conduit supported by a trapeze where none of those elements would individually be braced need not be braced if connections to the pipe/conduit/ductwork or directional changes do not restrict the movement of the trapeze. If this flexibility is not provided, bracing will be required when the aggregate weight of the pipes and conduit exceed 10 pounds/foot. The weight shall be determined assuming all pipes and conduit are filled with water.

E. As an alternative to designing the supports and anchorage, where an approved national standard provides a basis for the earthquake-resistant design, submit standard, data, and details for piping, conduit, duct or other systems:

1. For ductwork, mechanical piping, process piping and electrical conduits, follow Guidelines for Seismic Restraints of Mechanical Systems by SMACNA modified as follows:

a. Seismically brace piping regardless of size or location. Provide transverse braces at all changes in direction and at the end of all pipe runs. Space transverse braces not more than 20 feet apart. Provide longitudinal braces at 40-foot centers.

b. Seismically brace all ductwork regardless of size or location. Provide transverse braces at all changes in direction and at each end of run. Space braces not over 20 feet apart. Provide longitudinal braces at 40-foot centers.

2. For fire protection systems, follow NFPA 13 modified as in Paragraph 1.b above. Ensure that no seismic interaction occurs with items of other systems.

1.07 DESIGN REQUIREMENTS FOR UNDERWATER ITEMS

A. To allow for water sloshing, design rigid items such as piping or equipment supports for twice the lateral force, computed as if the item were above water. Alternatively, include seismic forces due to hydrodynamic forces in the analysis.

B. Design flexible items to accommodate sloshing motions without damage to rigid machinery.

C. Provide retainers to hold items from falling and damaging rotating equipment below, if bolted connections will fail because of ground motion displacing the supports.

1.08 SUBMITTALS

A. Comply with Section 01330.

B. Shop Drawings: Submit signed and sealed structural calculations and detailed drawings for the following listed elements and where required in Divisions 2 through 16 of the primary structural system and their attachments, the secondary structural system and their attachments, permanent non-structural components and their attachments, and the attachments and anchorage for all permanent equipment supported by the structures.

1. Biotrickling filter vessel

2. Wet well exhaust fan

C. Structural calculations and detailed drawings shall be prepared by a Specialty Engineer licensed in the State where the project is being built.

D. Structural calculations and detailed drawings shall clearly show the total design seismic forces which will be transferred from the elements of the structural system, non-structural components, and/or equipment and their attachments to the primary structure.

E. The Engineer's review of items within a Specification Section cannot be completed until all related items have been coordinated and submitted for review.

F. Quality Assurance Submittals

1. Test Reports: Submit test reports for tension testing of anchors.

2. Where required in the equipment specifications in Divisions 2 through 16 submit certification that the equipment itself is designed to resist all internal seismic forces based on the seismic design criteria for the project.

3. Where required in the equipment specifications in Divisions 2 through 16, submit signed and sealed structural calculations and detailed drawings from a specialty Structural or Civil Engineer licensed in the State where the project is being built for the attachments and anchorage to the primary structure.

4. Where required in the equipment specifications in Divisions 2 through 16, submit certification that the attachments and anchorage are designed to resist all seismic forces based on the seismic design criteria for the project.

1.09 QUALITY ASSURANCE

A. Qualifications: The Contractor is responsible for submitting signed and sealed structural calculations and detailed drawings from a Specialty Structural or Civil Engineer licensed in the State where the project is being built.

B. Regulatory Requirements: Comply with the State of California adopted and amended versions of 2019 California Building Code (CBC) Chapter 16 - Earthquake Design plus clarifications and additions specified in this Section.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

A. Site Tests:

1. Tension testing of expansion or adhesive anchors utilized for anchorage shall be done in the presence of the special inspector and a report of the test results shall be submitted.

2. See Section 05501 for additional requirements.

B. Inspection:

1. Provide special inspection for high strength bolting or bolts installed in concrete.

2. See Section 05501 for additional requirements.

END OF SECTION

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ASECTION 01615

WIND DESIGN CRITERIA

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Wind design criteria.

1.02 REFERENCES

A. International Code Council (ICC):

1. 2019 California Building Code (CBC).

B. ASCE/SEI 7-10 Minimum Design Loads for Buildings and Other Structures

1.03 DESIGN CRITERIA

A. Design in accordance with the requirements of the following:

1. Risk Category: III
2. Basic Wind Speed: V = 99 mph.
3. Wind Exposure Category: B

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01650

SHIPMENT, PROTECTION, AND STORAGE

PART 1 - GENERAL

1.01 GENERAL

A. Equipment, products, and materials shall be shipped, handled, stored, and installed in ways which will prevent damage to the items.

B. Damaged items will not be permitted as part of the work except in cases of minor damage that have been satisfactorily repaired and are acceptable to the Owner and Engineer.

PART 2 - PRODUCTS

2.01 PIPE

A. Pipe and appurtenances shall be handled, stored off the ground, and installed as recommended by the manufacturer.

B. Pipes with paint, tape coatings, linings or the like shall be stored to protect the coating or lining from physical damage or other deterioration.

C. Pipes shipped with interior bracing shall have the bracing removed only when recommended by the pipe manufacturer.

2.02 EQUIPMENT

A. Package and Marking

1. All equipment shall be protected against damage from moisture, dust, handling, or other cause during transport from manufacturer's premises to site. Each item or package shall be marked with the number unique to the specification reference covering the item.

2. Stiffeners shall be used where necessary to maintain shapes and to give rigidity. Parts of equipment shall be delivered in assembled or subassembled units where possible.

B. Identification

1. Each item of equipment, spare parts, and valve shall have permanently affixed to it a label or tag with its equipment or valve number designated in this contract. Marker shall be of stainless steel.

2. Location of label will be easily visible.

C. Shipping

1. Bearing housings, vents and other types of openings shall be wrapped or otherwise sealed to prevent contamination by grit and dirt.

D. Maintenance Records

1. Maintain for major equipment items that are in storage, indicating regular rotation of shafts, checking of oil, confirmation of power to the space heaters, etc.

2. Submit to Owner for approval prior to installation of the units and maintained by Contractor until acceptance of the project.

PART 3 - EXECUTION

3.01 EQUIPMENT STORAGE

A. During the interval between the delivery of equipment to the site and installation, all equipment, unless otherwise specified, shall be stored in an enclosed space affording protection from weather, dust and mechanical damage and providing favorable temperature, humidity and ventilation conditions to ensure against equipment deterioration. Manufacturer's recommendations shall be adhered to in addition to these requirements.

B. Equipment and materials to be located outdoors may be stored outdoors if protected against moisture condensation. Equipment shall be stored at least 6" above ground. Temporary power shall be provided to energize space heaters or other heat sources for control of moisture condensation. Space heaters or other heat sources shall be energized without disturbing the sealed enclosure.

3.02 PROTECTION OF EQUIPMENT AFTER INSTALLATION

A. After installation, all equipment shall be protected from damage from, including but not limited to, dust, abrasive particles, debris and dirt generated by the placement, chipping, sandblasting, cutting, finishing and grinding of new or existing concrete, terrazzo and metal; and from the fumes, particulate matter, and splatter from welding, brazing and painting of new or existing piping and equipment.

B. As a minimum, vacuum cleaning, blowers with filters, protective shielding, and other dust suppression methods will be required at all times to adequately protect all equipment.

C. During concreting, including finishing, all equipment that may be affected by cement dust must be completely covered.

D. During painting operations, all grease fittings and similar openings shall be covered to prevent the entry of paint.

E. Electrical switchgear, unit substation, and motor load centers shall not be installed until after all concrete work and sandblasting in those areas have been completed and accepted and the ventilation systems installed.

END OF SECTION

SECTION 01725

PROTECTION OF EXISTING FACILITIES

PART 1 - GENERAL

1.01 GENERAL

A. Protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.

1.02 CONNECTIONS

A. Connections to existing facilities, and all associated Work, shall be in accordance with the requirements of Section 01 00 00 – General Requirements, and this Section.

B. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from Owner or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

C. Connections to existing facilities that are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

D. Any work which requires a system outage shall be coordinated and a request made, including contingency plans, to the owning utility at least two (2) weeks in advance.

1.03 RIGHTS-OF-WAY

A. The Contractor shall not do any Work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the Contractor enter upon the rights-of-way involved until notified that the Owner has secured authority therefor from the proper party.

B. After authority has been obtained, the Contractor shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.

1.04 PROTECTION OF STREET OR ROADWAY MARKERS

A. The Contractor shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization.

B. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced.

C. Survey markers or points disturbed by the Contractor shall be accurately restored after street or roadway resurfacing has been completed.

1.05 RESTORATION OF PAVEMENT

A. General

1. All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit.

2. The pavement restoration requirement to match existing sections shall apply to all components of existing sections, including sub-base, base, and pavement.

3. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner. Pavements which are subject to partial removal shall be neatly saw cut in straight lines.

B. Temporary Resurfacing

1. Wherever required by the public authorities having jurisdiction, the Contractor shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.

C. Permanent Resurfacing

1. In order to obtain a satisfactory junction with adjacent surfaces, the Contractor shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement.

2. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines.

3. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

D. Restoration of Sidewalks or Private Driveways

1. Wherever sidewalks or private roads have been removed for purposes of construction, place suitable temporary sidewalks or roadways promptly after backfilling and maintain them in satisfactory condition for the period

of time fixed by the authorities having jurisdiction over the affected portions.

2. If no such period of time is so fixed, maintain temporary sidewalks or roadways until the final restoration thereof has been made.

1.06 EXISTING UTILITIES

A. Protect existing utilities and other improvements which may be impaired during construction operations, regardless of whether or not the Utilities are indicated on the Drawings. Take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Except where the Drawings indicate utilities have been field located during design or certain Utility locations shall be exposed as part of the Work, the Contractor shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of Utilities which may interfere with its work. Perform all exploratory excavations as soon as practicable after Notice to Proceed and, in any event, sufficient time in advance of fabrication and/or construction to avoid potential delays to the construction progress. When such exploratory excavations show the utility location as shown on the Drawings to be in error, notify the Engineer.

C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the Utility.

D. Utilities to be Removed

1. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing Utility or other improvement which is indicated, remove and, without unnecessary delay, temporarily replace or relocate such Utility or improvement in a manner satisfactory to the Engineer and the owner of the facility.

2. In all cases of temporary removal or relocation, restoration to the former location shall be accomplished in a manner that will restore or replace the Utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

E. Approval of Repairs

1. All repairs to a damaged Utility or improvement are subject to inspection and approval by an authorized representative of the Utility or improvement owner before being concealed by backfill or other work.

1.07 NOTIFICATION BY THE CONTRACTOR

A. Prior to excavation in the vicinity of any existing underground facilities, including water, sewer, storm drain, gas, petroleum products, or other pipelines; buried electric power, communications, or television cables; traffic signal and street lighting facilities; and roadway and state highway rights-of-way, notify the

respective authorities representing the owners or agencies responsible for such facilities not less than three (3) days nor more than seven (7) days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01735

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Cutting and patching existing and new construction.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01330 – Submittals

1.03 GENERAL REQUIREMENTS

A. Perform Work in compliance with CAL-OSHA Standards and other standards as applicable.

B. Cutting and patching shall be completed to the satisfaction of the Engineer.

1.04 SUBMITTALS

A. Submit in accordance with Section 01330.

B. Cutting and Patching Plan

1. Submit details of proposed construction before cutting and patching construction commences affecting:

a. Work of Owner or of others.

b. Structural integrity of element of Project.

2. Cutting and Patching Plan shall include the following for Engineer's approval:

a. Identification of Work.

b. Description of affected construction.

c. Necessity for cutting, patching, alteration, or excavation.

d. Description of proposed construction.

e. Scope of cutting, patching, alteration, or excavation.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Comply with specifications and standards for products involved.

PART 3 - EXECUTION

3.01 PREPARATION

A. Provide adequate temporary support as necessary to ensure structural integrity of affected portion of Work.

B. Provide devices and methods to protect other portions of Project from damage and persons from injury.

C. Provide protection from elements for that portion of Project which may be exposed by cutting and patching, and maintain excavations free from water.

3.02 CUTTING AND PATCHING

A. Cut, Fit, and Patch when required to

1. Make its several parts fit together properly.

2. Remove and replace construction not conforming to Contract Documents.

3. Remove samples of installed construction as specified for testing.

4. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

B. Execute cutting and demolition by methods which will prevent damage and will provide proper surfaces to receive installation of repairs.

C. Openings in Existing Concrete and Masonry

1. Create openings by:

a. Saw cutting completely through concrete or masonry, or

b. Scoring edges of opening with saw to at least 1 inch depth on both surfaces (when accessible) and removing concrete or masonry by chipping.

2. Do not allow saw cuts to extend beyond limits of opening.

3. Make corners square and true by combination of core drilling and grinding or chipping.

4. Prevent debris from falling into adjacent tanks or channels in service or from damaging existing equipment and other facilities.

D. Sizing of Openings in Existing Concrete or Masonry

1. Make openings sufficiently large to permit final alignment of pipe and fittings without deflections.

2. Allow adequate space for packing around pipes and conduit to ensure watertightness.

E. Grouting Pipes in Place

1. Sandblast concrete surfaces and thoroughly clean sand and other foreign material from surfaces prior to placing grout.

2. Grout pipes, sleeves, castings, and conduits in place by pouring grout under a head of at least 4 inches. Vibrate grout into place. Completely fill the spaces occupied by pipes, sleeves, castings, and conduits.

3. Water cure the grout.

F. Connections to Existing Pipes

1. Cut existing pipe square.

2. Properly prepare the ends for the connection indicated on the Drawings.

3. Repair any damage to existing lining and coating.

G. Rehabilitate all areas affected by removal of existing equipment, equipment pads and bases, piping, supports, electrical panels, electric devices, and conduits such that little or no evidence of the previous installation remains.

1. Fill areas in existing floors, walls, and ceilings from removed piping, conduit and fasteners with non-shrink grout and finish smooth.

2. Remove concrete bases for equipment and supports by:

a. Saw cutting clean, straight lines with a depth equal to the concrete cover over reinforcement minus 1/2 inch below finished surface. Do not cut existing reinforcement on floors.

b. Chip concrete within scored lines and cut exposed reinforcing steel and anchor bolts.

c. Patch with non-shrink grout to match adjacent grade and finish.

1) Terminate abandoned piping and conduits with blind flanges, caps, or plugs.

H. Treat Existing Concrete Reinforcement as follows:

1. Where existing reinforcement is to remain, protect, clean, and extend into new concrete.

2. Where existing reinforcement is not to be retained, cut off as follows:

a. Where new concrete joins existing concrete at the removal line, cut reinforcement flush with concrete surface at the removal line.

b. Where concrete surface at the removal line is the finished surface, cut reinforcement 2 inches below the surface, paint ends with epoxy, and patch holes with dry pack mortar.

END OF SECTION

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SECTION 01740

CLEANING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Intermediate and final cleaning of Work not including special cleaning of closed systems specified elsewhere.

1.02 STORAGE AND HANDLING

A. Store cleaning products and cleaning wastes in containers specifically designed for those materials.

1.03 SCHEDULING

A. Schedule cleaning operations so that dust and other contaminants disturbed by cleaning process will not fall on newly painted surfaces.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Cleaning Agents

1. Compatible with surface being cleaned.
2. New and uncontaminated.
3. For Manufactured Surfaces: Material recommended by manufacturer.

PART 3 - EXECUTION

3.01 GENERAL

A. Prevent accumulation of wastes that create hazardous conditions.

B. Conduct cleaning and disposal operations to comply with laws and safety orders of governing authorities.

C. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains or sewers.

D. Dispose of degradable debris at an approved solid waste disposal site.

E. Dispose of non-degradable debris at an approved solid waste disposal site or in an alternate manner approved by Engineer and regulatory agencies.

F. Handle materials in a controlled manner with as few handlings as possible.

G. Do not drop or throw materials from heights greater than 4-feet or less if conditions warrant greater care.

H. On completion of work, leave area in a clean, natural looking condition. Remove all signs of temporary construction and activities incidental to construction of required permanent Work.

I. Do not burn on-site.

3.02 EXTERIOR SITE CLEANING

A. Cleaning During Construction

1. Construction debris

a. Confine in strategically located container(s):

1) Cover to prevent blowing by wind.

2) Haul from site minimum once a week.

b. Remove from work area to container daily.

2. Vegetation

a. Keep weeds and other vegetation trimmed to 3 inch maximum height.

3. Soils, sand, and gravel deposited on paved areas and walks:

a. Remove as required to prevent muddy or dusty conditions.

b. Do not flush into storm sewer system.

B. Final Cleaning

1. Remove trash and debris containers from site:

a. Re-seed areas disturbed by location of trash and debris containers.

2. Clean paved roadways.

3.03 FIELD QUALITY CONTROL

A. Immediately prior to Demonstration Period, conduct an inspection with Engineer to verify condition of all work areas.

END OF SECTION

SECTION 01770

CONTRACT CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for contract closeout.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01 00 00 – General Requirements
2. Section 01780 – Record Drawings
3. Section 01782 – Operation and Maintenance Information

1.03 FINAL CLEANING

A. Immediately prior to submittal of a request for inspection for Substantial Completion, clean the project site and make ready for Owner's use and occupancy.

B. Employ experienced workers or professional cleaners for final cleaning.

C. Complete the following cleaning operations:

1. Clean the project site, yard and grounds which were disturbed by construction activities. Remove rubbish, waste material, litter and other foreign material.
2. Sweep paved areas, remove oil stains, grease, dust and dirt.
3. Remove tools, construction equipment, machinery, storage sheds, temporary fences and surplus material.
4. Broom clean sidewalks and concrete floors.
5. Vacuum carpets, spot clean or if necessary, shampoo to remove visible soil or stains.
6. Clean glass in doors and windows, remove glazing compounds, replace chipped and broken glass, clean door and window frames.
7. Patch, touch up and repair marred surfaces and finishes. Replace finishes and surfaces that cannot be satisfactorily repaired or restored.
8. Wipe surfaces of mechanical and electrical equipment, remove excess lubrication, paint splatter and mortar droppings.
9. Clean plumbing fixtures and mirrors.
10. Clean light fixtures, lamps and bulbs. Replace burned-out bulbs and defective or noisy starters in fluorescent and mercury vapor fixtures.

1.04 SUBSTANTIAL COMPLETION

A. General:

1. Comply with procedural requirements for Substantial Completion as specified in Section 01 00 00.

B. Complete final cleaning operations before requesting inspection for Substantial Completion.

C. Prior to requesting inspection for Substantial Completion, complete and submit the following:

1. List of items to be completed or corrected (punch list). Organize list by facility, space, system and piece of equipment.

2. Specific warranties, bonds, maintenance service agreements, final certifications and similar documents.

3. Delivery of spare parts, special tools, extra materials and similar items to designated locations.

4. Make final changeover of permanent locks and deliver keys to Owner.

D. Inspection for Substantial Completion:

1. Engineer, Owner and Contractor shall jointly walk through and inspect the project site to determine whether the Work is satisfactory and Substantially Complete.

2. The Contractor's punch list will be reviewed and additional items identified during the inspection requiring corrective actions will be added to the list as determined by the inspection.

1.05 FINAL COMPLETION

A. Final Completion Submittals:

1. Prior to submitting final Application for Payment, complete and submit the following:

a. Project Record Drawings. Refer to Section 01780.

b. Guaranty and Warranties.

c. Operation and Maintenance Information. Refer to Section 01782.

d. Punch List with all corrective actions completed and ready for Final Inspection.

e. Releases from Agreements with property owners or public agencies.

f. Releases or Waivers of Liens and Claims.

g. Evidence of final, continuing insurance coverage complying with insurance requirements.

h. Consent of Surety to Final Payment.

B. Final Inspection:

1. Submit written request for final inspection for Project Acceptance.
2. Engineer will either proceed with the inspection or advise Contractor of unfulfilled requirements.
3. Engineer will prepare a final Certificate of Completion after satisfactory inspection of the Work.

1.06 FINAL APPLICATION FOR PAYMENT

A. Following a satisfactory Final Inspection and receipt of a final Certificate of Completion from the Engineer, Contractor shall submit the final Application for Payment in accordance with the procedures and requirements specified in Section 01 00 00.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01780

RECORD DRAWINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Record Drawings are documents maintained and annotated by the Contractor during construction to illustrate the final location of piping, equipment, electrical conduits, outlet boxes and cables.

B. Record changes or deviations that vary from the details indicated on the original Contract Documents. Identify buried or concealed construction and utility features that are revealed during the course of construction. Record the horizontal and vertical location of buried utilities that differ from the locations indicated, or which were not indicated on the Contract Documents.

C. When the configuration and arrangement of the Work is changed from that indicated on the Contract Drawings or specified in the Project Manual, the authorizing document for the change, such as a Request for Information, Change Order, Shop Drawing, or Field Order, shall be clearly referenced on the Record Drawings as a comment.

D. Supplement the Record Drawings with detailed layout sketches, schedules, installation drawings and fabrication drawings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 RECORD DRAWINGS

A. Record Drawings shall be full size and maintained in a clean and legible condition. Engineer will provide one set of full size Drawings for use as a Record Drawing set.

B. Do not use the Record Drawing set for construction purposes.

C. At the completion of the work, but prior to final payment, submit the Record Drawing set to the Engineer.

D. Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed.

E. Annotations to the Record Drawings shall be legible and shall be made with an erasable colored pencil conforming to the following color code:

1. Additions and Final Dimensions – Red
2. Deletions – Green
3. Comments – Blue

F. Engineer will review the Contractor's updated Record Drawing mark-ups on a monthly basis during the evaluation of each progress payment.

1. Progress payment approval is contingent upon complete and up-to-date Record Drawing mark-ups.

2. Payment approval will be delayed if mark-up drawings are not up-to-date.

END OF SECTION

SECTION 01782

OPERATION AND MAINTENANCE INFORMATION

PART 1 - GENERAL

1.01 GENERAL

A. Provide Operation and Maintenance (O&M) information for each maintainable piece of equipment, equipment assembly or subassembly, and material provided or modified under this Contract.

1. Provide in the form of an instructional manual for use by Owner's personnel.

2. Provide a separate manual for each piece of equipment (i.e., submersible pumps will have a separate manual from vertical turbine pumps). One exception is that O&M Manuals for valves specified in Division 15 may be combined into one manual.

3. O&M Manuals and CMMS Data are required for equipment, specialties, electrical, and instruments included in, but not limited to, the following sections:

Section	Title
11060	Electric Motors
11302	Biological Odor Control System
15114	Ball Valves
16010	Electrical General

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals

2. Section 01820 – Training

3. Section 01999 – Reference Forms

1.03 SUBMITTALS

A. Submit in accordance with Section 01330.

B. Preliminary O&M manuals may be in electronic format, unless required to be hard-copies by technical specification sections.

1. Refer to "Format Requirements – Electronic Copies" below.

2. Include all material in final O&M manual except startup and field testing information.

3. Engineer and Owner will review manuals. Make additions and revisions in accordance with review comments.

C. Submit final O&M manuals in hard-copy and in electronic format on CD or DVD.

1. Include startup and field testing information.

2. Submit two (2) final hard copy O&M Manuals and one (1) electronic copy on CD or DVD for review. Hard copies will be returned to Contractor.

3. Provide five (5) approved O&M manuals and two (2) copies on CD or DVD to Owner.

D. O&M Manuals must be submitted and accepted before on-site training, specified in Section 01820, may start.

E. Submittals that are not fully indexed and tabbed with sequentially numbered pages may be returned without review.

F. Complete and submit O&M Information Transmittal (See Section 01999) with each Manual.

G. Deferred submittal parts, which need not be included with final manuals, but shall be included with approved manuals:

1. Master Volume Index as specified in Paragraph 2.01

2. Include test reports as specified in Paragraph 2.05 in final O&M manuals.

3. Include forms required during startup and training in final O&M manuals.

4. Include completed Equipment Record Forms with equipment serial numbers, as specified in Paragraph 2.02, in final O&M manuals.

H. Submit data for import in a Computerized Maintenance Management System (CMMS) as specified under Paragraph 2.07 below.

PART 2 - PRODUCTS

2.01 GENERAL

A. Each O&M Manual shall provide instructions and procedures for all aspects of equipment installation, operation, and maintenance including: delivery, handling, storage, maintenance during storage, assembly, erection, installation, startup, adjusting, testing, operating, shutdown, troubleshooting, maintenance, and as may otherwise be required.

B. Organize information in a consistent format under separate headings for each different procedure, with a logical sequence of instructions for each procedure.

C. Where manufacturers' standard pre-printed manuals are included in O&M Manuals, mark to reflect only the model or series of equipment used on the Project. Neatly cross out non-applicable material.

D. Master Volume Index

1. Provide a neatly typewritten master index of all O&M manuals.

2. List each manual as Volume __ of __.

3. Include a copy of the index at the front of each manual. Clearly call out the manual in the index.

2.02 FORMAT REQUIREMENTS – GENERAL

A. Cover: Provide a cover page the includes the following information:

1. "OPERATION AND MAINTENANCE MANUAL, VOLUME NO. __ OF __"

2. Project Name

3. Owner Project Number

4. Specification Number(s)

5. Equipment Name(s)

6. Equipment Tag Numbers

B. Title Page: Provide a title page at the front of each Equipment O&M Manual containing the following information:

1. Owner Name and Project Name

2. Equipment Name

3. Specification Section

4. Equipment Tag Numbers

5. Equipment Model Numbers

6. Equipment Serial Numbers

7. Names, addresses, telephone numbers and individuals to contact for the manufacturer, the nearest representative of the manufacturer, and the nearest supplier of the manufacturer's equipment and parts

8. Engineer name, address, and telephone number

9. Contractor, name of responsible principal, address, and telephone number.

10. Date

C. Table of Contents

1. Number each page of O&M Manuals and provide a typed table of contents with page numbers at the front of each O&M Manual.

2. Divide the O&M Manuals into major sections and subsections, to allow easy location of material. At a minimum, list each major section in the table of contents.

3. Provide a fly sheet for each major section listed in the table of contents, with section title printed on fly sheet.

D. Section 1: Reserve Section 1 of the manual for the following:

1. Equipment Record Forms (Section 01999 and Division 16)

   a. Fill out by machine. Hand entries will not be allowed.

   b. Include all required information. The Equipment Record Form is intended as an easily accessible quick reference for plant operation and maintenance personnel.

   c. Equipment record sheet for electrical/instrumentation equipment shall be as specified in Division 16. Include a complete list of items supplied, including serial numbers, ranges, options, and other pertinent data necessary for ordering replacement parts.

2. Startup forms required by individual specification sections. These may include but are not limited to the following forms in Section 01999:

   a. Equipment Test Report

   b. Manufacturer's Representative Service Report

   c. Manufacturer's Installation Certification Form

   d. Manufacturer's Instruction Certification Form

E. Presentation of Data

1. Include only those sheets that are pertinent to the specific product.

2. Annotate each sheet to:

   a. Clearly identify the specific project or part installed.

   b. Clearly identify the data applicable to the installation.

   c. Cross-out references to inapplicable information.

3. Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.

4. Material shall be suitable for reproduction, with quality equal to original. No scanned or faxed copies of standard published manuals and product data available from manufacturers will be allowed.

F. Text

1. Manufacturer's printed data properly edited for project. Cross out all data that does not apply to the equipment to be furnished. Clearly annotate to identify applicable product, part, or data.

2. Documents shall be machine typed; hand written documents are not acceptable. Documents shall be legible and original size, documents that cannot be read or have been reduced will be returned for correction.

2.03 FORMAT REQUIREMENTS – HARD COPIES

A. Binders

1. Bind Equipment O&M Manuals in heavy duty hard cover three-ring "Slant D" binders with clear vinyl overlay pocket on binder front and spine, Avery Dennison, Heavy Duty, EZD, View Binder or equal.
2. Insert cover page specified above into clear pocket on the front of each binder.
3. Provide with heavy plastic-coated section dividers with numbered plastic index tabs.
4. Include plastic sheet lifters prior to first page and following last page.

B. Spine Label

1. Provide a spine label to be inserted into the clear pocket on the spine of each binder. Include the following information on the spine label:
   a. Equipment Name(s)
   b. Specification Number(s)
   c. Equipment Tag Numbers.
   d. Appendix number and/or volume number

C. Drawings

1. Drawings reduced to 11-inch by 17-inch are acceptable if they are clear and readable, and are neatly and individually double-folded to 8-1/2-inch by 11-inch size. Drawing title shall be visible in lower right hand corner of the original and folded drawing. Reinforce binding edge with clear Mylar strip.
2. Larger drawings or illustrations are acceptable if neatly folded and individually placed in an 8-1/2-inch by 11-inch clear plastic pocket which fits in the binder. Only one drawing or illustration shall be placed in each pocket. Drawing title shall be visible in lower right hand corner of the original and folded drawing.

D. Additional formatting requirements:

1. Paper Size: 8-1/2 inches by 11 inches, except as noted below.
2. Paper: 20-pound minimum, white for typed pages.
3. Arrange printing so that punched holes do not obliterate data and use hole reinforcements for bound in plan sheets.

2.04 FORMAT REQUIREMENTS - ELECTRONIC COPIES

A. Include all information in the hard-copy Operation and Maintenance Manuals.

B. Insert fly sheets as specified above at the location of tabbed section dividers.

C. Provide as a single, searchable PDF file. Generate PDF files from original documents to enable text searches.

D. The files shall become the property of the Owner for use in training programs and other uses.

2.05 CONTENTS OF MANUALS

A. Product Data

1. Provide manufacturer's catalog data indicating equipment and accessories provided for the Project. Include only those sheets that are pertinent to the products supplied and delete references to inapplicable information.

2. Supplement product data with drawings as necessary to clearly illustrate relations of component parts of equipment and systems.

3. Provide "As Constructed" submittal shop documents, data sheets, and drawings, including all items in the electrical/instrumentation system as specified in Division 16. Contract documents shall not be used as "As Constructed" drawings.

B. Drawings

1. Supplement product data with drawings as necessary to clearly illustrate:

a. Relations of component parts of equipment and systems. Include individual parts list with exploded views for all equipment.

b. Control and flow diagrams.

2. Coordinate drawings with information in project contract documents to assure correct illustration of completed installation.

C. Equipment Description

1. Theory of Operation.

2. Description: Provide description of unit and component parts functions, normal operating characteristics, and limiting conditions.

a. Include descriptive bulletins, brochures, or catalog sheets to describe the equipment.

b. Include performance curves, engineering data, and test results.

D. Procedures

1. Safety Procedures: Manufacturer's safety procedures for operating and maintaining all equipment and materials used. List personnel hazards and safety precautions for all operating conditions.

2. Shipping and Installation Procedures

a. Receiving and handling.

b. Short-term storage, long-term storage and maintenance during storage.

c. Complete step-by-step installation instructions for all components.

d. Startup, adjusting and testing.

E. Operating Instructions

1. Provide complete, detailed, written description of the sequence of operations for all operations in all modes. Prepare specifically for this work and reference to control diagrams and system components.

   a. Recommended step-by-step pre-start, startup, adjustment, calibration, and break-in operating instructions.

   b. Recommended step-by-step regulation and control instructions for routine operation. Include summer and winter operating instructions as applicable. Include any special operating instructions.

   c. Recommended step-by-step stopping, shut-down, and post-shutdown instructions.

2. Staff Service Requirements: Provide instructions for services to be performed by the staff such as lubrication, adjustments, and inspection.

3. Current and desired control settings.

4. Emergency Procedures.

   a. Provide emergency procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment.

   b. Include emergency shutdown instructions for fire, explosion, spills, or other foreseeable contingencies.

F. Preventive Maintenance Information

1. Preventive Maintenance Plan and Schedule

   a. Provide manufacturer's schedule for routine preventive maintenance, inspections, tests, and adjustments required to ensure proper and economical operation and to minimize corrective maintenance and repair.

   b. Provide manufacturer's projection of preventive maintenance man-hours on a daily, weekly, monthly, and annual basis.

2. Lubrication information

   a. Lubrication schedule showing service interval frequency

   b. Table showing recommended lubricants for specific temperature ranges and applications

      1) For each required lubricant, provide a list of acceptable equivalents from at least one different major manufacturer whose products are locally available.

   c. Include a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities

3. Additional requirements

   a. Include procedures for disassembly, assembly, alignment, adjusting, and checking.

b. Provide manufacturer's printed maintenance instructions.

c. Include illustrations, assembly drawings, and diagrams required for maintenance.

G. Corrective Maintenance Information

1. Corrective maintenance to include disassembly, repair, overhaul and re-assembly.

2. Provide manufacturer's step-by-step trouble shooting and diagnostic procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement

3. Provide manufacturer's step-by-step procedures and list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings, and adjustments required. Instructions shall include a combination of text and illustrations

4. Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job-specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type identically to actual installation numbering.

5. Provide manufacturer's instructions and list tools required to restore product or equipment to proper condition or operating standards

6. Provide manufacturer's projection of corrective maintenance man-hours including craft requirements by type of craft.

H. Electrical and Instrumentation Information

1. Electrical & Instrumentation Drawings shall include as-built information per Division 16 for the project. As-built drawings shall be signed and stamped by an electrical engineer registered in the State of California.

2. Complete software ladder logic printouts.

3. Record of all settings or parameters for all programmable devices.

4. At the end of the project these manuals shall be updated to show "as-built" or "as-installed" conditions, including any field changes.

I. Parts Identification

1. Provide full identification and listing of all parts of each component, assembly, subassembly, and accessory.

a. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification.

b. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number which will cross reference the illustrated part to the listed part.

2. Include schematic diagrams of all electronic devices. Provide a complete parts list with stock numbers for the components that make up the assembly.

3. Include special hardware requirements, such as requirement to use high-strength bolts and nuts.

4. Include control and flow diagrams and panel wiring diagrams.

5. Coordinate drawings to ensure correct illustration of completed installation.

J. Spare Parts:

1. Provide lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays.

a. Manufacturer's recommended spare parts list with manufacturer's current prices.

b. Include complete nomenclature and commercial numbers of replaceable parts.

c. List spare parts and supplies that have a long lead-time to obtain.

d. Provide a table showing the predicted life of parts subject to wear.

2. Include the spare parts list on Equipment Record Forms A and B (Section 01999).

K. Test Data

a. Provide copies of factory test reports as specified in the applicable equipment sections.

b. After field testing is completed, include field test data.

c. Include performance curves and engineering data.

L. Additional Information

1. Provide any information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Examples include:

a. Information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

b. Instances that might affect the validity of Warranties or Bonds

2.06 APPENDICES:

A. Submittals

1. Include a copy of all approved submittals.

B. Warranty Information

1. List and explain the various warranties and include the servicing and technical precautions prescribed by the manufacturers or contract documents to keep warranties in force.

C. Personnel Training

1. Provide information available from the manufacturers to use in training designated personnel to operate and maintain the equipment and systems properly.

2. Refer to Section 01820 for additional training information.

2.07 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

A. Collate and submit information on the new and modified equipment, specialties, electrical, and instrumentation installed during the Project, for potential import into a Computerized Maintenance Management System (CMMS).

B. Data Format

1. Submit equipment and instrument information in a database file format suitable for direct import to an SQL-based relational database management system, without additional data manipulation.

2. The acceptable format is Microsoft Excel file format.

3. Format data in row (equipment name or tag) and column (equipment, name, tag, description, and various features as noted herein) so that it can be added to the SCADA database.

C. Data Content

1. Maintenance information to be provided shall include all equipment information relevant to a reliability-centered maintenance program.

2. File and file name of electronic (PDF version) of equipment manual.

3. The spreadsheet information shall include, but is not limited to, the following:

a. General information required for all equipment:

1) Equipment or instrument name, model number, serial number

2) Equipment or instrument tag numbers

3) Description

4) Equipment cost

5) Manufacturer and local representative name and contact information

6) Dates of purchase, installation and commissioning

7) List of spare parts, including part number, quantity, name and cost

8) Required inspections and frequency

9) Required preventive maintenance procedures and frequency

b. Mechanical equipment information:

1) Lubrication information, including lubrication points, frequency of lubrication, and recommended lubricants

2) Replaceable wear components and recommended replacement intervals

c. Electric motor information:

1) Frame number

2) Horsepower

3) Amperages

4) Voltage, frequency, number of phases

5) RPM

6) Service factor

7) Duty

8) NEMA design code

9) Insulation class

10) Ambient temperature rating

11) Temperature rise

d. Instrumentation equipment information:

1) Instrument type

2) NEMA rating

3) Size

4) Range

5) Power requirements

6) Output units

7) Output signal (e.g. millivolts, 4-20 milliamps, pulse)

8) Communications protocol (where applicable)

D. Submittal Requirements

1. Submit a complete draft electronic copy of the equipment and instrument information database for City review at least three (3) months prior to the project acceptance.

2. The City will provide comments on the draft database within then (10) Working Days of receipt. City comments on subsequent drafts of the equipment and instrument information database will be provided within five (5) Working Days of receipt, provided that major revisions requiring additional review time have not occurred.

3. The equipment and instrument information database shall not be considered complete until approved by the City. Approval will not be unreasonably withheld.

4. Following review and approval, the Contractor shall submit one (1) electronic copy of the equipment and instrument information database to the City.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01810

FACILITY START-UP AND COMMISSIONING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Project requirements for Start-up and Commissioning

1.02 DEFINITIONS

A. Start-up: The initial operation of the facility and/or plant, utilizing wastewater and related substances (sludge, methane, scum), or other media which the facility has been designed to process.

B. Commissioning: A confirmation that equipment, systems and facilities operate in accordance with the design intent and satisfy the detailed requirements of the technical specifications. The duration of the commissioning period shall be not less than 7 consecutive days.

1.03 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01820 – Training

1.04 SERVICES OF MANUFACTURER

A. Manufacturer's services for inspection, physical checkout, field adjustment, field testing, and start-up shall comply with the requirements of this Section, the requirements of the particular equipment or product technical specifications contained in Divisions 2 through 16.

B. Manufacturer's services for training and instruction of the Owner's personnel shall comply with the requirements of the particular equipment or product technical specifications contained in Divisions 2 through 16 and Section 01820.

1.05 ROLES AND RESPONSIBILITIES

A. Contractor's Responsibilities

1. Review procedures for facility start-up.

2. Review preliminary punch list items with the Engineer 15 days prior to the scheduled start-up; and complete, correct, or resolve at the option of the Engineer, any items which impact or interfere with the facility start-up.

3. Attend meetings related to the review of start-up plan(s).

4. Clarify submittals, testing requirements, schedules, or other items related to the start-up of the equipment and facilities specified and indicated in the Contract Documents.

5. Provide all start-up materials and operating supplies for 30 operating days. Supplies include lubricants, chemicals, gases, and specialized fluids to maintain operation for 30 days.

6. Provide Manufacturer's authorized representatives as required to supervise placing equipment or systems in operation and to provide guidance during the start-up period.

7. Provide to the Construction Manager a list of 24 hour, "on call" representative supervisory persons who will monitor the facility start-up, and serve as a liaison for the Construction Manager.

8. Provide the necessary craft or labor assistance full time during the day shift and as required at other times in the event of an emergency requiring immediate attention. An emergency is defined as a failure which precludes the further operation of a critical segment of the Work. The response time shall be not less than four hours from the time of notification.

9. Correct all failures or equipment problems identified during start-up. Repairs deemed the responsibility of the Contractor shall be made at no additional cost to the Owner.

B. The responsibilities of the Owner's O&M staff during the 7-day facility start-up period include the following:

1. Provide staff to operate equipment, systems, and facilities requiring start-up.

2. Provide all utilities including power, natural gas, and water.

C. The Construction Manager's responsibilities for the facility start-up period include the following:

1. Coordinate the Contractor's start-up activities with plant operations staff.

2. Direct the Contractor to repair defective workmanship, materials, and equipment.

D. The Engineer's responsibilities for the facility start-up period include the following:

1. Verify the results of performance tests and any retesting.

1.06 COMMISSIONING

A. The Owner's Operations and Maintenance staff will initiate the commissioning period and will operate the facility throughout the duration of the commissioning period. All equipment must operate properly and continuously 24 hours per day for the test period. If any item malfunctions during the test, the item shall be repaired and the test restarted at day zero with no credit given for the operating time before the malfunction.

B. The purpose of this operational demonstration is to:

1. Provide the environment by which the Owner's O&M staff can place equipment and systems into service.

2. Expose flaws or defects in workmanship, equipment, or materials, not previously discovered that are the responsibility of the Contractor to repair, correct, modify, or replace prior to Final Acceptance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01820

TRAINING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for training the Owner's personnel, by persons retained by the Contractor specifically for the purpose, in the proper operation and maintenance of the equipment and systems installed under this Contract.

B. Coordinate with the equipment suppliers for all training activities and provide additional labor, services, and materials as required to complete training.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01330 – Submittals

1.03 TRAINING SESSIONS

A. Where required by the detailed specifications, provide on-the-job training of the Owner's personnel, which will include operations personnel, mechanics, electricians, and electronics technicians.

B. The training sessions shall be conducted by qualified, experienced (2 years minimum), manufacturer's factory-trained representatives (not sales representatives) of the various equipment manufacturers.

C. Include instruction in both equipment operation and preventive maintenance.

D. Field training sessions shall take place at the project site. Classroom training facility will be provided at the site by the Owner.

1.04 TIMING OF TRAINING SESSIONS

A. Conduct training sessions in conjunction with the operational testing and commissioning periods.

B. Operation and maintenance manuals shall be approved and ready for distribution to the Owner's personnel at least 30 days prior to the date scheduled for the individual training session.

1.05 SUBMITTALS

A. The following information shall constitute the Contractor's training plan and be submitted to the Engineer in accordance with the provisions of Section 01330.

1. Lesson plans for each training session to be conducted by the Contractor's representatives. In addition, training manuals, handouts, visual aids, and other reference materials shall be included.

2. Date, time, and subject of each training session and identity and qualifications of individuals to be conducting the training.

3. Training schedule. Concurrent classes will not be allowed.

B. Due to phased testing and start-up activities, Contractor may prepare separate submittals for individual equipment items and systems. The materials shall be reviewed and accepted by the Engineer no later than 3 weeks prior to delivery of the training.

PART 2 - PRODUCTS

2.01 LESSON PLANS

A. Formal written lesson plans shall be prepared for each training session. Lesson plans shall contain an outline of the material to be presented along with a description of visual aids to be utilized during the session.

B. Each lesson plan shall contain a time allocation for each subject.

C. Furnish ten copies of the training manuals, handouts, and reference materials and one copy of necessary visual aids at least 1 week prior to each training session. These materials shall remain the property of the Owner and shall be suitably bound for proper organization and easy reproduction.

2.02 FORMAT AND CONTENT

A. Each training session shall be comprised of time spent both in the classroom and at the specific location of the subject equipment or system.

2.03 VIDEO RECORDING

A. The City may record, or retain the services of a commercial video taping service to record, each training session. After taping, the material may be edited and supplemented with professionally produced graphics to provide a permanent record.

PART 3 - EXECUTION

3.01 SCHEDULING TRAINING SESSIONS

A. Classes shall be scheduled such that classroom sessions are interspersed with field instruction in logical sequence. Consolidate short training sessions into combined sessions so that staff time is more efficiently used. The minimum combined session length should be 1.5 to 2 hours. The maximum single or combined session length shall be 4 hours. The Contractor shall arrange to have the training conducted on consecutive days, with no more than 4 hours of classes scheduled for any one day. Contractor shall provide two training sessions on each system, piece of equipment, or “topic”.

B. No training sessions shall be scheduled for Mondays or Fridays. The Contractor shall coordinate the scheduling of training sessions with the operations superintendent.

C. The following services shall be provided for each item of equipment or system. Additional services shall be provided, where specifically required in individual specification sections.

a. At a minimum, classroom equipment training for operations personnel will include:

b. Using slides and drawings, discuss the equipment's specific location in the plant and an operational overview.

c. Purpose and plant function of the equipment.

d. A working knowledge of the operating theory of the equipment.

e. Start-up, shutdown, normal operation, and emergency operating procedures, including a discussion on system integration and electrical interlocks, if any.

f. Identify and discuss safety items and procedures.

g. Routine preventative maintenance, including specific details on lubrication and maintenance of corrosion protection of the equipment and ancillary components.

h. Operator detection, without test instruments, of specific equipment trouble symptoms.

i. Required equipment exercise procedures and intervals.

j. Routine disassembly and assembly of equipment if applicable (as judged by the City on a case-by-case basis) for purposes such as operator inspection of equipment.

2. At a minimum, hands-on equipment training for operations personnel will include:

a. Identify location of equipment and review the purpose.

b. Identifying piping and flow options.

c. Identifying valves and their purpose.

d. Identifying instrumentation:

1) Location of primary element.

2) Location of instrument readout.

3) Discuss purpose, basic operation, and information interpretation.

e. Discuss, demonstrate, and perform standard operating procedures and round checks.

f. Discuss and perform the preventative maintenance activities.

g. Discuss and perform start-up and shutdown procedures.

h. Perform the required equipment exercise procedures.

i. Perform routine disassembly and assembly of equipment if applicable.

j. Identify and review safety items and perform safety procedures, if feasible.

3. Classroom equipment training for the maintenance and repair personnel will include:

a. Theory of operation.

b. Description and function of equipment.

c. Start-up and shutdown procedures.

d. Normal and major repair procedures.

e. Equipment inspection and troubleshooting procedures including the use of applicable test instruments and the "pass" and "no pass" test instrument readings.

f. Routine and long-term calibration procedures.

g. Safety procedures.

h. Preventive maintenance such as lubrication; normal maintenance such as belt, seal, and bearing replacement; and up to major repairs such as replacement of major equipment part(s) with the use of special tools, bridge cranes, welding jigs, etc.

4. Hands-on equipment training for maintenance and repair personnel shall include:

a. Locate and identify equipment components.

b. Review the equipment function and theory of operation.

c. Review normal repair procedures.

d. Perform start-up and shutdown procedures.

e. Review and perform the safety procedures.

f. Perform City approved practice maintenance and repair job(s), including mechanical and electrical adjustments and calibration and troubleshooting equipment problems.

g. Review and use equipment manufacturers' manuals in the hands-on training.

END OF SECTION

SECTION 01825

EQUIPMENT AND SYSTEM TESTING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for the Contractor's testing of mechanical, electrical, and instrumentation equipment and systems provided under this Contract.

B. The requirements contained in this Section supplement, but do not supersede, specific testing requirements found elsewhere in the Contract Documents.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 01999 – Reference Forms

1.03 COORDINATION

A. Coordinate with the equipment suppliers for functional and performance testing and facility startup. Minimum levels of on-site installation and testing assistance required of the equipment suppliers is described in separate Sections.

B. Coordinate the activities of subcontractors and equipment suppliers to implement the requirements of this Section.

1.04 SUBMITTALS

A. Prepare and submit in accordance with Section 01330.

B. Independent Testing Labs: When testing by an independent laboratory is specified, provide credentials and certifications to demonstrate capabilities.

C. Test Instruments Calibration: Certification that test instruments used in the testing procedure have been calibrated to an acceptable and recognized standard.

D. Testing Schedule: For each piece of equipment or system, provide a testing schedule and updates as appropriate. Submit at least 20 working days prior to the scheduled start of testing. Confirm the test schedule, or provide an updated schedule 4 days prior to the start of testing.

E. Testing Plan: Describe step by step procedure that will be utilized to systematically test equipment and systems.

F. Test Results:

1. Factory Test Results: Results of equipment tests performed by the equipment supplier at the point of manufacture and prior to shipping the equipment to the site.

2. Results of the Pre-Operational Test.

3. Results of the Functional Test.

4. Results of the Operational and Performance Tests.

G. Testing Form

1. Section 01999 contains a sample Instrumentation Data and Calibration Test Form showing the format and level of detail required for the documentation forms.

H. Manufacturer's Field Certification

1. Submit a Manufacturer's Installation Certification Form (Section 01999) after the manufacturer's Field Representative has completed the specified field services and testing. Submit the certification prior to Manufacturer's Representative leaving the plant site.

1.05 DOCUMENTATION REQUIREMENTS

A. Develop and implement a records keeping system to document compliance with the requirements of this Section.

B. Document date of test, equipment number or system name, nature of test (performance or operational), test objectives, test results and test instruments used during the test. Provide signature spaces for the Engineer and the Contractor.

1.06 TEST PLANS

A. Develop test plans in cooperation with the equipment suppliers detailing the coordinated, systematic testing of each item of equipment and system provided under this Contract.

B. Make test plans specific to the item of equipment or system to be tested. Identify by specific equipment or tag number each device or control station to be manipulated, observed or tested during the test procedure and the specific results to be observed or obtained.

C. Identify the responsibility of subcontractors and suppliers who will participate in the tests and list the names of manufacturers' representatives to be present during the duration of the test.

D. Provide step-by-step procedures for testing control and electrical circuits to affirm that the circuit is properly identified and connected to the proper device.

E. Undertake performance tests in a manner that will duplicate the actual operating conditions that will be encountered.

1.07 TESTING SCHEDULE

A. Prepare a testing schedule setting forth the sequence contemplated for performing the test work. Identify the contemplated start date, duration of the test and completion of each test.

1.08 TEST RESULTS

A. Test results shall be within the tolerances set forth in the detailed specification sections of the Contract Documents. If no tolerances have been specified, test results shall conform to tolerances established by recognized industry practice.

B. Retesting: If any portion of the work should fail to fulfill the Contract requirements and is adjusted, altered, renewed, or replaced, tests on that portion, together with all other portions of the work as are affected thereby, shall be repeated within reasonable time and in accordance with the specified conditions.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

A. The objective of the testing program is to demonstrate, to the Engineer's complete satisfaction, that the systems and equipment provided under this Contract meet the specified performance requirements.

B. Testing program also provides a base-line operating condition for the Owner to use in a preventative maintenance program.

C. Testing sequence consists of Pre-Operational Checkout, Functional Tests, Performance Testing and Operational Testing. These tests are required regardless of whether Factory Tests were conducted on the same piece of equipment or system.

D. Each item of mechanical, electrical, and instrumentation equipment installed under this Contract shall be tested by the Contractor to demonstrate compliance with the performance requirements of this project.

E. Provide labor, outside services, materials, test equipment and other items required to complete the specified testing and startup requirements. Furnish power, water chemicals, fuel, oil, grease and other materials needed to conduct the specified tests.

F. Install temporary valves, gauges, piping and other materials required to conduct the specified tests.

3.02 PRE-OPERATIONAL CHECKOUT

A. Pre-Operational Checkout shall be undertaken by the manufacturer's field representative.

B. Pre-Operational Checkout includes basic checks of the equipment installation prior to starting the equipment to determine if the equipment and related components have been correctly installed and is ready for starting.

C. Pre-Operational Checkout includes the following:

1. Alignment of equipment, shafts and shaft couplings, drives, belts and pulleys.

2. Filling and checking lubrication reservoirs.

3. Checking shaft seals, packing and seal lubrication system.

4. Manufacturer's recommendations for pre-start preparation.

5. Proper motor rotation

6. Circuit continuity testing, electrical testing, and instrumentation and control system testing in accordance with the requirements of Division 16.

7. Demonstrate operational controls function as intended.

8. Calibration and adjustment of electrical and instrumentation devices.

D. Verify tanks, pipes, conduits, vessels and equipment are clean and free of debris that may interfere with the testing or operation of the equipment. Remove debris prior to start of testing.

E. Following completion of the Pre-Operational Checkout, the manufacturer's field representative shall complete and sign a field certification form and submit to the Engineer.

3.03 FUNCTIONAL TESTS

A. After successful completion of the Pre-Operational Checkout, start individual items of equipment and systems and operate under simulated operating conditions to determine as nearly as possible whether the equipment and systems meet the requirements of these specifications.

B. Operate the equipment for a sufficient period of time to determine machine operating and characteristics, including noise, temperatures and vibration; to observe and document performance characteristics; and to permit initial adjustment of operating controls.

C. Obtain baseline operating data on all equipment with motors greater than 10 horsepower to include amperage draw, bearing temperatures, and vibration as required. This baseline data will be collected for the Owner to enter in their preventive maintenance system.

D. Post-Test Inspection: When Functional Tests have been completed, recheck equipment for proper alignment, unacceptably loose connections, unusual movement, or other indications of improper operating characteristics. Correct any deficiencies to the satisfaction of the Engineer.

E. Machines or devices which exhibit unusual or unacceptable operating characteristics shall be disassembled and inspected. Repair any defects found during the course of the inspection and identify and correct the cause of such defect. Replace specific parts, or the entire equipment item, to the complete satisfaction of the Engineer at no cost to the Owner.

3.04 OPERATIONAL AND PERFORMANCE TESTS

A. After successfully completing functional tests, conduct an operational test of each system to verify correct operation. During the operational test, conduct

performance testing to verify that the system complies with the performance requirements contained in the individual equipment specifications.

B. Owner's operating personnel will fill process units and process systems with water and other process fluids to allow the Contractor to conduct the operational tests.

C. Upon completion of the filling operations, operate all parts of each system for a continuous, uninterrupted period of not less than 8 hours. During this period, the Contractor and shall undertake performance testing and shall monitor the characteristics of each machine according to manufacturer information and specifications and report any unusual conditions to the Engineer.

D. Undertake performance tests of mechanical, electrical, HVAC, and instrumentation equipment and systems to demonstrate and confirm compliance with the performance requirements specified in the individual equipment specifications.

E. Should the operational testing be halted for any reason related to the facilities constructed or the equipment furnished under this Contract, the operational testing program shall be repeated until the specified continuous period has been accomplished without interruption.

F. Following successful completion of the Operational Test, commissioning of the system may begin.

END OF SECTION

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SECTION 01999

REFERENCE FORMS

The forms listed below and included in this section are referenced from other sections of the project manual. Contractor may submit equivalent forms for Owner's approval prior to use. If Owner does not approve substitute form, Contractor must use forms found in this Section. Owner will provide Contractor electronic files of prescribed forms upon request.

Referenced in Section	Title of Form
01782	Equipment Record Form A
01782	Equipment Record Form B
01782	Equipment Test Report
11060,11302, 11303	Extended Warranty Form
01825	Instrumentation Data and Calibration Record Test Form
01825	Manufacturer's Installation Certification Form
01782	Manufacturer's Instruction Certification Form
01782	Manufacturer's Representative Service Report
11060, 11302	Motor Data Form
01782	Operating and Maintenance Information Transmittal
15996	Pipe Test Record Form
01340	Request for Information (RFI)
01330	Submittal Transmittal
01140	System Outage Request (SOR)
11302, 11303	Unit Responsibility Certificate

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EQUIPMENT RECORD FORM A (Electrical or Motorized Mechanical Equipment):

Equip. Description:		Equip. Loc.:	
Equip. No.	Shop Dwg. No.	Date Inst.:	Cost:
Mfgr.:		Mfgr Contact	
Mfgr. Address:			Phone:
Vendor :		Vendor Contact:	
Vendor Address:			Phone:

MAINTENANCE REQUIREMENTS	D	W	M	Q	S	A	Hours

Lubricants: Recommended	
Alternative:	
Misc. Notes:	

Recommended Spare Parts				Electrical Nameplate Data			
Part No.	Qty	Part Name	Cost	Equip			
				Make			
				Serial No.		Id. No.	
				Model No.		Frame No.	
				HP	V	Amp	Hz
				pH	RPM	SF	Duty
				Code	Ins. Cl.	DES	Type
				NEMA DES	C Amb.	Temp Rise	Rating
				Misc.			

Recommended Spare Parts				Mechanical Nameplate Data			
Part No.	Qty	Part Name	Cost	Equip			
				Make			
				Serial No.		Id. No.	
				Model No.		Frame No.	
				HP	V	Amp	Hz
				pH	RPM	SF	Duty
				Code	Ins. Cl.	DES	Type
				NEMA DES	C Amb.	Temp Rise	Rating
				Misc.			

EQUIPMENT RECORD FORM B (Electrical or Non-Motorized Mechanical Equipment):

Equip. Description:		Equip. Loc.:	
Equip. No.	Shop Dwg. No.	Date Inst.:	Cost:
Mfgr.:		Mfgr Contact	
Mfgr. Address:			Phone:
Vendor :		Vendor Contact:	
Vendor Address:			Phone:

MAINTENANCE REQUIREMENTS	D	W	M	Q	S	A	Hours

EQUIPMENT TEST REPORT

NOTE:

This example equipment test report is provided for the benefit of the Supplier and is not specific to any piece of equipment to be installed as a part of this project. The example is furnished as a means of illustrating the level of detail required for the preparation of equipment test report forms for this project.

Project: _____

Owner _____

Contractor: _____

Supplier: _____

Equipment Name: _____

Equipment Number: _____

Specification Ref: _____

PRE-OPERATIONAL CHECKLIST

	Supplier		Engineer	
	Verified	Date	Verified	Date
Mechanical				
Lubrication				
Alignment				
Anchor bolts				
Pump/mechanical equipment vibration testing				
Seal water system operational				
Equipment rotates freely				
Safety guards				
Valves operational				
O&M manual information complete				
Supplier's installation certificate complete				
Electrical (Circuit ring-out and high-pot tests)				
Circuits:				
Power to MCC				
Control to HOA				

	Supplier		Engineer	
	Verified	Date	Verified	Date
Indicators at MCC:				
Red (running)				
Green (power)				
Amber (auto)				
Indicators at local control panel				
Wiring labels complete				
Nameplates:				
MCC				
Control station				
Control panel				
Electrical equipment grounding verification				
Equipment bumped for rotation				
Piping Systems				
Cleaned and flushed				
Suction				
Discharge				
Pressure tests				
Temporary piping screens in place				
Thrust restraint and pipe supports in place				
Instrumentation and Controls				
Flow meter _____ calibration Calibration Report No.				
Flow recorder_____ calibrated against transmitter				
VFD speed indicator calibrated against independent reference				
Discharge overpressure shutdown switch calibration				
Simulate discharge overpressure shutdown				
I/C equipment grounding verification				

FUNCTIONAL TESTS

	Supplier		Engineer	
	Verified	Date	Verified	Date
Mechanical				
Motor operation temperature satisfactory				
Pump operating temperature satisfactory				
Unusual noise, *etc?*				
Pump operation: gpm/ psig				
Pump Measurement:				
Flow/Pressure				
Test gage number				
Alignment hot				
Doweled in				
Pump/mechanical equipment vibration testing				
Remarks:				
Electrical				
Local switch function:				
Runs in *HAND*				
No control power in *OFF*				
Timer control in *AUTO*				
Overpressure protection switch PS2502C functional in both *HAND* and *AUTO*				
Overpressure protection switch PS2502C set at 75 psig				
PLC 2500 set at 24 hr cycle, 25 min *ON*				
Motor amperage draw test				

OPERATIONAL TEST

	Supplier		Engineer	
	Verified	Date	Verified	Date
48-hour continuous test:				
pump cycles as specified				
indicators functional				
controls functional				
pump maintains capacity				
overpressure protection remains functional				
hour meter functional				

RECOMMENDED FOR BENEFICIAL OCCUPANCY

Engineer _____ Date _____

ACCEPTED FOR BENEFICIAL OCCUPANCY

Owner's Representative _____ Date _____

EXTENDED WARRANTY FORM
(For Equipment, Material, Process)

Extended Warranty For: Product Name

Specification Section No. _____

Product Manufacturer _____

Project: _____

Location: _____

We hereby guarantee the Product Name that we have constructed for a period of # of Years (#) year(s), as specified in the Section noted above, from Date, the date of acceptance of the work/substantial completion and the assumption of occupancy and beneficial use by the Name of Owner.

The following are excluded from the provisions of this warranty:

We agree that if any of the equipment, material, or process designated for Product Name should fail due to any reason other than improper maintenance or improper operation, or should any portion of the work fail to fulfill any of the requirements of the Specifications, we will, within ten days after written notice of such defects, commence to repair or replace the same together with any other work which may be damaged or displaced in so doing.

In the event of our failure to comply with the above mentioned conditions within a reasonable time after being notified, or should exigent circumstances require repairs or replacements to be made before we can be notified or respond to notification, we do hereby authorize the Name of Owner to proceed to have the defect repaired and made good at our expense, and we will pay the cost therefor upon demand.

The warranty provided herein shall not be in lieu of, but shall be in addition to any warranties or other obligations otherwise imposed by the Contract Documents and by law.

Manufacturer:	_____	Contractor:	_____
Signed:	_____	Signed:	_____
Title:	_____	Title:	_____
Date:	_____	Date:	_____
Phone:	_____	Phone:	_____
E-mail:	_____	E-mail:	_____

INSTRUMENTATION DATA AND CALIBRATION RECORD TEST FORM

Component Description _____

Component Tag Name _____

Manufacturer		Location	
Name		Site	
Model			
Serial #		Equip	

	Range	Unit
Indicator Range		
Input Range		
Output Range		

General Notes
1) Attach Calibration Curves for dp Flowmeters
2) Include mounting elevations for level Instruments
3) All entries within solid box to be typed in prior to start of test

Designed Calibration			Measured Calibration		
Input Signal	Output	Eng. Value	Input	Output	Comments

Notes:

Tested by _____ (print name)

Signature _____

Date _____

Witnessed by _____ (print name)

Signature _____

Date _____

MANUFACTURER'S INSTALLATION CERTIFICATION FORM

Contract No: _____ Specification Section: _____

Equipment Name _____

Contractor: _____

Manufacturer of Equipment Item: _____

The undersigned manufacturer of the equipment item described above hereby certifies that he has checked the installation of the equipment and that the equipment, as specified in the project manual, has been provided in accordance with the manufacturer's recommendations and that the trial operation of the equipment item has been satisfactory.

Comments:

_____

_____

_____

_____

Date	Manufacturer
	Signature of Authorized Representative
Date	Contractor
	Signature of Authorized Representative

MANUFACTURER'S INSTRUCTION CERTIFICATION FORM

Contract No: _____ Specification Section: _____

Equipment Name: _____

Contractor: _____

Manufacturer of Equipment Item: _____

The undersigned manufacturer certifies that a service engineer has instructed the owner's staff in the proper maintenance and operation of the equipment designated herein.

Operations Check List (check appropriate spaces)

- Start-up procedure reviewed ☐
- Shutdown procedure reviewed ☐
- Normal operation procedure reviewed ☐

Others:

_____ ☐

_____ ☐

Maintenance Check List (check appropriate spaces)

- Described normal oil changes (frequency) ☐
- Described special tools required ☐
- Described normal items to be reviewed for wear ☐
- Described preventive maintenance instructions ☐
- Described greasing frequency ☐

Others

_____ ☐

_____ ☐

Manufacturer: _____

Date	Signature of Authorized Representative
Date	Signature of Owner's Representative
Date	Signature of Contractor's Representative

MANUFACTURER'S REPRESENTATIVE SERVICE REPORT

Owner: _____ File No. _____

Project: _____ Date: _____

Project No. _____

- This form should be completed and returned by the manufacturer's representative prior to leaving the site.

Manufacturer: _____ MRSR No. _____

Supplier: _____ Contract/P.O. No. _____

Manufacturer's Representative _____
Company

Equipment/Material: _____

Work performed and tests made on equipment:

Factory errors corrected:

Field errors corrected:

The above equipment ___is ___is not ready to be placed in operation.
Remarks:

Arrival onsite _____ _____ __AM __PM Department from Site _____ _____ __AM __PM
Date Time Date Time

Actual total duration onsite was _____ hours for period covered by this report.

Manufacturer's Representative _____ _____
Signature Date

Address: _____
Phone No.

Report Received By: _____
Signature Date

Distribution: _____ _____ _____

MOTOR DATA FORM

Equipment Name: _____ Equipment Number: _____

Site Location: _____

Nameplate Markings

Mfr _____ Mfr Model _____ Frame _____ HP _____

Volts _____ Phase _____ RPM _____ Service Factor _____

FLA _____ LRA _____ Freq _____ Amb temp rating _____ degrees C

Time rating _____ Design letter _____

(NEMA MG1-10.35) (NEMA MG-1.16)

KVA code letter _____ Insulation class _____

The following information is required for explosionproof motors only:

A. Approved by UL for installation in Class _____ , Div _____

B. UL frame temperature code _____ , Group _____ Atmosphere

(NEC Tables 500-2 and 500-2(b))

The following information is required for high efficiency motors only:

A. Guaranteed minimum efficiency at full load or NEMA efficiency index

(NEMA MG1-12.53b)

B. Nameplate or nominal efficiency _____

Data Not Necessarily Marked on Nameplate

Type of enclosure _____ Enclosure material _____

Temp rise _____ degrees C (NEMA MG1-12.41,42)

Space heater included? _____ Yes _____ No, if Yes _____ watts _____ volts

Type of motor winding overtemperature protection, if specified:

_____

Use the space below to provide additional information on other motor modifications, if specified:

_____

_____

_____

OPERATING AND MAINTENANCE INFORMATION TRANSMITTAL

Submittal Description: _____

Submittal No.	**# Copies:**
☐ 1st Submission	☐ Re-Submittal
Spec Section	

	Routing	**Date Sent**	**Date Received**
Owner:	Contractor/CM		
Project:	CM/Design Consultant		
	Design Consultant/CM		
Contractor:	CM/Contractor		

Supplier Name:	Supplier Review		Design Consultant Review	
Checklist	Satisfactory	N/A	Accept	Deficient
1. Table of Contents	☐	☐	☐	☐
2. Equipment Record Forms	☐	☐	☐	☐
3. Supplier/Vendor Contact Information	☐	☐	☐	☐
4. Safety Precautions	☐	☐	☐	☐
5. Operator Pre-Start	☐	☐	☐	☐
6. Start-up, Shutdown/Post-Shutdown Procedures	☐	☐	☐	☐
7. Normal Operations	☐	☐	☐	☐
8. Emergency Operations	☐	☐	☐	☐
9. Operator Service Requirements	☐	☐	☐	☐
10. Environmental Conditions	☐	☐	☐	☐
11. Lubrication Data	☐	☐	☐	☐
12. Preventative Maintenance Plan/Schedule	☐	☐	☐	☐
13. Troubleshooting Guide/Diagnostic Techniques	☐	☐	☐	☐
14. Wiring Diagrams and Control Diagrams	☐	☐	☐	☐
15. Maintenance and Repair Procedures	☐	☐	☐	☐
16. Removal and Replacement Procedures	☐	☐	☐	☐
17. Spare Parts and Supply List	☐	☐	☐	☐
18. Corrective Maintenance Man-hours	☐	☐	☐	☐
19. Parts Identification	☐	☐	☐	☐
20. Warranty Information	☐	☐	☐	☐
21. Personnel Training Requirements	☐	☐	☐	☐
22. Testing Equipment and Special Tool Information	☐	☐	☐	☐

Remarks:	

_____ (Contractor's Signature)

_____ (Supplier's Signature)

PIPE TEST RECORD

Date: _____

Project Name: _____ **Project No.:** _____

Contractor: _____

Pipeline Size & Name	Pipe Type	Pipe Location/Description
(SL), SN, IA, etc.)	(DI, PVC, Steel, Copper, etc.)	(Attach sketch if needed)
Section Tested: From: _____ To: _____	**First Test** ☐ **Or** **Re-Test** ☐	**Length of Pipe Tested:** _____ **Ft.**

Test Specifications	Actual Test Results
Type of Test: _____	Start pressure: _____
Type of Test: _____	End Pressure: _____
	Start time _____ Stop time _____ Duration _____
Duration: _____	
Allowable loss: _____	Actual loss: _____

Comments:

_____

_____

_____

_____

Test Passes	☐
Test Fails	☐

Tested By: _____
Contractor

Test Witnessed By: _____
Construction Inspector

REQUEST FOR INFORMATION

RFI No.: XXX

Owner: _____

Project: _____

Contractor: _____ Engineer _____

RFI Generated by: ☐ Contractor ☐ CM ☐ Other

Priority Level: ☐ Low ☐ High ☐ On Critical Path

Is there a Cost Impact associated with this RFI? ☐ Yes ☐ No ☐ Possibly

Is there a Time Impact associated with this RFI? ☐ Yes ☐ No ☐ Possibly

RFI Title:

Reference: Spec: Sheet:

Requested Information:

Signed: Date:

Response:

Signed: Date:

SUBMITTAL TRANSMITTAL

Submittal Description _____

Priority Level: ☐ Low ☐ Medium ☐ High ☐ **On Critical Path**

Submittal No.	
☐ 1st Submission	☐Re-Submittal
Spec Section	
Dwg/Detail No.	

Owner:	**Routing**	**Date Sent**	**Date Received**
Project Name:	Contractor/CM		
	CM/Design Consultant		
Contractor:	Design Consultant/CM		
	CM/Contractor		

We are sending you: ☐ Attached ☐ Under separate cover via _____

☐ Submittals for review and comment

☐ Product Data for information only _____

No. Copies	**Description**	**Manufacturer**	**Reviewer Action**	**Reviewer Initials**

The Action Designated Above is in Accordance with the Following Legend:

A – No Exceptions Taken
B – Make Corrections Noted
C – Amend and Resubmit
D – Rejected
E – Review not Required

CONTRACTOR: Must certify one of the following statements pertaining to the transmittal or submittal sent for review:

☐ As the General Contractor for this project we certify that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work specified (no exceptions)

☐ As the General Contractor for this project we certify that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

Comments:

Certified by: _____
(Contractor's Signature)

SYSTEM OUTAGE REQUEST FORM

System to be Shutdown: _____ **SOR No.:** _____

Date of Shutdown: _____ Beginning at: _____ am/pm

Duration of Shutdown: _____ Critical Path Activity? ☐ yes ☐ no

Owner:		**Routing**	**Date Sent**	**Date Received**
Project:		Contractor/CM		
Contractor:		CM/Owner-Operations		

Regulatory Agency Notification Required? ☐ yes ☐ no Is a Dry Run Required? ☐ yes ☐ no

Combustible/Hazardous Gases Present? ☐ yes ☐ no Confined Space Entry? ☐ yes ☐ no

Describe work to be performed including detailed sequence of events, safety plan, protection of existing facilities, equipment to be used and contingency plan. Use additional sheets as necessary.

Will you require assistance from Owner Operations? ☐ yes ☐ no

Note: *Existing valves and controls shall be operated by Owner staff only*

Outage Contact Information	Name of Person on Call/Duty	Home Phone	Cell Phone
Contractor			
Construction Manager			
Owner Operations			
Design Consultant			

Additional Contractor Comments:

CM / Owner / Design Consultant Review Action

☐ SOR Acceptable with comments noted on attached.

☐ SOR Not Acceptable with reasons noted on attached. Re-Submittal is required.

Certified by: _____ (Contractor's Signature)

_____ (Construction Manager's Signature) _____ Date

Name of Owner

CERTIFICATE OF UNIT RESPONSIBILITY
For Specification Section

Section Number and Title

In accordance with the contract documents, the undersigned manufacturer accepts unit responsibility for all components of equipment furnished under specification Section Section #***. We hereby certify that these components are compatible and comprise a functional unit suitable for the specified performance and design requirements.***

Name of Corporation

Street Address

City, State and Zip Code

By: _____
Duly Authorized Official

Notary Public

Commission Expiration Date

Name

Title

Seal:

Date: _____

SECTION 02071

GEOTEXTILE FABRIC

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Geotextile fabric.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 02300 – Earthwork

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Manufacturer's Data:

1. Manufacturer's name and product information
2. Certificate of Compliance
3. Minimum Average Roll Values (MARV)

1.04 DEFINITIONS

A. Geosynthetic – A planar product manufactured from polymeric material used with soil, aggregate, or other geotechnical engineering materials as an integral part of a civil engineering project.

B. Geotextile – a permeable geosynthetic comprised solely of textile materials (nonwoven or woven comprised of various synthetic polymers and manufactured by numerous processes).

1.05 FUNCTION

A. Subgrade Enhancement Geotextile:

1. Located beneath aggregate base of both paved and unpaved roadways. Used as solids separation barrier for below grade structures.

1.06 QUALITY ASSURANCE

A. Treat geotextiles to resist degradation from exposure to sunlight.

1.07 DELIVERY, STORAGE AND HANDLING

A. Deliver, unload, and store geotextile fabric in manufacturer's wrapping with a minimum amount of handling.

B. Protect geotextile rolls from excessive dust, moisture, rainfall, mud, ultraviolet exposure, and debris.

C. Follow manufacturer's recommendations regarding storage.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. One of the following or equal:

1. US Fabrics
2. TenCate Mirafi

2.02 MATERIALS

A. General

1. Fabric values are based on the State of California Department of Transportation Specifications (Section 96) except for Geomembrane Support Fabric.

B. Subgrade Enhancement Fabric

1. Polyester or polypropylene.
2. When tested under the referenced ASTMs, the properties must have the values shown in the following table.
3. Approved manufacturers
   a. US Fabrics

Subgrade Enhancement Geotextile (Caltrans 96-1.02O)						
		Requirement[a]				
Quality Characteristic	Test Method	Class A1	Class A2	Class B1	Class B2	Class B3
Elongation at break, (percent)	ASTM D4632	<50	≥50	<50	<50	≥50
Grab Breaking Load, 1-inch grip in each direction, (min, lb)	ASTM D4632	250	160	--	320	200
Wide width tensile strength at 5 percent strain, (min, lb/ft)	ASTM D4595	--	--	2,000	--	--
Wide width tensile strength at ultimate strength, (min, lb/ft)	ASTM D4595	--	--	4,800	--	--
Tear strength, (min, lb)	ASTM D4533	90	60	--	120	80
Puncture strength, (min, lb)	ASTM D6241	500	310	620	620	430
Permittivity, (min, sec-1)	ASTM D4491	0.05	0.05	0.20	0.20	0.20
Apparent opening size, (min, inches)	ASTM D4751	0.012	0.012	0.024	0.012	0.012
UV Resistance, retained grab breaking load, 500 hours, (min, percent)	ASTM D4355	70	70	70	70	70

[a] Values are based on minimum average roll value in the weaker principal direction except apparent opening size is based on maximum average roll value.

PART 3 - EXECUTION

3.01 PREPARATION

A. Subgrade and earthwork as specified in Section 02300.

3.02 PLACEMENT

A. Roll Length: Sized to fit area of use. Minimum length of 300 feet for areas larger than 300 feet long.

B. Handle geotextile fabric in a manner that will not damage fabric.

C. Place geotextile with no wrinkles or folds.

D. If the fabric is joined with overlap joints, the adjacent borders of the fabric must be overlapped be at least 24-inches. Overlap in the same directions that the cover material is placed.

E. Install as shown on the Drawings and per manufacturer's installation instructions.

END OF SECTION

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SECTION 02081

CONTROLLED LOW STRENGTH MATERIAL

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for controlled low strength material (CLSM) as backfill material in specific locations.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section:

1. Section 01330 – Submittals

1.03 DEFINITION

A. Controlled low strength material (CLSM): A highly flowable, lean concrete mix consisting of a mixture of cement, fly ash, densely graded mineral aggregates, water and admixtures. Characteristics include:

1. Capable of freely flowing to fill excavations and voids without compaction or other additional effort.
2. Used in trenches and for backfill adjacent to structures where clearance is limited, and in other areas specifically identified on the Drawings or specified.
3. Low permeability to prevent migration of adjacent fines into the set mix.
4. Easily excavated after curing with minimum risk of damage to buried utility.

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Mix Design: Identify name and/or number of the mix design and proposed use. Provide the proportions and gradations of materials proposed for CLSM.

C. Certified test results for compressive strength.

1.05 QUALITY ASSURANCE

A. Demonstrate that the CLSM mix meets the specified requirements, including compressive strength.

B. Enlist the services of a testing laboratory to prepare test cylinders and to transport cylinders to the laboratory for testing.

C. Testing expenses shall be borne by the Contractor.

D. Test Cylinders

1. Procedure: Make 6-inch diameter by 12-inch high test cylinders in accordance with ASTMD4832.

2. Required Number: Not less than 3 cylinders for each 200 cubic yards of CLSM placed, with a minimum of 3 cylinders for each location where CLSM is used.

3. Test two cylinders at 28 days, third cylinder is spare.

E. Field Testing:

1. Test flow consistency per ASTM D6103.

2. Test flow consistency once every 200 cubic yards of CLSM placed.

PART 2 - PRODUCTS

2.01 GENERAL

A. CLSM Mix: A mixture of Portland cement, fly ash, aggregate, water, and admixtures that produce a material of controlled density and of low compressive strength capable of filling all spaces between the pipe, the bedding and the trench walls.

2.02 MATERIALS

A. Cement: Conforming to ASTM C150, Type II or III with total alkali content not more than 0.8 percent.

B. Water: Clean, potable water.

C. Fly Ash

1. Mix Designs used for Pipe Bedding and Trench Backfill: Class F in conformance with ASTM C618.

2. Mix Designs used for Backfill of Excavations: Class F in conformance with ASTM C618.

D. Aggregate Materials

1. Densely graded rock conforming to the following gradation:

Sieve Size	Percentage Passing
1”	100
No. 8	50-100
No. 200	0-5

2.03 DESIGN REQUIREMENTS

A. Water-cement Ratio: Not to exceed 3.5.

B. Minimum Cement Content: 50 pounds per cubic yard.

C. Use fly ash to improve flow-ability of the fresh CLSM and to regulate the strength. Do not use more than 300 pounds per cubic yard.

D. Compressive Strength Requirements

1. Mix Designs used for Pipe Bedding and Trench Backfill: Compressive strength at 28 days between 100 psi and 150 psi as determined in accordance with ASTM D4832.

2. Mix Designs used for Backfill of Excavations: Compressive strength at 28 days between 150 and 300 psi as determined in accordance with ASTM C4832.

3. Mix Designs used for Excavation Support and Protection: Compressive strength at 28 days 1,500 psi or greater.

2.04 CONSISTENCY AND MIXING

A. Consistency: Similar to that of a thick liquid so that it flows readily and fills spaces and voids around pipes and structures.

B. Slump: Between 6 inches and 8 inches when tested in accordance with ASTM C143.

C. Uniform consistency and appearance.

D. Mixing Method and Time: As required to produce a uniform mixture of cement, fly ash, aggregate, admixtures, and water.

2.05 MEASUREMENT OF MATERIALS

A. Use weighing equipment to determine the amount of cement, fly ash, and aggregate entering into each batch. Where batches are proportioned to contain an integral number of conventional sacks of cement, and the cement is delivered at the mixer in the original unbroken sacks, the weight of the cement contained in each sack may be taken without weighing as 94 lbs.

B. Use a suitable water meter or other acceptable method of measuring the quantity of water entering the mixer.

PART 3 - EXECUTION

3.01 PLACEMENT

A. Thoroughly settle and consolidate CLSM as the material is placed in excavations. Fill the entire depth of the layer that is being consolidated, into a dense, homogeneous mass, filling all spaces and voids and bringing only a slight excess of water to the exposed surface. Place and consolidate CLSM by means that will not cause segregation of the mix.

B. Do not place CLSM under the following conditions:

1. When the air temperature is below 40 degrees Fahrenheit.

2. When the excavation contains water or when the bottom or walls of the excavation are frozen or contain frozen material.

C. Prevent flotation of pipes by placing CLSM in two or more lifts, with each lift reaching an initial set before the succeeding lift is placed. Correct any flotation and displacement of pipelines.

D. Placement of CLSM in Excavations: Limit lift thickness to 10 feet, place subsequent lifts after CLSM has achieved the minimum specified compressive strength.

3.02 PROTECTION OF CLSM

A. Protect CLSM from equipment, traffic and backfilling operations until the surface has achieved an initial set and has hardened enough to develop a minimum penetration number of 650 when tested in accordance with ASTM C403.

B. If the trench backfill is not to be placed over the CLSM within eight hours after CLSM placement, place a 6-inch layer of moist backfill over the CLSM.

END OF SECTION

SECTION 02200

SITE PREPARATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Site preparation work, as follows:

1. Locating existing facilities.
2. Installing safety and protective barriers.
3. Constructing temporary access roads, work areas and storage areas.
4. Clearing, grubbing, stripping, and other initial work required for earthwork and trenching operations.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals

1.03 DEFINITIONS

A. Clearing: Consists of removal of natural obstructions and man-made objects and features including foundations, buildings, fences, lumber, stumps, debris, rubbish, brush, trees, boulders, and other items that interfere with construction operations or are specifically designated for removal.

B. Stripping: Includes the removal and disposal of sod, grass, weeds, roots, and other organic material remaining after clearing has been completed.

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Submit:

1. Materials used and layout of temporary fences
2. Proposed staging and stockpile locations.

PART 2 - PRODUCTS

2.01 TEMPORARY FENCES USED TO ESTABLISH WORK AREAS AND OFF-LIMITS BOUNDARIES

A. Type: Heavyweight, high visibility, flat laminar mesh design.

B. Material: High-density polyethylene.

C. Height: 48 inches.

D. Posts: Wood or metal posts at 10-foot spacing. Secure fence to posts with plastic cable ties.

PART 3 - EXECUTION

3.01 LOCATING EXISTING FACILITIES

A. Review the design drawings, maps, and other sources of information and identify existing facilities at the site to determine and mark the approximate locations of underground facilities.

B. The location of each underground utility that is to be connected to or that is in the path of the proposed improvements shall be determined by exploratory excavations after field marking and prior to any excavations in the affected areas.

1. Survey the location of the exposed utility and provide information to the Engineer.
2. Replace and compact soil removed to expose the utility.
3. When existing asphalt is disturbed, install an asphalt patch and replace to original condition.

3.02 SAFETY AND PROTECTIVE BARRIERS

A. Along Public Roadways:

1. Install appropriate barriers such as temporary fencing, plastic drums, or concrete traffic barriers to protect public from construction areas and to protect workers and existing facilities from danger of passing vehicles.

B. Temporary Fences:

1. Prior to beginning excavation, erect temporary fences along boundaries of the work area.
2. Maintain work activities within the confines of the temporary fences.
3. Remove temporary fences when work in the vicinity is substantially complete.

C. Existing Trees: Erect temporary fences around trees at the drip line that are adjacent to the Work and may be subject to damage unless protected. Maintain work activities outside of protected areas.

D. Provide protective concrete slabs, steel plates or encasements for existing buried facilities that may be damaged by Contractor's equipment and vehicles.

3.03 PRIMARY SITE ACCESS, WORK AND STORAGE AREAS

A. Develop primary access routes, work areas and storage areas as indicated on the Drawings.

B. Clean up areas at the conclusion of the project and return the areas to their original or better condition.

3.04 CLEARING

A. Clear construction areas of objectionable items and material, which, if left in place, would interfere with the proper performance of the work.

B. Remove loose boulders within 10 feet from the tops of cut slopes. Incorporate boulders into landscaping or remove from the site.

C. Dispose of material from clearing operations in an acceptable off-site location.

3.05 STRIPPING

A. Remove the top layer of soil containing sod, grass, weeds and other vegetation to a depth of 3 inches from areas that will be affected by construction and site grading operations.

B. Extend stripped areas at least 4 feet beyond the limits of cut and fill areas.

1. Dispose of stripped material in an acceptable off-site location.

3.06 REMOVAL OF EROSION CONTROL DEVICES

A. Remove erosion control devices when bare soils are sufficiently revegetated to prevent on-site or off-site soil erosion.

B. Straw wattles containing plastic netting, including plastic specified as phot-degradable, may not remain on site. Remove entire wattle or remove and dispose of plastic netting and spread straw from wattle across vegetated areas of site.

END OF SECTION

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SECTION 02260

EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Temporary excavation support systems.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 02081 – Controlled Low Strength Material
3. Section 02300 – Earthwork

1.03 DEFINITIONS

A. Protection Systems:

1. Sloping or benching systems for excavated slopes.
2. Structural support systems, shield systems, and other systems for preventing excavation wall failure.

1.04 SUBMITTALS

A. Prepare and submit in accordance with Section 01330.

B. Submit information as a complete package. Include all items required by the Contract Documents. Incomplete submittals will not be reviewed and will be returned for resubmittal as a complete package.

C. Shop Drawings

1. Prepared, signed and sealed by a professional engineer who is registered to practice in the state of California.
2. Clearly indicate structural sections of shoring members, welding details, bolting details and bracing details.
3. Indicate existing and new structures, pipelines and other improvements located in the vicinity and impacting the design of the shoring system.
4. Provide details for bracing, reinforcement and sealing around penetrations.

D. Calculations: Structural calculations verifying and demonstrating the structural safety and adequacy of the sheeting, shoring and bracing to be used.

1. Prepared, signed and sealed by a registered Professional Civil or Structural Engineer who is registered to practice in the State of California.

2. Provide calculations for the different load, support and other conditions that occur during the sequence of installation, construction of facilities protected by the shoring and the sequence of removal of the internal bracing and shoring.

E. Sheet Pile Driving Equipment: Information on type of equipment to be used, including manufacturer, model number and driving energy.

F. Qualifications of registered Professional Engineer and shoring installer, including project references.

G. Prepare a detailed plan illustrating the sequence of installation and removal of shoring systems and internal bracing. Include sketches showing the various stages in the sequence.

H. Letter confirming installation of the shoring system is in accordance with the shoring design.

I. Control Points and Stability Measurements:

1. Submit proposed location and details of control points and method and schedule for obtaining stability measurements.

2. Submit field notes documenting stability measurements.

1.05 INSTALLER QUALIFICATIONS

A. Shoring installer must have a minimum of five successful past installations of shoring systems of comparable overall heights and comparable penetration of soils similar to those found on the project site.

1.06 PERFORMANCE REQUIREMENTS

A. Design and install excavation support and protection systems that are capable of:

1. Supporting excavation sidewalls and bottom to maintain the required excavation or trench section.

2. Resisting soil and hydrostatic pressure and superimposed construction loads and other live loads.

3. Protecting existing facilities in the vicinity of the excavation from damage due to settlement or movement of soil

B. Provide professional engineering services necessary to assume engineering responsibility, including preparation of Shop Drawings and a comprehensive engineering analysis by a qualified professional engineer registered in the State of California.

C. Install and remove excavation support and protection systems without damaging existing buildings, pavements, utilities, railroad facilities and other improvements adjacent to excavation.

D. Excavations

1. Protect workers from hazard of caving ground and other hazards.

2. Install excavation protection system in locations where:

   a. Protection system is specifically indicated on the Drawings.

   b. Excavations are equal to, or greater than, 5 feet deep.

   c. Excavations are less than 5 feet deep, but there is a potential for cave-in.

   d. When engineering analyses prepared by the Contractor indicate the stability of existing structures and facilities may be jeopardized by settlement or movement of soil.

1.07 GENERAL DESIGN REQUIREMENTS

A. Design excavation support systems to meet requirements and standards of the Occupational Safety and Health Administration (OSHA).

B. Design excavation support systems to meet the requirements of California Code of Regulations, Title 8 – Construction Safety Orders and California Labor Code Sections 6705 to 6707.

C. Design structural steel members in accordance with the American Institute of Steel Construction (AISC) Manual of Steel Construction Allowable Stress Design and the Uniform Building Code.

D. Excavation support systems for trench excavations shall be selected by the Contractor based on the soil conditions, depths of trench excavations, groundwater conditions and other site conditions. No attempt has been made by Engineer to define acceptable trench shoring options.

E. Excavation support systems for structural excavations may consist of either driven steel sheet piling or soldier beam and lagging systems complying with requirements of this Section. Contractor may select from either specified system.

F. Allowable Deflection: Not more than 1/2-inch at any point on the shoring system.

G. Cantilevered Design Limits:

   1. Maximum height of cantilevered shoring above the bottom of the excavation shall not exceed 15 feet.

H. Resistance to Overturning

   1. Design soldier piles and sheet piles with sufficient depth below the excavation to:

      a. Resist lateral movement or overturning of the pile, and

      b. Act as an effective water cutoff to prevent heaving or flow of soil into the excavation.

   2. Calculate the required depth of pile below the bottom of the excavation by assuming the soil immediately below the bottom of excavation does not provide passive resistance for a depth of 1.5 times the effective pile diameter.

1.08 DESIGN REQUIREMENTS FOR SOLDIER PILES AND LAGGING

A. Design soldier piles for downward loads including vertical loads from tie back anchors.

B. Flexural Strength of Lagging: In accordance with the Uniform Building Code, but not greater than 1,500 psi.

C. Wales: Use back-to-back structural members.

D. Soil Anchors, Rock Anchors and Deadmen Anchors:

1. Design tie back anchors with a safety factor of not less than 2 times the calculated load from the shoring.

2. When calculating the length of soil anchors needed to resist the load from the shoring, do not include any anchor length within the potential active pressure soil failure zone behind the face of the shoring.

3. Design anchor tie rods for 130 percent of the calculated load from the shoring.

4. When tie rod couplings are used, design anchor tie rods for 150 percent of the calculated load from the shoring.

1.09 GEOTECHNICAL REPORT

A. A geotechnical report has been prepared for this Project and is available for information only. The geotechnical report is not part of the Contract Documents. The opinions expressed in this report are those of geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by geotechnical engineer. Owner will not be responsible for interpretations or conclusions drawn from this data.

1. Make additional test borings and conduct other exploratory operations necessary for design of the excavation support systems.

2. Copies of the geotechnical report are available for inspection by request.

1.10 JOB SITE POSTINGS

A. Maintain at least one copy of the protection system design at the job site while the excavation is open in accordance with the requirements of California Code of Regulations, Title 8 Construction Safety Orders and the California Labor Code.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Provide materials that are either new or in serviceable condition.

B. Structural Steel Soldier Beams: ASTM A36, ASTM A690 or ASTM A992.

C. Steel Sheet Piling: ASTM A328, ASTM A572 or ASTM A690; with continuous interlocks.

D. Wood Lagging: Lumber, mixed hardwood, nominal rough thickness as determined by design calculations, but not less than 3 inches.

E. Lean Concrete Mix:

1. Controlled Low Strength Material in accordance with Section 02081.

2. A mixture of sand, fine aggregate, water and 2 sacks of cement per cubic yard to create a flowable mixture that fills voids.

3. Minimum Compressive Strength: 1500 psi.

PART 3 - EXECUTION

3.01 PREPARATION

A. Prior to beginning installation of the excavation support system, pothole to locate existing buried utilities in the vicinity of the excavation. Survey utilities and compare actual locations to those locations indicated on the Drawings and the Shop Drawings. Determine any areas of conflict and revise the design and layout of the excavation support system to eliminate these conflicts.

3.02 SLOPING AND BENCHING OF EXCAVATED FACES

A. Where structural excavation support systems are not specifically indicated on the Drawings, sloping and benching systems for exposed faces of excavations may be utilized.

B. Construct sloping and benching systems in accordance with Section 02300.

3.03 TRENCHING SUPPORT SYSTEMS

A. Where structural excavation support systems are not specifically indicated on the Drawings, trench support systems consisting of hydraulic jacks and plates, trench shield systems, and other trench protection systems may be utilized.

3.04 SOLDIER BEAMS AND LAGGING

A. Before starting excavation, drive steel soldier beams or install steel soldier beams in pre-drilled holes.

1. Installation of Soldier Beams in Pre-Drilled Holes

a. Diameter of pre-drilled hole: Not to exceed the outside dimensions of the soldier beam.

b. Backfill around soldier beam using a lean concrete mix.

B. Space soldier beams at regular intervals not to exceed allowable flexural strength of the wood lagging. Align exposed faces of flanges to vary not more than 2 inches from a horizontal line and not more than 1:120 out of vertical alignment.

C. Install wood lagging within flanges of soldier beams as excavation proceeds. Trim excavation as required to install lagging.

D. Install horizontal wales at locations indicated on the shop drawings and secure to soldier beams.

E. Fill voids behind lagging with gravel, lean concrete or other material acceptable to the Engineer.

3.05 SHEET PILING

A. Before starting excavation, install one-piece sheet piling lengths and tightly interlock to form a continuous barrier. Align exposed faces of sheet piling to vary not more than 2 inches from a horizontal line and not more than 1:120 out of vertical alignment. Cut tops of sheet piling to uniform elevation at top of excavation.

3.06 BRACING

A. Locate bracing to clear temporary and permanent work and to allow lowering of material and equipment into the excavation.

B. If necessary to move brace, install new bracing before removing original brace.

C. Install internal bracing when calculations indicate bracing is required to prevent spreading or distortion of braced frames.

D. Maintain bracing until structural elements are supported by other bracing or until permanent construction is able to withstand lateral earth and hydrostatic pressures.

3.07 REMOVAL

A. Remove at least the top 10 feet of excavation support systems.

B. Remove excavation support and protection systems when backfill can support the remaining open excavation and bear soil and hydrostatic pressures. Remove support and protection systems in stages to avoid disturbing underlying soils or damaging structures, pavements, facilities, and utilities.

C. After removal, promptly fill voids resulting from the extraction of shoring with sand-cement grout. Repair or replace adjacent work damaged or displaced by excavation support and protection systems removal.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Earthwork requirements for sitework, structures, roads and general earthwork, including excavation, fill, backfill, grading, and compaction; import of material; and disposal of surplus and unsuitable materials.

B. Refer to Section 02320 for earthwork related to pipeline installation.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 02200 – Site Preparation
3. Section 02260 – Excavation Support and Protection
4. Section 02320 – Trenching
5. Section 02722 – Aggregate Base Course Material

1.03 DEFINITIONS

A. Backfill: Earthwork necessary to add fill between new structures and the excavation up to the sub or finish grade.

B. Borrow Area: Area identified from which to obtain earthwork materials.

C. Cut: Earthwork necessary to remove existing material to lower the existing grade in elevation to sub or finish grade.

D. Embankment: Materials placed to form the subgrade for roadways or site improvements.

E. Excavation: Earthwork necessary to remove existing material for the installation of structures.

F. Fill: Earthwork necessary to add material to bring the existing grade up in elevation to sub or finish grade.

G. Finish Grade: Final surface following placement of surfacing, if any, as indicated.

H. Subgrade: The surface of the earthwork on which pavement, surfacing, base, subbase, or a layer of any other material is placed.

1.04 SUBMITTALS

A. Prepare submittals and submit in accordance with Section 01330.

B. For imported materials, provide certification and source.

C. For excavations 5 feet or deeper: Submit detailed plan of all shoring, bracing, side sloping, or other provisions for worker protection against the hazard of caving ground during excavations in accordance with Section 02260.

1.05 QUALITY ASSURANCE

A. Materials and Compaction Testing.

1. Source testing of materials: Provided and paid for by Contractor.

2. Field testing of compaction: Provided and paid for by Contractor.

B. Compaction Testing Standards

1. In-place Density of Compacted Fill Material: Density determined in the field in accordance with ASTM D6938 – Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

2. Maximum Dry Density of Compacted Material: determined in the laboratory in accordance with Method C of ASTM D1557-12e1 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3)), or ASTM D4253 – Standard Test Methods for Maximum Index Density of Soils Using a Vibratory Table and D4254 – Standard Test Methods for Maximum Index Density of Soils and Calculation of Relative Density, for cohesionless, free draining soils.

C. Material Testing Standards:

1. Particle size analysis of soils and aggregates: ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils.

2. Determination of sand equivalent value: ASTM D2419 – Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.

3. Liquid limit, plastic limit, and plasticity index: ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

4. The testing for organic matter: ASTM D2974 – Standard Test methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils.

D. References in this section to soil classification types and standards shall have the meanings and definitions indicated in ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes. Contractor shall be bound by all applicable provisions of ASTM D2487 in the interpretation of soil classifications.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General fill, backfill, and embankment materials:

1. Selected or processed clean earth, rock, or sand, free from grass, roots, brush, other vegetation, corrosive and hazardous materials, manmade objects, and debris.

2. Materials not defined as unsuitable as indicated below, except some materials listed as unsuitable may be used, if indicated on the Drawings or when acceptable to the Engineer, when thoroughly mixed with suitable materials to form a stable composite.

3. Obtain suitable materials from one or more of the following:

4. Onsite excavations and designated borrow areas.

5. Processed on-site materials.

6. Imported from offsite borrow areas and processing plants.

7. If imported materials are required by this Section, or to meet the quantity requirements of the Project, provide the imported materials at no additional expense to Owner, unless a unit price item is included for imported materials in the Bidding Schedule.

8. Large rocky material: When embankment material consists of large rocky material, or hard lumps, such as hardpan or cemented gravel which cannot be broken down readily, distribute such material evenly throughout the embankment. Place sufficient earth or other fine material around the larger material as it is deposited so as to fill the interstices and produce a dense, compact embankment. Do not place rocks larger than 6 inches in diameter within the upper 2 feet of the embankment subgrade.

9. Further condition fill, backfill, and embedment materials as described below or as indicated on the Drawings.

B. Levee Berm Embankment Material:

1. Lean clay, silty clay, sandy clay or gravely clay soil.

2. Plasticity index of 20 or less.

3. Liquid limit of 40 or less.

4. Complying with the grading shown in the following table:

Sieve Size	Percentage Passing
6-inch	100
4-inch	85-100
No. 200	30-100

C. Structure Backfill Material (within 12” of outside face of structure)

1. Granular, low to non-expansive soil.

2. Plasticity index 12 or less.

3. Liquid limit 30 or less.

4. Complying with the grading shown in the following table:

Sieve Size	Percentage Passing
6-inch	100
3-inch	95-100
No. 200	15-50

D. Aggregate Base Course Material: In accordance with Section 02722.

E. Crushed Rock:

1. Manufactured, angular, crushed stone with a minimum sand equivalent value of 75.

2. Clean, hard, sound, durable, uniform in quality, and free of soft, friable, thin, elongated or laminated pieces, and disintegrated material.

3. Have 100 percent of its particles with at least one fractured face on a weight basis, when tested for crushed particles per ASTM D5821.

4. Complying with the grading shown in the following table:

	Percentage Passing		
Sieve Size	1-inch	3/4-inch	1/2-inch
1-1/2-inch	100	-	-
1-inch	90-100	100	-
3/4-inch	30-60	90-100	100
1/2-inch	0-20	30-60	90-100
3/8-inch	-	0-20	20-60
No. 4	0-5	0-5	0-15
No. 8	-		0-5

F. Sand:

1. Clean, coarse, natural sand free from organic material, suitable for the purpose intended.

2. Gradation: 90 percent to 100 percent will pass a No. 4 sieve and not more than 5 percent will pass a No. 200 sieve.

G. Permeable Backfill:

1. Hard, durable, clean sand, gravel or crushed stone, free from Unsuitable Material.

2. Complying with the grading shown in the following table:

Sieve Sizes, Square Openings	Percent by Weight Passing Sieve
1-inch	100
3/4-inch	90 – 100
3/8”	40 – 100
No. 4	25 – 40

Sieve Sizes, Square Openings	Percent by Weight Passing Sieve
No. 8	18 – 33
No. 30	5 – 15
No. 50	0 – 7
No. 200	0 – 3

3. Durability index: Not less than 40
4. Sand equivalent: Not less than 75.

H. Impervious Material:

1. Material free of organic materials, rocks, or clods greater than 4 inches in diameter.
2. Gradation: Not less than 50 percent passing the No. 200 sieve.

I. Geofoam

1. Provide rigid cellular polystyrene geofoam
   a. EPS-12
   b. 0.7 lbs/ft^3 density
2. Comply with ASTM D6817 Standard Specification for Rigid Cellular Polystyrene Geofoam
3. Protect geofoam according to manufacturer's instructions, including but not limited to:
   a. Do not expose to sunlight except to the extend necessary for installation
   b. Do not expose to hydrocarbons
   c. Do not expose to open flame

2.02 UNSUITABLE MATERIALS

A. Unsuitable materials include the materials listed below:

1. Soils which, when classified under ASTM D2487, fall in the classifications of Pt, OH, CH, MH, or OL, or in a classification that contains Pt, OH, CH, MH, or OL in combination with any other letter designation, such as CH/CL.
2. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use, or are unstable or pump regardless of the degree of compaction.
3. Materials that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable regulations.

4. Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or pH less than the average values for existing onsite soils.

5. Topsoil, sludge and sludge-entrained soils.

6. Rocks, stones, and boulders larger than allowed for use as fill and backfill materials.

2.03 SOURCE QUALITY CONTROL

A. Materials source testing will be performed by a testing laboratory by the Contractor.

B. Minimum Frequency of sampling:

1. Fill, backfill and embankment material generated from earthwork activities:

2. Two soil samples every [500] cubic yard of material used.

3. Two soil samples whenever the character of the soil changes.

4. One soil sample when directed by the Engineer.

5. Obtain samples that represent the predominate character of the soil that is encountered.

6. Sampling of Imported Material

7. Obtain representative samples of product from supplier.

8. After initial testing demonstrates that the proposed borrow material meets the specified requirements, obtain and test one additional sample for every 500 cubic yard of imported material.

C. Testing:

1. Test all materials used in the Work to confirm they meet the requirements indicated.

2. Prepare moisture-density curves for use in determining the optimum moisture content and in-place density of the compacted backfill.

PART 3 - EXECUTION

3.01 EXCAVATION – GENERAL

A. Excavation includes the removal of all materials of whatever nature encountered, including all obstructions of any nature.

B. Excavation shall conform to the lines and grades indicated on the Drawings.

C. Clear, grub and strip and remove top soil in construction and borrow areas in accordance with Section 02200.

D. Excavation Stability

1. Slope excavated faces or otherwise support in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA

Safety and Health Standards for Construction (29CFR1926) and in accordance with Section 02260.

2. Furnish, place, and maintain supports and shoring required to maintain stability of the sides of excavations.

E. Notify Engineer at least 1 working day in advance of completion of any structure excavation to allow inspection of the exposed subgrade before it is covered with backfill or with any construction materials.

F. Erosion Control:

1. Maintain earthwork surfaces true and smooth and protected from erosion.

2. Construct erosion control measures identified in the Storm Water Pollution Protection Plan prior to any clearing or grading activity.

G. Existing Underground Utilities:

1. Known existing underground utilities are generally shown on the Drawings in their approximate locations based on information of varying accuracy.

2. Exercise care to avoid damage to all existing utilities whether shown or not.

3. Conduct field explorations to locate all underground utilities in the vicinity of the Earthwork activities in accordance with Section 02200.

4. Alert the Engineer of the presence of existing utilities that are not shown on the Drawings or are in locations different than those shown on the Drawings.

H. Existing Overhead Utilities: There may be existing overhead utilities in the vicinity of the Work which may or may not be shown on the Drawings. Identify existing overhead utilities, if any, and use extreme caution when working in the vicinity of overhead utilities.

3.02 EXCAVATION FOR FILLS AND EMBANKMENTS

A. Benching and Keyways:

1. Where fill is to be placed against existing subgrade or existing grade that is sloped, excavate horizontal benches a minimum of 5 feet wide and located at vertical intervals of not more than 5 feet to provide for placement and compaction of the new fill on horizontal surfaces.

2. Excavate keyway along the base of the existing slope:

3. Extend the keyway at least 3 feet into competent native soil.

4. Width of Keyway: Minimum of 15 feet.

5. Keyway Side Slopes: Inclined at approximately 0.75:1.

6. Keyway Subgrade: Scarify the upper 8-inches of the exposed surface, moisture condition and re-compact.

B. Subgrade Preparation:

1. Subgrade Beneath Embankments:
2. Expose competent native soil within the planned new embankment footprint.
3. Excavate soil beneath embankments to a minimum of 24 inches below existing grade. Extend the excavation a minimum of 10 feet beyond the embankment.
4. Scarify the exposed subgrade to a depth of 12 inches, moisture condition as necessary and re-compact.
5. Subgrade Beneath Paved Areas:
6. Excavate to the subgrade soils beneath the bottom of the aggregate base or to the subbase, if such subbase is indicated.
7. Scarify the top 12 inches of subgrade soils, moisture condition as necessary, and re-compact.
8. Finished subgrade shall be even, self-draining, and in conformance with the slope of the finished pavement.
9. Subgrade Beneath Structures:
10. Excavate to the subgrade soils beneath the bottom of the structure or bottom of crushed rock layer where indicated.
11. Scarify the top 12 inches of subgrade soils, moisture condition as necessary, and re-compact.

3.03 EXCAVATION IN VICINITY OF TREES

A. Except where trees are indicated to be removed, protect trees form injury during construction.

B. Do not cut tree roots over 2 inches in diameter without permission of the Engineer.

C. Support trees during excavation by means approve by the Engineer.

3.04 OVER-EXCAVATION NOT ORDERED OR INDICATED

A. Backfill areas over-excavated with the materials indicated for the backfill above the over-excavation or Aggregate Base.

B. Backfill the over-excavation to restore the required subgrade elevation and compact.

C. Any over-excavation carried below the grade indicated on the Drawings will be at no additional cost to Owner.

3.05 OVER-EXCAVATION WHERE ORDERED BY ENGINEER

A. Where ordered by the Engineer, over-excavate beyond the depth of subgrade indicated to the dimensions ordered.

B. Backfill areas over-excavated with the materials indicated for the backfill above the over-excavation or Aggregate Base.

C. Backfill the over-excavation to restore the required subgrade elevation.

D. Over-excavation less than 6 inches below the limits indicated: At no increase in cost to Owner.

E. Over-excavation greater than 6 inches below the limits indicated: Payment will be made under separate unit price bid items for over-excavation if such bid items have been established. Otherwise, payment will be made in accordance with a negotiated price.

F. Measurement and Payment

1. Measurement of quantities for payment of over-excavation: By calculation by Engineer of the volume of materials removed as over-excavation based on the difference between the excavation dimensions before and after the over-excavation work. No compensation will be made for removal of materials beyond the limits of the additional excavation ordered by Engineer or for materials which may come into the excavation from outside the designated limits. No compensation will be made for removal of materials that are outside of the minimum horizontal dimensions indicated.

2. Payment for over-excavation will be made by the cubic yard. The payment shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in excavating and backfilling the over-excavation completely. Payment shall also include full compensation for the removal and disposal of the excavated materials, import and installation of backfill materials, control of water in the excavation, excavation support, and all costs associated with interruption of construction operations during the review of the foundations, over-excavation, backfill, and all other operations required for, or as a result of, over-excavation.

3.06 DISPOSAL OF UNSUITABLE, EXCESS EXCAVATED AND OTHER MATERIALS

A. Dispose unsuitable or excess excavated materials at an appropriate site selected by Contractor unless otherwise indicated.

B. Obtain required permits, landowner, and agency approvals for disposal of unsuitable and excess excavated materials and pay costs associated with the removal and disposal of the materials.

3.07 FILL AND EMBANKMENT CONSTRUCTION

A. Scarify foundation soils for fills and embankments bring to optimum moisture content, and re-compact with heavy compaction equipment to obtain compaction indicated.

B. Place and compact fill and embankments in horizontal layers so that when compacted layers to not exceed thickness indicated.

C. Provide keyways or benches where an embankment or fill is to be placed against slopes, hillsides, or fill slopes.

D. Slopes: Construct slopes as indicated except construct no permanent fill or embankment slopes with slope inclinations that exceed 2:1 (horizontal:vertical) unless specifically indicated otherwise

E. Over-construct fills and embankments to greater horizontal dimensions than indicated. Cut back slope following placement and compaction to expose well compacted fill.

F. Construct the first 3 feet of embankment or fills over pipelines using placement and compaction equipment that do not damage the pipe. Keep heavy construction equipment a minimum distance of the edge of the trench equal to the depth of the trench until at least 3 feet of fill over the pipe has been completed.

3.08 STRUCTURE BACKFILL

A. Provide Structure Backfill material within 12-inches of all structures to be backfilled unless otherwise indicated.

B. Place a 6-inch layer of 3/4-inch or 1-inch Crushed Rock below all structures, unless otherwise indicated.

C. Do not drop backfill upon any structure or pipe.

D. Confirm concrete structures have attained sufficient strength to withstand the backfill loads imposed.

E. Do not place backfill around water retaining structures until structures have been tested and approved for backfill. Fill structures with water during backfill operations.

F. Place backfill after all water has been removed from the excavation and the excavation sidewalls and subgrade soils have dried to a moisture content suitable for compaction.

G. Remove all loose, sloughing, or caving soils and rock materials prior to placement of backfill.

H. Place geotextile fabric as indicated.

I. Promptly after removal, fill voids created by the extraction of sheetpile or shoring indicated in Section 02260.

J. Place backfill and spread evenly in layers so that when compacted layers do not exceed thickness indicated.

K. Thoroughly mix layers as necessary to promote uniformity of material in each layer.

L. Add water to backfill material where moisture content is below the optimum moisture content and mix with the soil until the proper moisture content is achieved throughout the soil layer.

M. Where backfill material moisture content is too high to permit the specified degree of compaction, dry backfill material until moisture content is satisfactory.

3.09 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

A. Adjust moisture condition of soils to achieve a water content of 3 percent, plus or minus 0.5 percent, above the optimum moisture content as determined through laboratory testing of the soil.

B. Compact each layer in a uniform and systematic manner.

C. For materials with less than 10 percent passing the No. 4 sieve, compact by means of at least 2 passes from a flat plate vibratory compactor.

D. For materials with 10 percent or more passing the No. 4 sieve, mechanically compact to the indicated percentage of density each layer of backfill materials.

1. Use equipment that is consistently capable of achieving the required degree of compaction.

2. Compact each layer over its entire area while the material is at the required moisture content.

E. Do not use flooding, ponding, or jetting as a method of compaction.

F. Do not use equipment weighing more than 10,000 lbs closer to structure walls than a horizontal distance equal to the depth of the fill at the time. Use hand operated power compaction equipment where use of heavier equipment is impractical or restricted due to weight limitations.

G. Compaction Requirements:

1. Where agency or utility company requirements govern, the highest compaction standards shall apply.

2. Compact finish and subgrades in compliance with the following table:

Location or Use of Fill	Limit/Layer Thickness	Percentage of Maximum Dry Density of Compacted Material per ASTM D1557
Backfill around structures	8 in. Layers	90
Embankment Fill	12 in. Layers	90
Subgrade beneath embankments or fill areas (upper 8 inches)	Upper 12 in.	95
Subgrade beneath paved areas (upper 12 inches)	Upper 12 in.	95
Subgrade beneath structures (upper 12 inches)	Upper 12 in.	95
Subgrade beneath keyway (upper 8 inches)	Upper 8 in.	95
Finish grade in unimproved or landscape areas	Upper 12 in.	85

3.10 FIELD QUALITY CONTROL AND TESTING

A. If requested by the Owner, remove soil above the level at which the Owner wishes to test. Backfill and re-compact material after testing is completed.

B. If compaction fails to meet specified requirements, perform remedial work by one of the following methods:

1. Remove and replace backfill at proper density.
2. Bring density up to specified level by other means acceptable to Owner.
3. Retesting:
4. Costs for conducting additional tests to confirm and verify that remedial work has brought compaction within specified requirements shall be borne by the Contractor.
5. Conduct compaction tests at twice as frequently specified for the initial confirmation tests.

C. Where soil compaction is specified as a percentage of maximum dry density, determine the maximum dry density at optimum moisture content by laboratory testing in accordance with Method C of ASTM D1557.

D. Where compaction of cohesionless, free draining soil is specified as a percentage of relative density, determine relative density by laboratory testing in accordance with ASTM D4253 and D4254.

E. Determine In-Place Density of Compacted Fill Material by performing field tests of soil density in accordance with ASTM D6938.

F. Frequency of Compaction Confirmation Testing at intervals not less than as follows:

1. Embankments and Fills: 2 tests every 500 cubic yards.
2. Structure Backfill: 1 test every 5 feet in elevation per 100 horizontal feet of backfill.

3.11 FINISH GRADES

A. Surface: Reasonably smooth and free of grade breaks, irregular surface changes, protrusions and other defects.

B. Restore un-improved areas back to pre-construction grades.

C. Backfill topsoil in all areas where the topsoil was removed as part of the site preparation.

D. Restore drainage swales and water courses to their pre-construction alignments and grades unless otherwise modified by the Work. Grade surface to drain away from structures. Direct drainage to collection points.

E. Provide smooth transitions to existing grades.

F. Repair and reestablish grades to required elevations and slopes due to any settlement or erosion that may occur prior to final acceptance.

G. Vertical Tolerance:

1. Subgrade under paved areas: 0.0 feet above and 0.08 feet below.

2. Subgrade under structures: 0.0 feet above and 0.08 feet below.
3. Landscaped areas: 0.1 feet above and 0.1 feet below.
4. Unimproved areas: 0.1 feet above and 0.1 feet below.

END OF SECTION

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SECTION 02320

TRENCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

1. Trench excavation and backfilling for pipe and pipeline appurtenances.
2. Minor structure excavation and backfill associated with pipeline construction.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01140 – Work Sequence and Constraints
2. Section 01330 – Submittals
3. Section 02081 – Controlled Low Strength Material
4. Section 02200 – Site Preparation
5. Section 02300 – Earthwork
6. Section 02260 – Excavation Support and Protection
7. Section 02722 – Aggregate Base Course Material

1.03 DEFINITIONS

A. Backfill: Earthwork necessary to provide fill between new structures and excavation up to the sub or finish grade.

B. Bedding Zone: The area from the trench subgrade to the bottom of the pipe.

C. Embedment or Pipe Zone: The area from the top of the Bedding Zone to the bottom of the Trench Zone as indicated on the Drawings.

D. Excavation: Earthwork necessary to remove existing material for the installation of structures.

E. Finish Grade: Final surface following placement of surfacing, if any, as indicated.

F. Native Material: Naturally occurring soils excavated from the trench after top soil, if any, has been removed.

G. Open Areas: Areas along the pipeline route that are outside Roadway Shoulders or in open pasture.

H. Pavement Section: The upper portion of the trench within paved areas comprising the base and finished surface materials.

I. Roadway Shoulders: Paved areas and unpaved areas outside the traveled way and extending to the outside edge of any roadside drainage features.

J. Spoils: Unsuitable or excess excavated materials.

K. Subgrade: The surface of the earthwork on which bedding, base materials, pavement, other surfacing materials, or structure bases are placed.

L. Traveled Way: The portion of the roadway where vehicles travel, does not include shoulders.

M. Trench Backfill: Materials used to backfill the trench including bedding zone, pipe zone, and trench zone backfill.

N. Trench Zone: The area from the top of the Pipe Zone to the bottom of the pavement base (subgrade), ground surface or other surface material over the trench excavation.

O. Wet Trench: Trench with water or groundwater present in the trench.

1.04 SUBMITTALS

A. Prepare submittals and submit in accordance with Section 01330.

B. Material Data: Submit the following for each material type imported to the site:

1. Material source.
2. Gradation.
3. Moisture-density curves.
4. Permeability tests (for clay material).

C. All material submittals must be dated to less than 1 year prior to Notice-to-proceed.

D. For excavations 5 feet or deeper, submit detailed plan of all shoring, bracing, side sloping, or other provisions for worker protection against the hazard of caving ground during excavations in accordance with Section 02260.

E. Submit name and qualifications of materials testing lab for Contractor furnished testing.

1.05 QUALITY ASSURANCE

A. Materials and compaction testing

1. Source Testing of Materials: Provided and paid for by Contractor
2. Field Testing of Compaction: Provided and paid for by Contractor
3. Provide testing performed by a qualified testing laboratory approved by the Owner. Submit testing laboratory qualifications for approval.

B. Compaction Testing:

1. In-place Density Testing of Compacted Fill Material: ASTM D6938 – Test Methods for Density of Soil and Soil Aggregate by Nuclear Methods (shallow depth).

2. Maximum Dry Density:

a. Cohesive soils: Method C of ASTM D1557 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10 lb Rammer and 18” Drop.

b. Cohesionless, free draining soils: ASTM D4253 – Test Methods for Maximum Index Density of Soils Using a Vibratory Table and D4254 – Test Methods for Maximum Index Density of Soils and Calculation of Relative Density.

C. Materials Testing Standards:

1. Particle size analysis of soils and aggregates: ASTM D422 – Method for Particle-Size Analysis of Soils.

2. Determination of sand equivalent value: ASTM D2419 – Test Method for Sand Equivalent Value of Soils and Fine Aggregate.

3. Liquid limit, plastic limit, and plasticity index: ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

4. Testing for organic matter: ASTM D2974 – Standard Test methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils.

5. Testing for percentage of fractured particles: ASTM D5821.

6. References in this section to soil classification types and standards: Meanings and definitions indicated in ASTM D2487 – Classification of Soils for Engineering Purposes.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General:

1. Obtain trench backfill materials from one or more of the following:

a. Imported from off-site borrow areas,

b. Processing plants.

2. Provide materials as indicated or as may be necessary to complete the Work at no additional cost to the Owner, unless a unit price item is included for trench backfill materials in the bidding schedule.

3. Provide materials as indicated in the Schedule in PART 3.

4. Soils unsuitable for use as trench backfill materials:

a. Soils classified under ASTM D2487 categories Pt, OH, CH, MH, or OL; or soils that contain classifications Pt, OH, CH, MH, or OL in combination with any other soil classification, such as CH/CL.

b. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use, are highly expansive, or are unstable or "pump", regardless of the degree of compaction.

c. Soils that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable Regulations.

d. Soils that contain greater concentrations of chloride or sulfate ions, or have a soil resistivity or pH less than the existing on-site soils.

e. Topsoil, except as allowed below.

f. Soils containing rocks, stones, or boulders larger than specified.

g. Soils that contain more than 5 percent organic matter when tested in accordance with ASTM D2974.

5. Crushed Rock: In accordance with Section 02300.

6. Sand: In accordance with Section 02300.

B. Controlled Low Strength Material (CLSM): In accordance with Section 02081.

C. Aggregate Base: Class 2 aggregated base as specified in Section 02722.

D. Clay:

1. On-site or off-site clay material free of organic materials or rocks.

2. Permeability: Not greater than 1x10-6 cm/sec when tested in accordance with ASTM D2434.

3. Permeable Backfill: In accordance with Section 02300.

E. Structure Backfill Material:

1. General: Granular, low- to non-expansive soil.

2. Plasticity index: 12 or less.

3. Liquid limit: 30 or less.

4. Comply with the grading shown in the following table:

Sieve Size	Percentage Passing
6-inch	100
3-inch	95-100
No. 200	15-50

F. Concrete: In accordance with Contract drawings.

G. Cement Slurry Backfill:

1. Slurry cement backfill: Provide a fluid workable mixture of aggregate, cement, and water.

2. Cement: In accordance with Contract drawings, except testing is not required.

3. Water: Free from oil, salts, and other impurities that adversely affect the backfill.

4. Aggregates: Select one of the following:

   a. Commercial-quality concrete sand

   b. Excavated or imported material in any combination, free of organic material and other deleterious substances and complying with the grading requirements shown in the following table:

Sieve size	Percentage passing
1-1/2"	100
1"	80–100
3/4"	60–100
3/8"	50–100
No. 4	40–80
No. 100	10–40

5. Proportion slurry cement backfill by weight or volume. Use at least 188 pounds of cement per cubic yard. Use sufficient water to produce a fluid workable mix that flows and can be pumped without segregation during placement.

6. Mix materials thoroughly by machine. Use a pugmill, rotary drum, or other authorized mixer. Mix until cement and water are thoroughly dispersed.

2.02 SOURCE QUALITY CONTROL

A. Submit samples of all trenching materials used in the Work for testing by the Owner.

B. Frequency of Sampling of Imported Material: After initial testing demonstrates that the proposed borrow material meets the specified requirements, obtain and submit one additional sample for every 500 cubic yards of imported material.

PART 3 - EXECUTION

3.01 EXISTING UTILITY LOCATIONS

A. Perform subsurface investigations to locate existing underground utilities in accordance with Section 02200.

3.02 REMOVAL AND REPLACEMENT OF PAVEMENT

A. In paved areas, remove and replace pavement as follows unless otherwise indicated:

1. Saw cut existing pavement along each side of the trench.

2. Remove and dispose of the pavement lying within the limits of the saw cuts and from adjoining areas damaged by the cutting, removal, excavation and backfilling operations.

3. During subsequent trench excavation and backfill activities, minimize disturbance of the adjoining pavement.

4. Refer to drawings and Section 01140 for additional pavement removal and replacement requirements.

3.03 TRENCH EXCAVATION

A. General Requirements

1. Stabilize and support all faces of the trench excavation.

2. Clear, grub, and strip construction area as necessary to remove all vegetation and top soil as specified in Section 02200.

B. Open Trenches

1. Open Trench Limitations: Unless otherwise indicated or required by the Agency having jurisdiction limit open trenches as follows:

2. Travelled Way plus 3 feet either side:

   a. Do not open more than 100 lineal feet of excavated trench at any one time during the Work shift.

   b. Up to 50 feet of trench as measured at the surface may remain open during any non-work shift, provided:

      1) The entire trench opening is plated with steel plates, secured to avoid movement, and the edges backfilled with temporary pavement to provide a smooth transition.

      2) Shoring is installed to prevent collapse of the trench excavation.

3. Paved surfaces including road shoulders:

   a. Do not open more than 100 lineal feet of excavated trench at any one time during the Work shift.

   b. Up to 50 feet of trench as measured at the surface may remain open during any non-work shift provided the open trench is adequately plated, and the trench adequately shored.

4. Open areas: Do not open more than 100 lineal feet of excavated trench at one time.

5. Open Trench Safety Requirements:

   a. Erect traffic barricades and warning lights meeting safety requirements of the City where open trench is within 12 feet of any travelled way.

   b. Erect signs to warn oncoming vehicles of rough road or steel plates in road, as appropriate.

   c. Provide fencing or warning tape to protect the public from open trench in open areas.

C. Trench Excavations

1. Excavate trenches and maintain excavation such that pipe and pipeline accessories are installed in an open trench.

2. Excavate to subgrade elevation and to trench width dimensions indicated on the Drawings.

3. Excavate all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution of the trenching Work unless otherwise indicated.

4. Where pipelines are to be installed in embankments, fills, or structure backfills, construct fill to a level at least one foot above the top of the pipe before the trench is excavated.

5. Trench shield:

   a. If a moveable trench shield is used during excavation operations widen the trench width so that the shield is free to be lifted and then moved longitudinally without binding against the trench sidewalls.

   b. If the trench walls cave in or slough, the trench shall be excavated as an open cut excavation with sloped sidewalls or with trench shoring, as indicated and as required by the pipe structural design.

D. Trench Bottom: Excavate and shape trench bottoms to provide uniform subgrade for placement of Bedding Material.

1. Unsuitable Hard Trench Bottom: If bottom of excavation is found to consist of rock or any material that cannot be excavated to provide uniform bearing surface:

   a. Notify Engineer of the conditions encountered and obtain concurrence that an unsuitable trench bottom condition is present.

   b. Remove such rock or other material to a depth of not less than 6 inches below the original design elevation of the bottom of the trench.

   c. Place bedding material or aggregate base course material to restore the trench bottom to the original design elevation. Place in lifts not exceeding 8 inches in un-compacted thickness and compact to 90 percent of maximum dry density.

2. Unsuitable Soft Trench Bottom: If bottom of excavation is found to consist of soft or unstable material which is incapable of properly supporting pipe:

   a. Notify Engineer of the condition encountered and obtain concurrence that an unsuitable trench bottom condition is present.

   b. Remove such material to a depth and for the length required, as determined by the Engineer.

   c. Place bedding material or aggregate base course material to restore the trench bottom to the original design elevation. Place in lifts not

exceeding 8 inches in un-compacted thickness and compact to 90 percent of maximum dry density.

3. Over-excavation

   a. Over-excavation to a depth 6 inches or less below the design trench bottom shall be done at no additional cost to the Owner.

   b. When the over-excavation ordered by Engineer is greater than 6 inches below the limits shown, additional payment will be made to Contractor. Additional payment will be made under separate unit price bid items for over-excavation if such bid items have been established. Otherwise, payment will be made in accordance with a negotiated price.

   c. Measurement and Payment:

      1) Measurement of quantities for payment of over-excavation will be by calculation by Engineer of the volume of materials removed as additional excavation, including additional material that must be excavated from slopes. Such calculation shall be based on the difference between dimensions before and after the additional excavation work. No compensation will be made for removal of materials beyond the limits of the additional excavation ordered by Engineer or for materials which may come into the excavation from outside the designated limits. No compensation will be made for removal of materials that are outside of the minimum horizontal dimensions indicated, even if Contractor has excavated wider than the minimum indicated.

      2) Payment for over-excavation will be made by the cubic yard. The payment shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in excavating and backfilling the over-excavation completely, to a level at the bottom of the pipe bedding indicated. Payment shall also include full compensation for the removal and disposal of the excavated materials, import and installation of the backfill materials, control of water in the excavation, excavation support, and all costs associated with the interruption of construction operations during the review of the foundations, excavation, backfill, and all other operations required for, or as a result of, over-excavation.

4. Over-excavation not ordered by the Engineer:

   a. Any over-excavation carried below the grade ordered or indicated, shall be backfilled to the required grade with the indicated material and compaction. Such work shall be performed by Contractor at no additional cost to Owner.

3.04 EXCAVATION FOR MANHOLES, VAULTS AND OTHER PIPELINE STRUCTURES.

A. Unless otherwise indicated, provide excavations sufficient to leave at least 12 inches clear between structure outer surfaces and the face of the excavation or any shoring which may be used to support the face of the excavation.

B. Excavate to the subgrade soils beneath the bottom of the structure or bottom of crushed rock layer where indicated.

C. Scarify the top subgrade soils to a depth of 12 inches, moisture condition, and re-compact to 90 percent of maximum dry density.

3.05 EXCAVATION IN VICINITY OF TREES

A. Except where trees are indicated to be removed, protect trees from injury during construction.

B. Do not cut tree roots over 2 inches in diameter without permission of the Engineer.

C. Support trees during excavation by means approve by the Engineer.

3.06 BEDDING ZONE

A. Bedding Material: As scheduled herein or as indicated on the Drawings

B. Depth of Bedding Material: As indicated on the Drawings.

C. Place Bedding Material in a single lift, and at uniform density, with minimum possible compaction. Grade material to allow installation of the pipe at the design elevations.

D. Depressions for Assembly of Joints

1. Dig holes for bell or coupling assembly after Bedding Material has been placed at the trench bottom and fine graded to the design elevation.

2. Create sufficient width and depth to provide ample room for tightening bolts, welding, or other joint assembly activities.

3. Excavate holes only as necessary in making joints. Ensure that pipe rests upon prepared trench bottom and is not supported by any portion of the joint.

3.07 PIPE ZONE

A. Pipe Zone Material: As scheduled herein or as indicated on the Drawings.

B. Dimensions of Pipe Zone Material: As indicated on the Drawings.

C. After the pipe is laid, place material within the Pipe Zone in lifts:

1. Place backfill only after all water is removed from the excavation and the trench sidewalls have been dried to a moisture content suitable for compaction.

2. Immediately prior to placing backfill materials remove all loose, sloughing, or caving soils and rock materials from the trench.

3. Place in lifts not exceeding 8 inches in un-compacted thickness and compact to 90 percent of maximum dry density. Maintain level backfill on each side of pipe.

4. Do not dump backfill materials directly on the pipe.

D. Pipe Displacement

1. Take necessary precautions in placement and compaction of to prevent displacement of piping.

2. In the event there is movement of the pipe, excavate and re-lay the pipe.

E. Consolidation:

1. Do not use water-settling methods to consolidate trench backfill materials.

2. Use mechanical means, shovel slicing or vibratory compaction, to compact granular backfill materials under pipe haunches.

3.08 TRENCH ZONE

A. Trench Zone Material: As scheduled herein or as indicated on the Drawings.

B. Dimensions of Trench Zone Material: As indicated on the Drawings

C. Backfill voids that may form when removing shoring and bracing.

D. Do not use water-settling methods to consolidate Trench Zone Material.

E. Under Existing Crossing Pipes or Conduits Larger than 3 Inches in Diameter

1. Backfill from the top of the Pipe Zone to the spring line of the intersecting pipe or conduit with Aggregate Base or Pipe Zone material. Place in lifts not exceeding 8 inches in compacted depth and compact to 90 percent of maximum dry density.

2. Extend Pipe Zone material 2 feet on either side of crossing pipe or conduit to 6 inches above the top of the crossing pipe.

3. Backfill remainder of trench as described in this Section.

3.09 FINAL BACKFILL ZONE

A. Unless indicated otherwise on the Drawings, restore the Site to the topography that existed prior to construction by excavation, compaction, finish grading and other earthwork operations, as necessary, for the areas affected by construction.

B. Backfill with stockpiled topsoil in all areas where the original topsoil was removed as part of the site preparation and construction activities.

C. Restore all drainage swales and water courses to their original alignments and grades.

D. Install and maintain for a period of at least one year following completion of construction in any area, the facilities and management practices required by the Project Storm Water Pollution Prevention Plan, if any.

E. Install and maintain for a period of at least one year following completion of construction in any area, the measures required by the environmental permitting Drawings, permits, and approval documents of the agencies that have issued permits for construction of the Project.

F. Inside road rights-of-way:

1. Unless otherwise indicated on the Drawings or required by the agency having jurisdiction of the road right-of-way, complete trench backfill as follows:

a. Place in lifts not exceeding 12 inches in un-compacted depth.

b. Compact to 90 percent of maximum dry density except compact to 95 percent the upper 24 inches below the finished grade.

c. Replace aggregate base course to match existing aggregate base course thickness.

d. Replace final surface as indicated on the Drawings, match existing thickness, or as required by the agency having jurisdiction of the right-of-way, whichever is greater.

G. Outside road rights-of-way:

1. Areas with unpaved surfaces:

a. Place final backfill in lifts not exceeding 18 inches in un-compacted depth and compact to 85 percent of maximum dry density.

b. In Open Areas, replace topsoil with material that was removed and stockpiled prior to trench excavation.

2. Paved areas or driveways:

a. Backfill in lifts not exceeding 12-inches in un-compacted depth and compact to 90 percent maximum dry density except compact the upper 12 inches to 95 percent.

b. Replace final surface as indicated on the Drawings or match existing thickness, whichever is greater.

c. Replace driveway materials in kind.

d. Match pre-construction condition or better.

e. Smooth and compact material as required to create a smooth and firm driving surface.

3.10 CONCRETE PIPE ENCASEMENT

A. Provide concrete pipe encasement where indicated on the Drawings.

B. Concrete: 2,000 psi

C. Provide temporary bulkheads to contain concrete at each end of encasement. Remove temporary bulkheads after concrete has set.

D. Install reinforcing steel, where indicated, in accordance with Contract drawings.

E. Mix and place concrete in accordance with Contract drawings.

F. Control placement of concrete to prevent movement of the pipe from either displacement or buoyancy forces.

G. Support pipeline on concrete blocks, sand bags, or pre-mixed cement bags unless otherwise noted. Place supports a minimum of 10 feet on center.

H. Maintain groundwater removal, as necessary, at least until completion of concrete placement.

I. Do not place backfill on top of concrete within 4 hours of the completion of concrete placement.

3.11 CEMENT SLURRY BACKFILL

A. Provide cement slurry backfill where indicated on the Drawings.

B. Provide temporary bulkheads to contain cement slurry at each end of cement slurry backfill segments. Remove temporary bulkheads after slurry has set.

C. Control placement of cement slurry backfill to prevent movement of the pipe from either displacement or buoyancy forces.

D. Support pipeline on concrete blocks, sand bags, or pre-mixed cement bags unless otherwise noted. Place supports a minimum of 10 feet on center.

E. Maintain groundwater removal, as necessary, at least until completion of cement slurry backfill placement.

F. Do not place backfill on top of cement slurry backfill within 4 hours of the completion of cement slurry backfill placement.

3.12 STRUCTURE BACKFILL

A. Provide Structure Backfill material within 12-inches of all structures to be backfilled unless otherwise indicated.

B. Place a 6-inch layer of 3/4-inch or 1-inch Crushed Rock below all structures, unless otherwise indicated.

C. Do not drop backfill upon any structure or pipe.

D. Confirm concrete structures have attained sufficient strength to withstand the backfill loads imposed prior to placing backfill.

E. Do not place backfill around water retaining structures until structures have been tested and approved for backfill. Fill structures with water during backfill operations.

F. Place backfill after all water has been removed from the excavation and the excavation sidewalls and subgrade soils have dried to a moisture content suitable for compaction.

G. Remove all loose, sloughing, or caving soils and rock materials prior to placement of backfill.

H. Place geotextile fabric as indicated.

I. Promptly after removal, fill voids created by the extraction of sheetpile or shoring with sand-cement grout.

J. Place backfill and spread evenly in layers so that when compacted layers do not exceed thickness indicated.

K. Thoroughly mix layers as necessary to promote uniformity of material in each layer.

L. Add water to backfill material where moisture content is below the optimum moisture content and mix with the soil until the proper moisture content is achieved throughout the soil layer.

M. Compact backfill to 90 percent of maximum dry density except compact to 95 percent the upper 24 inches below the finished grade.

3.13 COMPACTION REQUIREMENTS

A. Compaction requirements specified herein are in-place densities of compacted backfill.

B. Initial Trench Backfill Compaction Demonstration

1. Demonstrate adequacy of compaction equipment and procedures before exceeding 500 lineal feet of trenching work.

2. Continued Compaction Requirements: When specified degree of compaction is achieved, proceed with trenching and backfilling activities using the established equipment and procedures.

3.14 DISPOSAL OF SPOILS

A. Dispose of spoils and unsuitable materials in a lawful manner at an off-site location.

B. Do not dispose of spoils within temporary or permanent easements.

C. A spoils disposal area has not been identified for this project. It is Contractor’s responsibility to identify spoils disposal areas and to negotiate all agreements necessary and pay all costs to dispose of spoils.

D. Obtain written permission and landowner agreements that allows the disposal of spoils and contains language that states that Owner, Engineer, and Design Consultant shall not be liable for any claims or damages resulting from Contractor's use of properties for disposal of spoils.

E. Prior to removal of any materials from the project site, provide copies of permits, landowner agreements, and approvals to Engineer.

3.15 FIELD QUALITY CONTROL

A. Cost of compliance testing: By Contractor.

B. Frequency of testing: Periodic compliance tests will be made by the Engineer to verify that compaction is meeting requirements specified.

C. Compaction Testing:

1. Coordinate compaction testing and compliance with agency having jurisdiction over the Work within the public right-of-way.

2. Submit copies of compaction testing results to the Owner.

3. If compaction fails to meet specified requirements, perform remedial work by one of the following methods:

a. Remove and replace backfill at proper density.

b. Bring density up to specified level by other means acceptable to the Engineer.

c. Redo trench backfill compaction demonstration and demonstrate compaction process achieves required results.

D. Frequency of trench backfill compaction confirmation testing:

1. Each test location: Perform tests for each type or class of backfill from bedding to finish grade, excluding controlled low strength material (CLSM) and concrete slurry backfill

2. Open fields: 1 tests every 1,000 linear feet.

3. Non-paved roadways: 1 tests every 500 linear feet.

4. Crossing paved roadways: 2 tests at each crossing.

5. Inside road rights-of-way:

a. 1 test every 300 linear feet.

b. As required by the Agency having jurisdiction over the right-of-way.

3.16 SCHEDULE

A. Construct pipeline using materials specified in the following schedule. Where options are provided, Contractor may select materials from the materials listed.

1. Bedding Zone:

a. Class 2 Aggregate Base (3/4”)

b. Sand: Required for plastic pipe

c. Controlled Low Strength Material: Required for pipes 18-inch and greater in diameter and pipes with less than 2.5 feet of cover.

2. Embedment Zone:

a. Class 2 Aggregate Base (3/4”)

b. Controlled Low Strength Material: Required for pipes 18-inch and greater in diameter and pipes with less than 2.5 feet of cover.

3. Trench Zone:

a. Class 2 Aggregate Base (3/4”)

b. Controlled Low Strength Material: Required for pipes 18-inch and greater in diameter and pipes with less than 2.5 feet of cover.

B. Structure Backfill:

1. Bedding:

a. Crushed Rock (1- or 3/4-inch)

b. Class 2 Aggregate Base.

2. Structure backfill:

a. Structure Backfill Material

b. Class 2 Aggregate Base.

END OF SECTION

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SECTION 02722

AGGREGATE BASE COURSE MATERIAL

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Aggregate base course material and placement.

1.02 DEFINITIONS

A. Completed Course: Compacted, unyielding, free from irregularities, with smooth, tight, even surface, true to grade, line, and cross-section.

B. Completed Lift: Compacted with uniform surface reasonably true to cross-section.

1.03 STANDARD SPECIFICATION

A. State of California Department of Transportation Standard Specifications (Caltrans), 2015.

1.04 SUBMITTALS

A. Product Data: Source, gradation, and testing data records for aggregate base course material previously produced by the supplier, which demonstrates compliance with the specified gradation and physical requirements.

1.05 DELIVERY, STORAGE AND HANDLING

A. Storage and Protection: Protect from segregation and excessive moisture during delivery, storage, and handling.

1.06 QUALITY ASSURANCE

A. Material and Compaction Testing

1. Source Testing of Materials: Provided and paid for by the Contractor

2. Field Testing for Compaction: Provided and paid for by the Owner

B. Compaction Testing

1. In-place Density: Density of aggregate base course material that has been placed and compacted in the field, then tested in conformance with ASTM D6938 to determine density relative to the maximum density.

2. Maximum Density: Density obtained in the laboratory when tested in accordance with ASTM D1557.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Aggregate: Clean, hard, durable particles consisting of the any combination of the following:

1. Broken stone
2. Crushed gravel
3. Natural rough surfaced gravel
4. Sand
5. Processed reclaimed asphalt concrete, portland cement concrete (PCC), lean concrete base (LCB), or cement treated base (CTB).

B. Use either 1-1/2-inch or 3/4-inch aggregate grading unless otherwise indicated. Do not change grading without authorization from the Engineer.

C. Conform to the following gradation when tested in accordance with ASTM C136:

Sieve Sizes (Square Openings)	Percent by Weight Passing Sieve 3/4” Maximum	Percent by Weight Passing Sieve 1-1/2” Maximum
2”	-	100
1-1/2”	-	90-100
1-inch	100	-
3/4-inch	90-100	50-85
No. 4	35-60	25-45
No. 30	10—30	10-25
No. 200	2-9	2-9

A. Durability Index (ASTM D3744): 35 minimum.

B. Sand Equivalent (ASTM D2419): 25 minimum.

C. R-Value (ASTM D2844): 78 minimum.

PART 3 - EXECUTION

3.01 PLACEMENT

A. Obtain Engineer's acceptance of subgrade before placement of base course.

B. Do not place aggregate base material on soft, muddy or frozen subgrade.

C. Moisture condition, spread and compact aggregate base course material to the lines, grades and dimensions indicated on the Drawings and in accordance with applicable sections of Caltrans Section 26.

1. Do not haul material over surfacing in process of construction.

2. Spread and distribute material to provide the required density, depth, grade and dimensions with allowance for subsequent lifts.

3. Produce an even distribution of material without segregation. Should segregation occur, modify or change the spreading procedure to correct segregation problems and to result in uniformity in grading.

3.02 COMPACTION REQUIREMENTS

A. Compact aggregate base course material to obtain an In-Place Density of 95 percent of maximum density unless otherwise indicated.

B. Commence compaction effort by starting at the outer edges of the layer and continue toward the center.

C. Apply water as needed to obtain required In-Place Density.

D. Place and compact each lift to required density before succeeding lift is placed.

E. Blade or otherwise work surfacing as necessary to maintain grade and cross-section at all times, and to keep surface smooth and thoroughly compacted.

3.03 TOLERANCES

A. Structure subgrade: Plus or minus 0.05-foot of the design elevation.

B. Pavement subgrade: Plus or minus 0.05-foot of the design elevation.

C. Aggregate Base surface grade: Plus or minus 0.05-foot of the design elevation.

3.04 FIELD QUALITY CONTROL

A. Contractor's compaction testing responsibilities:

1. Accomplish specified degree of compaction.

2. Undertake and control compaction effort by confirmation tests to verify that the compaction work complies with the specified degree of compaction.

3. Pay for compaction testing services and submit compaction test reports to the Engineer.

B. Frequency of Compaction Testing

1. Structures: Make one compaction test for each 50 cubic yards of aggregate base course material placed, with a minimum of one compaction test per structure.

2. Roadway and Paved Areas: Make one test every 1500 square feet of pavement.

END OF SECTION

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SECTION 02740

ASPHALT PAVING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for constructing asphalt paving shown.

B. Work includes, but is not necessarily limited to, earthwork, scarifying and preparing the subgrade, placing and compacting aggregate base, applying prime coat and tack coat, placing and compacting asphalt concrete, and all related work.

1.02 REFERENCED STANDARDS

A. State of California Department of Transportation Standard Specifications (Caltrans), 2015.

1.03 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 02300 – Earthwork
3. Section 02071 – Geotextile Fabric
4. Section 02722 – Aggregate Base Course Material

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Manufacturer's Data or Certificate of Compliance

1. Aggregate base
2. Prime coat
3. Tack coat
4. Asphalt design mix
5. Seal Coat

C. Furnish a certificate of compliance signed by the manufacturer prior to the use of any asphalt materials.

1. The certificate shall state that the material complies with the requirements of these Specifications.
2. Furnish a certificate with each lot of material delivered to the site with the lot certified clearly identified in the certificate.
3. Provide certificates of compliance for each type of asphalt product used.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide materials in accordance with:

1. Caltrans Specifications, as modified by this Section.

2.02 CLASS 2 AGGREGATE BASE

A. Class 2 aggregate base: As specified in Section 02722.

2.03 PRIME COAT

A. State Standard Specifications, Section 93

B. Grade SC-70

2.04 TACK COAT

A. Caltrans Specification, Section 39 and 94

B. Grade SS-1h asphalt emulsion.

2.05 ASPHALT CONCRETE

A. Hot Mixed Asphalt Concrete Job Mix Formula: Caltrans Specifications, Section 39 for Type A, Asphalt Concrete (1/2-inch maximum aggregate, medium grading).

B. Asphalt Binder: Caltrans paving asphalt, Caltrans Specifications, Section 92

1. PG 64-10.

2.06 SEAL COAT

A. Caltrans Specification, Section 37 and 94

B. Grade SS-1, SS-1h or CSS-1h asphalt emulsion.

2.07 HEADER BOARD

A. 100% post-consumer recycled HDPE plastic.

1. UV stabilized formula resistant to fading from sunlight.

2. Size as shown on Drawings

3. Color: Brown

4. Textured, wood-grained surface

5. Furnish with minimum 1 (one) stake every three feet.

PART 3 - EXECUTION

3.01 PAVEMENT

A. Construct to the line, grade, and section indicated and in accordance with referenced State Specifications.

B. Sawcut existing asphalt paving that is adjacent to new pavement.

C. Prepare subgrade material per Section 02300.

D. Prepare aggregate base course in accordance with Section 02722.

E. Install geotextile fabric per Section 02071.

F. Apply prime coat to the requirements of Caltrans Specifications, Section 93.

G. Apply tack coat at a minimum residual rate specified for the underlying surface condition as shown in Caltrans Specifications, Section 39-2. Apply tack coat to all adjoining vertical surfaces no more than 8 hours prior to paving.

H. Place asphalt concrete to the requirements of Caltrans Specifications, Section 39, and Section 22.

1. Install in lifts a minimum of 2-inches thick unless otherwise indicated.

2. Install final lift at a maximum thickness of 2 inches.

I. Density of finished paving: not less than 91% nor greater than 97% of maximum theoretical density as determined by California Test 309 (CTM 309)

J. Tolerance of final grade

1. Not more than 0.05 foot from the elevations indicated on the drawings

2. All areas graded to drain

3.02 FOG SEAL

A. Apply asphaltic emulsion for fog seal coat to the requirements of Caltrans Specifications, Section 37 and Section 22.

3.03 HEADER BOARD

A. Place at all limits of paving not abutting a concrete structure.

B. Attached to plastic stakes with metal screws.

3.04 TESTING

A. Contractor to provide the following Quality Control Testing

1. Aggregate Gradation

a. Test Method: California Test 202

b. Minimum sampling and testing frequency: 1 per 500 tons but no less than per day.

c. Point of Sampling: California Test 125

2. Asphalt binder content %

   a. Test Method: California Test 379 or 382

   b. Minimum sampling and testing frequency: 1 per 1000 tons but no less than per day.

   c. Point of Sampling: Loose mix behind paver, see California Test 125.

3. Smoothness

   a. Contractor to test in conformance to the requirements of Caltrans Specifications, Section 39-2.01.

   b. Owner may conduct parallel smoothness testing.

   c. If the top layer of pavement does not comply with the smoothness specifications, Contractor to correct in conformance with Caltrans Specifications, Section 39-2.01. No compensation will be made for smoothness correction.

END OF SECTION

SECTION 03301

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for cast-in-place concrete work.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01330 – Submittals

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Shop Drawings

1. Reinforcing Steel: Prepare shop fabrication and field installation drawings in accordance with CRSI Manual of Standard Practice and ACI SP.

2. Layout drawings for construction joints.

C. Product Data: Waterstops, curing, form release agent compound data.

D. Concrete Mix Design: Data on the concrete mix, including aggregate gradations and admixtures, in accordance with ASTM C94.

E. Quality Control Submittals

1. Manufacturer's application instructions for curing compound.

2. Ready-mix delivery tickets for each truck in accordance with ASTM C94.

1.04 QUALITY ASSURANCE

A. Supplier Qualifications: A minimum of 5 years' experience manufacturing ready-mixed concrete and that complies with ASTM C94 for production facilities and equipment.

B. Source Limitations: Use the same brand of cement from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

C. Concrete and Reinforcement: Unless otherwise specified, meet the requirements of ACI 301 and 318.

D. Hot Weather Concreting: Conform to ACI 305R.

PART 2 - PRODUCTS

2.01 FORMWORK

A. Exposed Areas: Use hard plastic or finished plywood.

B. Unexposed Areas: Use new ship lap or plywood.

C. Earth cuts may be used for forming footings.

2.02 CONCRETE

A. Ready-mixed meeting ASTM C94, Option A.

B. Portland Cement: ASTM C150, Type II.

C. Aggregates: Furnish from one source.

1. Natural Aggregates

a. Free from deleterious coatings and substances in accordance with ASTM C33, except as modified herein.

b. Free of materials and aggregate types causing pop outs, discoloration, staining, or other defects on surface of concrete.

2. Non-Potentially Reactive: In accordance with ASTM C33, Appendix XI, paragraph X1.1.

3. Aggregate Soundness: Test for fine and coarse aggregates in accordance with ASTM C33 and ASTM C88 using sodium sulfate solution.

4. Fine Aggregates

a. Clean, sharp, natural sand.

b. ASTM C33.

c. Materials Passing 200 Sieve: 4 percent maximum.

d. Limit deleterious substances in accordance with ASTM C33, Table 1 with material finer than 200 sieve limited to 3 percent, coal and lignite limited to 0.5 percent.

5. Coarse Aggregate

a. Natural gravels, combination of gravels and crushed gravels, crushed stone, or combination of these materials containing no more than 15 percent flat or elongated particles (long dimension more than five times the short dimension).

b. Materials Passing 200 Sieve: 0.5 percent maximum.

D. Admixtures: Do not use admixtures that contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Air-Entraining: ASTM C260.

2. Water-Reducing: ASTM C494, Type A or D.

3. Superplasticizers: ASTM C494, Type F or G.

4. Fly Ash: ASTM C618, Class C or F.

5. Color Pigments: Inert mineral or metal oxide pigments, natural or synthetic; resistant to lime and other alkalies.

E. Concrete Mix Design

1. Minimum Compressive Field Strength: 4,000 psi at 28 days when cured and tested in accordance with ASTM C31 and C39.

2. Coarse Aggregate Size: 1-1/2 inches and smaller.

3. Slump Range: 3 to 5 inches.

4. Air Entrainment: Between 3 and 6 percent by volume.

5. Water Reducers: Use in concrete without plasticizers.

F. Proportions

1. Design mix to meet aesthetic and structural concrete requirements.

2. Water-cement ratio (water-cement plus fly ash ratio) shall control amount of total water added to concrete as follows:

Coarse Aggregate Size	W/C Ratio
1-1/2 inch	0.50
1 inch	0.45

3. Minimum Cement Content (Combined Cement Plus Fly Ash Content):

a. 517 pounds per cubic yard for concrete with 1-1/2 inch maximum size aggregate.

b. 540 pounds per cubic yard for 1 inch maximum size aggregate.

4. Increase cement content (combined cement plus fly ash content), as required meeting strength requirements and water-cement ratio.

5. Fly Ash Content: minimum 20 percent, maximum 50 percent by weight of total cement content.

G. Mixing: Minimum 70 and maximum 270 revolutions of mixing drum. Non-agitating equipment is not allowed.

2.03 REINFORCING STEEL

A. Deformed Bars: ASTM A615, Grade 60.

B. Welded Wire Reinforcement: ASTM A185, fabricated from as-drawn steel wire into flat sheets.

C. Bar Supports:

1. For Slab Rebar: Concrete blocks or plastic bar supports.

2. For Rebar in Walls, Beams, Columns, and Slabs Exposed to View: Galvanized steel chairs with plastic tips or plastic bar supports and side form spacers.

2.04 ANCILLARY MATERIALS

A. Curing Compound

1. Material: Solvent based containing chlorinated rubber solids in accordance with ASTM C309, with additional requirement that the moisture loss not exceed 0.030 gram per centimeter squared per 72 hours.

2. Manufacturers and Products

a. Master Builders Co.; Masterkure CR

b. Euclid Chemical Co.; Euco Super Floor Coat

B. Epoxy Bonding Agent and Adhesives (for Binding New Concrete to Existing Concrete)

1. Epoxies: Two component material for use on dry or damp surfaces and conforming to the requirements of ASTM C881.

2. Apply in accordance with manufacturer's recommendations.

3. Manufacturers: One of the following or equal:

a. Sika Armatec 110 EPOCEM; Sika Chemical Corporation.

b. CCS Bonder Paste LWL; Chemco Systems.

C. Waterstops

1. General: Place hydrophilic and/or rubber dumbbell type or center bulb type waterstops at construction joints and other joints as specified and indicated on the Drawings.

2. Hydrophilic Waterstops:

a. Use: For concrete repairs or when attaching new concrete to existing structures.

b. Manufacturers: One of the following or equal:

1) Greenstreak, Hydrotite CJ.

2) Tremco, Parastop II.

c. Installation: As indicated on the Drawings and in accordance with manufacturer's instructions.

3. Rubber Waterstops

a. Use: At new construction joints where indicated on the Drawings.

b. Material: PVC or rubber waterstops manufactured by one of the following, or equal:

1) Greenstreak.

2) Progress Unlimited.

3) Williams Products.

c. Size:

1) Construction and Contraction Joints. 6-inch flat dumbbell type.

2) Expansion Joints: 9-inch wide dumbbell with hollow center bulb.

D. Vapor Barrier

1. Material: 15 mil, multilayer plastic, 0.01 minimum permeance rating.

2. Manufacturers: One of the following or equal:

a. StegoWrap, Stego Industries.

b. Premoulded Membrane Vapor Seal with Plasmatic Corel, W. R. Meadows.

E. Form-Release Agent

1. Water-based, high solids content non-yellowing curing compound meeting requirements of ASTM C309 and C1315.

2. Moisture Loss: 0.40 kg/square m/72 hours maximum.

3. Capable of meeting moisture retention at manufacturer's specified application rate.

4. Manufacturers and Products:

a. Atlas; Bio-Guard.

b. Dayton Superior; Clear Strip J1EF.

PART 3 - EXECUTION

3.01 FORMWORK

A. Design, construct, erect, brace and maintain formwork in accordance with ACI 301.

B. Form Ties

1. Fixed conical or spherical type inserts that remain in contact with forming material and allow for dry packing of form tie holes.

2. Space ties to withstand pressures and to limit deflection of forms to acceptable limits.

3. Wire ties are not acceptable.

C. Construction

1. In accordance with ACI 347.

2. Make joints tight to prevent escape of mortar and to avoid formation of fins.

3. Brace as required to prevent distortion during concrete placement.

4. On exposed surfaces locate form ties in uniform pattern or as shown.

5. Construct so ties remain embedded in the wall with no metal within 1-inch of concrete surface when forms, inserts, and tie ends are removed.

D. Form Removal

1. Remove after concrete has attained 28 day strength, or approval is obtained in writing from Engineer.

2. Remove forms with care to prevent scarring and damaging the surface.

3.02 PLACING REINFORCING STEEL

A. Place reinforcing steel in accordance with CRSI Recommended Practice for Placing Reinforcing Bars.

B. Field bending or welding of reinforcing bars will not be allowed.

C. Bar Supports: Provide in sufficient quantity to prevent sagging and to support bars during concrete placement.

D. Splices and Laps

1. Top Bars: Horizontal bars placed such that 12 inches of fresh concrete is cast below in single placement.

2. Horizontal wall bars are considered top bars.

3. Bar lap splices shall conform to General Structural Notes on the Drawings.

4. Tie splices with 18-gauge annealed wire as specified in CRSI Standard.

3.03 PLACING CONCRETE

A. Place concrete in accordance with ACI 301.

B. Before placing concrete:

1. Check reinforcing steel for proper placement and correct discrepancies.

2. Remove excessive rust, mill scale, dirt, oil and other material from rebar that may adversely affect bonding to concrete.

3. Remove water from excavation and debris and foreign material from forms.

C. Before depositing new concrete on existing concrete, clean surface using sandblast or other mechanical means to obtain a 1/4 inch rough profile, and apply epoxy bonding agent in accordance with the manufacturer's instructions.

D. Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over 2 feet deep. Place within 1-1/2 hours after adding cement to mix.

E. Placement Limitations: 8 feet maximum vertical drop to final placement, when not guided with chutes or other devices to prevent segregation due to impact with reinforcing.

F. Hot Weather

1. Prepare ingredients, mix, place, cure, and protect in accordance with ACI 305R.

2. Maintain concrete temperature below 80 degrees F at time of placement, or furnish test data or provide other proof that admixtures and mix ingredients do not produce flash set plastic shrinkage, or cracking due to heat of hydration. Ingredients may be cooled before mixing to maintain fresh concrete temperatures at 80 degrees F or less.

3. Make provisions for windbreaks, shading, fog spraying, sprinkling, ice, or wet cover, or other means to provide concrete with temperature specified.

4. Maximum allowable temperature differential between reinforcing steel and concrete: Not greater than 20 degrees F at the time of concrete placement.

3.04 COMPACTION

A. Vibrate concrete as follows:

1. Apply approved vibrator at points spaced not farther apart than vibrator's effective radius.

2. Apply close enough to forms to vibrate surface effectively but not damage form surfaces.

3. Vibrate until concrete becomes uniformly plastic.

4. Vibrator must penetrate fresh placed concrete and into previous layer of fresh concrete below.

3.05 CONSTRUCTION JOINTS

A. Locate as shown or as approved.

B. Maximum Spacing Between Construction Joints: 40 feet, unless otherwise indicated.

3.06 CRACK CONTROL JOINTS

A. Provide crack control joints in concrete slabs on grade, curbs, gutters, sidewalks and other concrete flatwork as follows:

1. Install crack control joints by use of grooving tool on fresh concrete or saw-cut by use of a saw designed for crack control joints as soon as the concrete hardens sufficiently to support the saw, however, no longer than 12 hours after concrete placement.

2. Depth: 1/4 the thickness of the slab.

3. Frequency: Unless otherwise indicated,

a. At least 2 times the slab thickness in feet (6-inch slab = 12 foot on center).

b. Rectangular slabs: Maximum spacing 1-1/2 to 1

3.07 FINISHING FLOORS AND SLABS

A. Unexposed Slabs: Screed to true surface, bull float with wood float, and wood trowel to seal surface and to provide a uniform surface.

B. Exposed Slabs to Receive Grout: Screed to indicated elevation and leave without special finish.

C. Exposed Floors and Slabs: Screed to true surface and use bull float to form a uniform surface with minor texture then apply final surface finish.

D. Final Surface Finishes for Exposed Floors and Slabs: Apply final surface finish as scheduled.

1. Walkway finish: Apply to concrete surfaces that will be used for foot traffic such as walkways around basins and sidewalks. Apply steel trowel surface, then a light hairbroom finish to produce a profile that is parallel to the slab drainage.

2. Scratch Finish: Apply to surfaces receiving concrete floor topping and other bonded cementitious floor finishes, unless otherwise indicated on the Drawings. Use brushes or brooms with stiff bristles to produce ¼-inch deep scratches.

3. Float Finish: Apply to slabs of water-bearing basins and channels and to roof surfaces to receive membrane roofing. Use power-driven floats or hand floats to produce a surface that is uniform and smooth.

4. Trowel Finish: After applying float finish, trowel surface until surface is uniform in texture and appearance and free of trowel marks. Apply trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet or tile.

5. Non-slip Finish: After concrete has been screeeded level and slightly hardened, sprinkle abrasive onto surface, wood float into concrete, and trowel abrasive into surface to obtain the proper non-slip finish with the exposed abrasive.

E. Tolerances: Exposed surfaces shall not vary from level or true plane more than 1/4 inch in 10 feet when measured with a straightedge.

3.08 FINISHING AND PATCHING FORMED SURFACES

A. Unexposed Surfaces: Provide rough-formed concrete texture as imparted by form-facing material, fill form tie holes with nonshrink grout and grind off projections, fins, and rough spots.

B. Exposed Surfaces: Provide smooth-formed concrete texture as imparted by form-facing material, arranged in an orderly and systematic manner with a minimum number of seams. Fill form tie holes with nonshrink grout and grind off projections, fins, and rough spots. Where scheduled, apply rubbed surface as follows:

1. Smooth Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive to

produce a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes.

   a. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces.

   b. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout.

   a. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces.

   b. Compress grout into voids by grinding the concrete surface in a swirling motion, then finish the surface with a cork float.:

C. Patching Defective Areas: Patch defective areas and repair rough spots resulting from form release agent failure or other reasons to provide smooth uniform appearance.

1. Cut out honeycombed and defective areas.

2. Cut edges perpendicular to surface at least 1-inch deep. Do not feather edges. Soak area with water for 24 hours.

3. Finish surfaces to match adjacent concrete.

4. Keep patches damp for minimum 7 days or spray with curing compound to minimize shrinking.

3.09 PROTECTION AND CURING

A. Protect fresh concrete from direct rays of sunlight, drying winds, and wash by rain.

B. Keep concrete slabs continuously wet for a 7 day period. Intermittent wetting is not acceptable.

C. Use curing compound only where approved by Engineer. Cure formed surfaces with curing compound applied in accordance with manufacturer's directions as soon as forms are removed and finishing is complete.

1. Do not use curing compound on concrete surfaces that will be painted.

D. Remove and replace concrete damaged by freezing.

3.10 FIELD QUALITY CONTROL

A. Concrete Samples:

1. Provide concrete for making composite samples for testing slump, air content, and for making cylinders for determination of compressive strength.

2. Prepare samples in accordance with ASTM C172. Select trucks or batches of concrete on a random basis.

3. Samples may be obtained at the discharge chute of the truck or at the point of discharge into forms.

B. Sampling Frequency: One composite sample for each 100 cubic yards of structural concrete, or fraction thereof, of each concrete mixture placed in any one day.

C. Evaluation will be in accordance with ACI 301, Chapter 17 and Specifications.

D. Slump tests and concrete cylinders will be made by the Contractor. Contractor will handle cured test cylinders, transport to the testing laboratory and pay testing costs.

E. Enforcement of Compressive Strength Requirements:

1. Compressive strength of concrete will be considered acceptable if the following conditions are satisfied:

   a. Averages of all sets of 3 consecutive strength test results are greater or equal to the specified compressive strength.

   b. No individual strength test (average of 2 cylinders) falls below specified compressive strength by more than 500 pounds per square inch.

2. Whenever one, or both, of 2 conditions stated above is not satisfied, provide additional curing of affected portion of structure, then obtain test cores from the affected area.

   a. Obtain 3 test cores in accordance with ASTM C42 and ACI 318.

   b. Concrete will be considered acceptable if the average compressive strength of the 3 test cores is equal to at least 90 percent of the specified 28-day compressive strength and no single core is less than 80 percent of the specified 28-day compressive strength.

   c. Concrete will be designated as defective when the specified conditions are not achieved.

   d. Fill core holes with concrete.

3. Engineer may require the Contractor to strengthen defective concrete by means of additional concrete, additional reinforcing steel, or replacement of defective concrete, all of the Contractor's expense.

END OF SECTION

SECTION 03600

GROUT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Grout for uses other than masonry construction, including:

1. Dry pack grout
2. Cement grout
3. Nonshrink grout, non-metallic
4. Nonshrink grout, metallic
5. Pressure grout
6. Epoxy grout
7. Polymer concrete

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 03301 – Cast-in-Place Concrete

1.03 SUBMITTALS

A. Conform to Section 01330.

B. Product Data

1. Manufacturer's product data of all materials proposed for use in the Work.
2. Manufacturer's literature containing instructions and recommendations on the mixing, handling, placement and appropriate uses for each type of grout used in the Work

C. Laboratory Test Reports

1. Test reports on previously tested materials shall be accompanied by the manufacturer's statement that the previously tested material is the same type, quality, manufacture, and make as that proposed for use in this project.
2. Test reports are required for the following:

a. Cement
b. Aggregates
c. Bonding compounds
d. Admixtures

D. Certifications that all grout used on the project are free of chlorides or other chemicals that may cause corrosion.

1.04 QUALITY ASSURANCE

A. Field tests

1. Compression test specimens will be taken during construction from the first placement of each type of grout and at intervals thereafter as selected by the Owner to insure compliance with the Contract Documents.

2. The test specimens will be obtained, tested, and paid for by the Owner except the Contractor will be charged the cost of any additional tests on work which does not meet the Specifications.

3. Compression tests for grout and non-shrink grout:

a. Per ASTM C109.

b. Obtain three samples.

c. At a minimum test at 7 and 28 days.

4. Compression test for epoxy grout:

a. Per ASTM C579 Method B.

b. Obtain three samples.

c. At a minimum test at 7 days.

5. Remove and replace all grout that does not meet the Specification requirements at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 GENERAL

A. Use grouts indicated in the grout schedule whether called for on Drawings or not.

2.02 CEMENT GROUT

A. Portland cement ASTM C150 Type II or Type V

B. Low alkali, containing less than 0.60 percent alkalies.

C. Aggregate

1. Nonreactive and washed before use.

2. Fine Aggregate

a. Hard, dense, durable particles of either sand or crushed stone regularly graded from coarse to fine and shall conform to ASTM C33 as modified herein.

b. Gradation (ASTM C136): 100 percent by weight will pass a standard No. 8 mesh sleeve and no less than 45 percent by weight will pass a standard No. 40 mesh sieve.

c. Tolerance: The average of three consecutive tests fall within the limits listed below:

US standard sieve size	Permissible variation in individual tests, percent
30 or coarser	2.0
50 or finer	0.5

3. Meet the requirements of the following specifications:

Test	Test Method	Requirements
Organic Impurities	ASTM C40	Color lighter than standard
Amount of Material Passing No. 200 Sieve	ASTM C117	3% maximum by weight
Soundness	ASTM C88	10% maximum loss with sodium sulfate
Reactivity	ASTM C289	Innocuous aggregate
Sand Equivalent	ASTM D2419	Minimum 80

4. Admixtures

a. General

1) Compatible with the grout.

2) Do not use calcium chloride or admixtures containing calcium chloride.

3) Follow the manufacturer's recommendations for use.

4) Add separately to the grout mix.

b. Water Reducing Retarder

1) ASTM C494 Type D.

2) Manufactured by:

a) Master Builders MasterSet R 300,

b) Sika Corporation Plastiment,

c) Or equal.

c. Lubricant for Cement Pressure Grouting

1) Manufactured by:

a) Intrusion Prepakt Intrusion Aid,

b) Sika Intraplast N,

c) Or equal.

5. Water

a. Free from oil and deleterious amounts of acids, alkalies, and organic materials;

b. Do not use water containing more than 500 mg/1 of chlorides as Cl, nor more than 800 mg/1 of sulfates as SO_4;

c. Do not use water containing impurities that may cause a change of more than 25 percent in the setting time of the cement nor a reduction of more than five percent in the compressive strength of the grout at 14 days when compared with the result obtained with distilled water.

d. Do not use water for curing that discolors the grout.

D. Drypack Grout

1. A mixture of approximately one part cement, 1-1/2 to 2 parts sand, water reducing retarder, and sufficient water to make a stiff workable mix.

2. Consistency: Plastic and moldable but does not flow.

E. Cement Grout

1. Mixture of one part cement, two parts sand, proportioned by volume, admixtures for pressure grouting, and sufficient water to form workable mix.

2. Maximum slump: 4 inches.

2.03 PREPACKAGED GROUT

A. Non-shrink Grout

1. Cementitious non-shrink, non-metallic grout

2. Conform to ASTM C1107, Grades B and C.

3. Manufactured by:

a. Sika Corporation, SikaGrout 212

b. Five Star Products, Inc. Five Star Grout

c. Chemrex Inc. Masterflow 928

d. Euclid Chemical Co. High-Flow Grout

e. Or equal.

B. Epoxy grout bonding/grouting adhesive

1. Multi-purpose, two-component, 100% solids, moisture-tolerant, structural adhesive.

2. Conform to ASTM C881, Types I, II and V, Grade-2.

3. Manufactured by:

a. Sika Corporation, Sikadur 32, Hi-Mod

b. Chemrex Inc. MasterFlow 649

c. Or equal.

C. Epoxy grout paste adhesive

1. High modulus, two-component, moisture insensitive, 100 percent solids, thermosetting modified polyamid epoxy compound.

2. Paste form consistency capable of not sagging in horizontal or overhead anchoring configurations.

3. Conform to ASTM C881 Type 1, Grade 3

4. Heat deflection temperature: In excess of 130 degrees F.

5. Manufactured by:

   a. Chemrex Inc. Concresive Paste LPL

   b. Sika Corporation Sikadur Hi-Mod Series

   c. Adhesive Technology Corporation Ultrabond 1350

   d. Or equal,

D. Epoxy grout for pressure grouting

1. Two-component, 100% solids, moisture-tolerant, epoxy adhesive. Low-viscosity, high-strength adhesive formulated specifically for injection grouting.

2. Consistency as necessary to achieve complete penetration in hairline cracks and larger.

3. Conform to ASTM C881 Type 1 and 2, Grade 1.

4. Manufactured by:

   a. Sika Corporation Sikadur 52

   b. Chemrex Inc. Concresive LV1

   c. Adhesive Technology Corporation SLV 300 series

   d. Or equal.

E. Polymer concrete grout

1. Liquid binder and dry aggregate mixed together to make a mortar or grout of a consistency as necessary for the application.

2. Liquid binder: Chemical and oil resistant, stress relieved, low modulus, moisture insensitive, two-component epoxy-resin compound.

3. Consistency similar to lightweight oil for proper mixing with aggregate.

4. Conform to ASTM C881 Type 3 Grade 1,

5. Aggregate:

   a. Size and consistency compatible with recommendations of manufacturer of liquid binder for intended application.

   b. Keep aggregate oven dry in sealed packages until time of mixing.

6. Manufactured by:

   a. Sika Corporation Sikadur Lo-Mod series

   b. Adhesive Engineering Concresive 1470

   c. Adhesive Technology Corporation 400 series

d. Or equal.

2.04 PRESSURE GROUTING EQUIPMENT

A. Mixer and holdover agitator tanks

B. Designed to place grout at pressures up to 50 psi.

C. Provide gages to indicate pressure grout pressure during application.

D. Provide mixer with a meter capable of indicating to one-tenth of a cubic foot the volume of grout used.

PART 3 - EXECUTION

3.01 GENERAL

A. Conduct mixing, surface preparation, handling, placing, consolidation, and curing for prepackaged grouts according to the instructions and recommendations of the grout manufacturer.

B. Mix grouts in a mortar mixer.

C. Bonding compound for use with grout is specified in Section 03301.

D. Provide primer, if required, for polymer concrete, per manufacturer's recommendation.

3.02 DRYPACK GROUT

A. Roughen surfaces to be built up with drypack grout by brushing

B. Clean, and coat surface with bonding compound in conformance to Section 03301 before the application of the grout.

C. Apply drypack grout immediately following the application of the bonding compound in layers to the required thickness.

D. Finish the surface smooth.

E. Where construction joints are necessary, slope face of construction joints and clean and wet the existing grout before application is resumed.

F. Cure drypack grout in accordance with Section 03301.

G. Do not place drypack grout during freezing weather unless adequate protection is provided.

3.03 CEMENT GROUT

A. Except for the specialized equipment for pressure grouting, mixing and placing apparatus use equipment similar to that normally used for cast-in-place concrete.

B. Mix grout for a period of at least 1 minute.

3.04 NONSHRINK GROUT

A. Place in accordance with manufacturer's instructions.

3.05 EPOXY GROUT

A. Prime surface to be grouted in accordance with the grout manufacturer's instructions.

3.06 PRESSURE GROUTING

A. Prior to grouting, Wash clean surfaces and holes to be grouted, prior to grouting.

B. Washing is not required for grouting soil voids outside pipe cylinders or casing pipes.

C. Once commenced, continue grouting to completion without stoppage.

D. In case of breakdown of equipment, wash out the grouting system sufficiently to ensure fresh grout and adequate bond and penetration will occur upon restarting the grouting operation.

E. Maintain grout pressure until grout has set.

3.07 GROUT SCHEDULE

A. Use grout type indicated in the table below unless otherwise indicated.

Grout	Application
Drypack Cement Grout	Built-up surfaces, setting miscellaneous metal items and minor repairs.
Cement Grout	Filling nonbearing portions of equipment pads and pressure grouting.
Non-shrink Grout	Bearing surfaces of machinery and equipment bases, column base plates, and bearing plates, and setting handrail, guardrail, or fence posts in pipe sleeves.
Epoxy Grout	Reinforcing steel set in grout, repairing cracks in concrete, concrete repair.
Pressure Grout	Repairing cracks in concrete.
Polymer Cement Grout	Repair of concrete floors, patching.

END OF SECTION

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SECTION 05501

ANCHOR BOLTS AND ANCHORING DEVICES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Anchor bolts, concrete anchors, adhesive anchors, and other anchoring devices.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01330 – Submittals

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Product Data: Manufacturer's data for nuts, bolts, concrete anchors, chemical anchors and other fasteners.

C. Catalog data and ICBO reports for each type of anchor bolt.

1.04 QUALITY ASSURANCE

A. For applications that require special inspection in accordance with building codes, coordinate the progress of the Work with the required inspection activities.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Unless otherwise specified or indicated on the Drawings, materials of construction for anchoring devices shall conform to the following:

1. Anchor bolts and other anchoring devices, nuts and washers installed indoors: Type 304 stainless steel.

2. Anchor bolts and other anchoring devices, nuts and washers installed outdoors or in locations exposed to wastewater: Type 316 stainless steel.

a. Locations exposed to wastewater includes:

1) Below tops of walls of water-containing structures.

2) Underside of roof, slab or walkways of enclosed water-containing structures.

3) Dry side of walls on water-containing structures.

2.02 CAST-IN-PLACE ANCHOR BOLTS

A. Locations for use of cast-in-place anchor bolts:

1. In locations indicated on the Drawings.

2. To anchor engine-driven equipment and equipment with motors 3 horsepower and larger.

B. Cast-in-Place Anchor Bolts

1. Material: Stainless steel conforming to ASTM A320.

2. Minimum Length of Bolt: As indicated on the Drawings. When not indicated, provide bolt length such that the length of the embedded anchor is at least 10 bolt diameters.

3. Minimum length of 90-degree hook: 4 bolt diameters.

2.03 CONCRETE ANCHORS

A. Concrete Anchors: Drilled in place wedge-type anchors with threaded stud body, stainless steel expansion clip, nut and washer.

B. Materials: Type 304 or Type 316 stainless steel, depending upon installed location.

C. Code Compliance: Test in accordance with, and comply with requirements of, ASTM E488 and ICC-ES AC193.

D. Manufacturers: One of the following or equal:

1. Hilti Kwik Bolt 3.

2. ITW Redhead, Trubolt Wedge Anchor.

3. Powers Fasteners, Power-Stud SD4 or SD6.

4. Wej-It Corporation, Ankr-Tite Wedge Anchors.

2.04 STUDS

A. Material: Conforming to ASTM A108 with 50,000 pounds per square inch minimum yield strength, and 60,000 pounds per square inch minimum tensile strength.

B. Manufacturers: One of the following or equal:

1. Nelson Stud Welding Company, S3L Shear Connectors or H4L Concrete Anchors.

2. Stud Welding Products, Headed Concrete Anchors and Shear Connectors or Concrete Anchors.

2.05 ADHESIVE ANCHORS

A. Applications: Use for bonding threaded rods and concrete reinforcing bars to hardened concrete and grouted cement masonry. Do not use in overhead applications, in chlorine gas environments, or where anchor may be exposed to machine oil or diesel oil.

B. Code Compliance: Test in accordance with, and comply with requirements of, ASTM E488 and ICC-ES AC58.

C. Materials

1. Epoxy Adhesive: Two component, injectable epoxy adhesive.
2. Concrete Reinforcing Bars: Grade 60.
3. Threaded Rods: Type 304 stainless steel all-thread rod conforming to ASTM F593.

D. Manufacturers: One of the following or equal:

1. Hilti HVA Adhesive Anchor System.
2. ITW Redhead G5 Adhesive Anchoring System.
3. Powers Fasteners PE1000+ Epoxy Anchoring System.

PART 3 - EXECUTION

3.01 GENERAL ANCHORING REQUIREMENTS

A. Use equipment shop drawings, anchorage layout drawings, and anchor bolt layout templates to accurately position anchor bolts.

B. Install anchor bolts, concrete anchors and other anchoring devices with at least 2 threads projecting beyond the nut, but no more than 1/2-inch projecting beyond the nut.

C. Prior to installing nuts, coat threads of stainless steel bolts with material to prevent galling of threads.

1. Manufacturers: One of the following or equal:
   a. Never Seez Compound Corporation, Never-Seez.
   b. Oil Research, Inc., WLR No. 111.

D. Tighten nuts on anchor bolts, concrete anchors and other anchoring devices to the "snug-tight" condition, defined as tightness attained by a few impacts of an impact wrench or the full effort of a man using an ordinary wrench.

3.02 CAST-IN-PLACE ANCHOR BOLTS

A. Do not use expansion type concrete anchors or adhesive anchors as substitution for cast-in-place anchor bolts.

B. Accurately place anchor bolts to be embedded in concrete within the formwork and perpendicular to surface from which they will project. Secure in correct position while concrete is placed.

C. Do not allow anchor bolts to touch reinforcing steel. Where anchor bolts are within 1/4 inch of reinforcing steel, isolate with a minimum of 4 wraps of 10 mil polyvinyl chloride tape in area adjacent to reinforcing steel.

D. In anchoring machinery bases subject to heavy vibration, use 2 nuts, with 1 serving as a locknut.

E. Where bolts are indicated on the Drawings for future use, first coat thoroughly with non-oxidizing wax, then turn nuts down full depth of thread and neatly wrap exposed thread with waterproof polyvinyl tape.

F. Where indicated on the Drawings, set anchor bolts in metal sleeves having inside diameter approximately 2 inches greater than the bolt diameter and a minimum of 10 bolt diameters deep. Fill sleeves with grout when equipment is grouted in place.

3.03 CONCRETE ANCHORS AND ADHESIVE ANCHORS

A. Cast-in-place anchor bolts may be used in place of concrete anchors and adhesive anchors at Contractor's option.

B. Installation

1. Drill holes using concrete drill bits and impact type drill motors. Hole diameter shall be in accordance with the manufacturer's recommendations.

2. Clean drilled hole using compressed air to dislodge and remove drilling dust.

3. Accurately locate concrete anchors and set anchors with axis perpendicular to surfaces from which they will project.

4. Do not disturb adhesive anchors until cure time has elapsed.

5. Unless otherwise indicated on the Drawings or as required by structural calculations prepared by the equipment supplier, comply with minimum embedment lengths identified in the following table.

Minimum Embedment Lengths for Concrete and Adhesive Anchors

Diameter of Anchor or Bar, inches	Embedment Length for Concrete Anchors, inches	Embedment Length for Adhesive Anchors or Reinforcing Bars
1/4	1-3/4	As indicated on the Drawings
3/8	1-7/8	
1/2	2-1/4	
5/8	2-3/4	
3/4	3-1/4	
(1) Provide longer embedment where otherwise indicated		

END OF SECTION

SECTION 09960

HIGH PERFORMANCE COATINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Materials, surface preparation, application, curing and inspection on interior and exterior surfaces for industrial, high-performance coatings.

B. Furnish all labor, materials, tools and equipment required to perform surface preparation, coating work and inspection as specified. Perform all subsidiary and incidental work necessary to complete the work in conformance with the project requirements, to accomplish the approved end result of a totally protected and usable structure, including all attachments, accessories and appurtenances.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 01600 – Materials and Equipment
3. Section 01999 – Referenced Sections

1.03 GOVERNING STANDARDS AND RECOMMENDED PRACTICES

A. Standards and recommended practices listed (including the most recent update or version) shall govern the work unless otherwise specified in these specifications.

B. ASTM – American Society for Testing and Materials

1. ASTM C308, Standard Test Methods for Working, Initial Setting, and Service Strength Setting Times of Chemical-Resistant Resin Mortars
2. ASTM C496, Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
3. ASTM C531, Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
4. ASTM C579, Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
5. ASTM C580, Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes
6. ASTM C596, Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement

7. ASTM C868, Standard Test Method for Chemical Resistance of Protective Linings
8. ASTM C882, Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear
9. ASTM D638, Standard Test Method for Tensile Properties of Plastics
10. ASTM D790, Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
11. ASTM D1653, Standard Test Methods for Water Vapor Transmission of Organic Coating Films
12. ASTM D4417, Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel
13. ASTM D4541, Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
14. ASTM D4585, Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation
15. ASTM D4940, Detecting Contamination on Abrasive
16. ASTM D5402, Standard Practice for Assessing the Solvent Resistance of Organic Coatings Using Solvent Rubs
17. ASTM D6386, Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting

C. AWWA – American Water Works Association

1. AWWA D102, Standard for Painting Steel Water-Storage Tanks.
2. AWWA C652, Disinfections of Water Storage Facilities.

D. SSPC – The Society for Protective Coatings

1. SSPC- Vol. 1, Steel Structures Painting Manual, Good Painting Practice
2. SSPC- Vol. 2, Steel Structures Painting Manual, Systems and Specifications
3. SSPC-SP1, Solvent Cleaning
4. SSPC-SP2, Hand Tool Cleaning
5. SSPC-SP3, Power Tool Cleaning
6. SSPC-SP11, Power Tool Cleaning to Bare Metal
7. SSPC-SP15, Commercial Grade Power Tool Cleaning
8. SSPC-Guide 12, Illumination of Industrial Painting Projects
9. SSPC-PA 1, Shop, Field and Maintenance Painting
10. SSPC-PA 2, Measurement of Dry Coating Thickness with Magnetic Gauges
11. SSPC-PA, Guide 3 Guide to Safety in Paint Application

12. SSPC-AB1, Mineral and Slag Abrasives

13. SSPC-VIS 1, 02-12 Reference Photographs, Dry Abrasive Blast Cleaning

14. SSPC-VIS 3, 93-04 Visual Standards for Power and Hand-Tool Cleaned Steel

E. NACE International – National Association of Corrosion Engineers International

1. Joint NACE/SSPC-SP5/5 NACE #1 White Metal Blast

2. Joint NACE/SSPC-SP6/NACE #3 Commercial Blast

3. Joint NACE/SSPC-SP7/NACE #4 Brush-off Blast

4. Joint NACE/SSPC-SP10/NACE #2 Near White Metal Blast

5. Joint NACE/SSPC-SP12/NACE #5 Surface Preparation and Cleaning of Metals by Water Jetting Prior to Recoating

6. Joint NACE/SSPC-SP13/NACE #6 Surface Preparation of Concrete

7. NACE RPO178 Appendix C - Degrees of Surface Finishing of Welds

8. NACE RPO287 Field Measurement of Surface Profile

9. NACE SPO188 Discontinuity (Holiday) Testing of Protective Coatings

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Include the following items:

1. Coating manufacturer’s technical data on product and recommended use. Include the brand name and series number of all coatings to be used.

2. Coating manufacturer's surface preparation criteria, including recommended surface profile range after abrasive blasting.

3. Coating manufacturer's application instructions, equipment recommendation, temperature and humidity limitations, pot life and induction requirements, drying and curing times, and recoat cycle times. List recoat times and final cure at 35° F., 45° F., 55° F., 65° F. and 75° F. substrate temperatures. Provide manufacturer’s maximum and minimum material and substrate temperatures for proper application.

4. Contractor’s written program for over spray prevention.

5. Coating manufacturer’s Material Safety Data Sheets (MSDS) for Product to be used on the project, including solvents, additives, cleaners and thinners.

6. Abrasive supplier's certification that the abrasive blast material to be provided complies with the State of California Environmental Protection Agency, Air Resources Board (CARB) and local AQMD requirements for dry outdoor blasting.

7. Abrasive blast cleaning and application equipment list and complete procedures for its use.

8. Contractor's safety program to be employed on this project which complies with the current requirements of CAL/OSHA, OSHA and this Specification.

1.05 QUALITY ASSURANCE

A. Unit Responsibility

1. Assign unit responsibility for the materials, surface preparation, and coatings application to the Coatings Application Subcontractor.

2. Provide a certificate of Unit Responsibility. See Section 01999.

B. Qualifications

1. Coatings Applicator Requirements

a. Hold a valid State of California Contractor's Class C 33 Painting and Decorating Contractors license for performing abrasive blast cleaning and coating work.

b. Minimum of five (5) years practical experience and successful history in the application of similar products on comparable projects. Substantiate this requirement by furnishing a written list of references with the bid package that includes a list of projects with verifiable coating inspection reports.

2. Coatings Applicator Personnel

a. Provide a supervisor at the work site during cleaning and coating operations.

b. Provide skilled personnel qualified to perform work to industry standards of practice and safety, maintain continuity of personnel, and coordinate transfer of personnel with the Construction Manager.

C. Pre-Construction Conference

1. Schedule pre-construction conference with the Construction Manager.

2. Do not proceed without holding a pre-construction conference with the Construction Manager, Contractor, Inspector, Fabricator, Coating Applicator and Manufacturer.

3. Topics for discussion include:

a. Site conditions

b. Coating materials and manufacturer's application recommendations.

c. Surface preparation prior to abrasive blast cleaning.

d. Specification compliance of blast abrasives and surface profile requirements.

e. Schedule of field surface preparation and coating application, and order of the work.

f. List of equipment and procedures for cleaning, blasting, coating application, ventilation and dehumidification (if required).

g. Safety programs and the enforcement to be used during the course of the work.

h. Weather limitations for acceptable work.

i. Inspection facilities and equipment to be provided.

j. Hold points and inspector's authority.

k. Establish non-conformance procedures, and chain of command and who signs off on completion of bringing the job back into compliance.

l. Procedures for over-spray prevention.

1.06 PRODUCT SHIPMENT, PROTECTION, AND STORAGE

A. Comply with Section 01600.

B. Delivery

1. Deliver in original sealed containers identified with labels indicating manufacturer; product name and number; color, batch or lot number; and date of manufacture.

2. Note the date of manufacture and apply coatings prior to the expiration of the guaranteed storage life.

3. Coating materials exceeding storage life will be rejected.

C. Storage

1. Store coating materials in enclosed structures to protect from weather and excessive heat or cold.

2. Coatings stored at above or below manufacturers recommendations will be rejected.

3. Comply with state and local requirements for flammable materials.

1.07 WARRANTY

A. Provide material and workmanship warranty for coatings of 18 months from date of final acceptance by the City

B. Complete the Extended Warranty Form in Section 01999.

C. See also Paragraph 3.17.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Specified products of the following manufacturers have been approved:

1. Tnemec Company Inc.

2. International Protective Coatings (IPC)

3. Dunn-Edwards Paints (D-E)

B. Products of other manufacturers demonstrating equivalence to performance requirements specified in Paragraph 2.02 will be allowed, subject to compliance with Section 01330.

2.02 COATING SYSTEMS

A. General Requirements

1. For all materials of a specified system including primer, touch-up, intermediate, and finish coats, provide products by the same manufacturer. Use thinners, cleaners and other additives as recommended in writing by the coating manufacturer for the specified system.

2. Coating materials, including additives, for interior potable water contact surfaces.

   a. Must appear in the current ANSI/NSF Standard 61 "Listing of Certified Drinking Water System Components Health Effects", as published by NSF International (NSF).

   b. Comply with regulations and applicable requirements of local, State and federal air quality and health regulatory agencies.

3. Use only coatings which are free of asbestos, lead, cadmium, and chromate.

4. Comply with local AQMD rules and regulations.

5. No request for product substitution will be considered which decreases the dry-film thickness designated, the number of coats to be applied, or which changes the generic type of coating specified.

6. Requests for Substitution

   a. Include the full name of each product, descriptive literature, test data, data on past performance, manufacturer's instruction for use, generic type, and its nonvolatile content by volume.

   b. Demonstrate product and performance is equivalent to the specified materials and complete systems.

   c. Comply with Section 01330.

7. Demonstrate that the coatings manufacturer has local representation which will provide onsite technical support to resolve field problems with the manufacturer's products, materials or application for the duration of the project.

8. Do not purchase or deliver coating materials to the site before the review and written acceptance of the proposed materials by the Construction Manager.

B. Performance Requirements-Severe Service (High H2S Exposure).

1. Surfacer: Aggregate Reinforced Epoxy Mortar for Systems E-4 & E-5.

   a. Bond Strength – Not less than 1,040 psi per ASTM C882.

   b. Splitting Tensile Strength – Not less than 640 psi per ASTM C496.

   c. Linear Shrinkage – not more than 3,150 millionths of an inch per ASTM C531.

   d. Drying Shrinkage – Not more than 2,510 millionths of an inch per ASTM C596.

   e. Certified compatibility with specified high performance coating system E-4 and E-5.

2. Remediation Surfacer: Aggregate Reinforced Epoxy Mortar for Systems E-4 & E-5.

   a. Splitting Tensile Strength – Not less than 610 psi per ASTM C496.

   b. Linear Shrinkage – Not more than 2,560 millionths of an inch per ASTM C531.

   c. Drying Shrinkage – Not more than 1,730 millionths of an inch per ASTM C596.

   d. Service Strength Setting Time – Not more than 5 days – 660 psi per ASTM C308.

   e. Certified compatibility with specified high performance coating system E-4 and E-5.

3. Rebuilding Material: Acrylic-Modified Concrete for Systems E-4 & E-5.

   a. Adhesion – Not less than 400 psi (100% concrete failure) per ASTM D4541.

   b. Compressive Strength – No less than 7,330 psi per ASTM C579.

   c. Flexural Strength – No less than 1,000 psi flexural, 941,000 psi modulus per ASTM C580.

   d. Service Strength Setting Time – Not more than 5 days.

   e. Certified compatibility with specified high performance coating system E-4 and E-5.

4. Primer: 100% Solids Polyamine Epoxy for Systems E-4 & E-5.

   a. Adhesion – Not less than 400 psi (100% concrete failure) per ASTM D4541.

   b. Flexural Strength – 12,873 psi per ASTM D790.

   c. Modulus of Elasticity – 553,832 psi per ASTM D790.

   d. Humidity – Not less than 1,500 hours per ASTM D4585.

   e. Tensile Strength – No less than 4,871 psi per ASTM D638.

5. System E-4 100% Solids Epoxy – One Self-Priming Finish.

   a. EIS – Initial impedance of 10.2 (log-Z). No blistering, cracking, checking or loss of adhesion. No reduction in electrical impedance after 28 days exposure per H2S Autoclave at 149°, 536 ppm H2S, 4000 ppm NaCL, 10% H2SO4.

   b. Moisture Vapor Transmission – Not more than 3.16 g/m2 per 24 hours and no more than 0.243 perms water vapor permeability per ASTM D1653, Method B, Condition C.

   c. Chemical Resistance – No effect after 98 days continuous immersion in 100°F solution 25% sulfuric acid per ASTM C868.

   d. Adhesion – Not less than 1,806 psi per ASTM D4541 (Type V).

6. Finish: Fiber Reinforced Polyamine Epoxy (100% Solids Epoxy E 5).

   a. EIS – Initial impedance of 10.4 (log-Z). No blistering, cracking, checking or loss of adhesion. Reduction in electrical impedance no more than 0.2 after 28 days exposure per H2S Autoclave at 149°, 536 ppm H2S, 4000 ppm NaCL, 10% H2SO4.

   b. Moisture Vapor Transmission – Not more than 2.77 g/m2 per 24 hours and no more than 0.43 perms water vapor permeability per ASTM D653, Method B, Condition C.

   c. Chemical Resistance – No effect after 100 days continuous immersion in 100°F solution 25% sulfuric acid per ASTM C868.

   d. Adhesion – Not less than 400 psi (100% concrete failure) per ASTM D4541.

C. Coating Systems for Steel – Severe Service, Exposed or Immersed (Non-Potable).

1. System E-2 High Solids Epoxy – One Prime/Two Finish.

   a. Steel surfaces shall be abrasive blasted in compliance with SSPC-SP 10/NACE No. 2 Near White Metal Blast Cleaning. Obtain an anchor pattern between 1.5 and 2.0 mils. See Paragraph 2.02.C.4 for surface preparation of ductile iron pipe or cast iron surfaces.

   b. Primer: Shop or Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-1211, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

   c. Intermediate: Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

   d. Stripe Coat: Field-applied, two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied, or equal applied at 1.0 to 2.0 dry mils to all welds and sharp edges per SSPC-PA 1, 6.6 Striping, 7.4.6 Application Method (Brush).

e. Finish: Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

2. System E-3 High Solids Epoxy – One Prime/One Finish.

a. Steel surfaces shall be abrasive blasted in compliance with SSPC-SP 10/NACE No. 2 Near White Metal Blast Cleaning. Obtain an anchor pattern between 1.5 and 2.0 mils. See Paragraph 2.02.C.4 for surface preparation of ductile iron pipe or cast iron surfaces.

b. Primer: Shop or Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-1211, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

c. Stripe Coat: Field-applied, two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied, or equal applied at 1.0 to 2.0 dry mils to all welds and sharp edges per SSPC-PA 1, 6.6 Striping.

d. Finish: Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

3. System E-4 - 100% Solids Epoxy (High H2S Exposure).

a. Steel surfaces shall be abrasive blasted in compliance with SSPC-SP 5/NACE No. 1 White Metal Blast Cleaning. Obtain an anchor pattern between 3.0 and 4.0 mils. Do <u>not</u> use this coating for ductile iron pipe or cast iron surfaces.

b. Stripe Coat: Field-applied, two-component polyamine epoxy. Product: Tnemec Series 435 Perma-Glaze, no known equal, applied at 8.0 to 12.0 dry mils to all welds and sharp edges per SSPC-PA 1, 6.6 Striping, 7.4.6 Application Method (Brush). Stripe Coat shall be followed immediately by Finish Coat application; “wet on wet”.

c. Finish: Field applied two-component polyamine epoxy. Product: Tnemec Series 435 Perma-Glaze, no known equal applied pinhole free at 30.0 to 40.0 dry mils in one or two coats.

4. Surface Preparation for Ductile Iron Pipe or Cast Iron surfaces

a. Solvent Cleaning

1) Surfaces shall first be inspected and precleaned with appropriate solvents to remove grease, oil and other soluble contaminants.

2) The preferred method of precleaning is through scrubbing of the surface with still bristle brushes soaked in solvent.

3) Prior to evaporation remove solvent by wiping with clean, lint-free cloth rags.

4) Remove rag residue (if any) with dry, oil-free compressed air.

b. Surface Profile

1) Measure surface profile (anchor pattern) in accordance with ASTM D4417, Method C.

2) If surface profile is less than 1.5 mils then proceed with brush-off blast cleaning in accordance with No. 4.c below.

3) If surface profile is 1.5 mils or greater then proceed with hand or power tool cleaning in accordance with No. 4.d.

c. Brush-Off Blast Cleaning

1) Remove all loose annealing oxides, loose rust, dirt and other foreign matter by compressed air nozzle abrasive blast cleaning using a fine abrasive.

2) Remove any dust or other contaminants remaining after blasting with dry, oil-free compressed air or by vacuum cleaning.

3) Recheck surface profile prior to painting.

4) A profile depth of at least 1.5 mils is required.

d. Hand or Power Tool Cleaning

1) Remove all loose annealing oxides, loose rust, dirt and other foreign matter with the use of hand or power tools.

2) Do not use cleaning tools that burnish or smooth the natural roughness (profile) of the cast iron surface.

3) Remove any dust or other contaminants remaining after hand or power tool cleaning with dry, oil-free compressed air or by vacuum cleaning.

D. Coating Systems for Steel-Exterior Exposure.

1. System U-1 Bare Steel - Acrylic Urethane.

a. Steel surfaces shall be abrasive blasted in compliance with SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. See Paragraph 2.02.D.3 for surface preparation of ductile iron pipe.

b. Prime: Shop or Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-1211, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

c. Intermediate: Field applied two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied at 4.0 to 6.0 dry mils.

d. Stripe Coat: Field-applied, two-component polyamidoamine epoxy. Product: Tnemec Series V69F-Color, IPC Interseal 670 or equal applied, or equal applied at 1.0 to 2.0 dry mils to all welds and sharp edges per SSPC-PA 1, 6.6 Striping, 7.4.6 Application Method (Brush).

e. Finish: Field-applied, semi-gloss polyurethane. Product: Tnemec Series 1075-Color Endura-Shield II applied at 3.0 to 5.0 dry mils in one to two coats, IPC Interthane 990 applied at 3.0 to 5.0 dry mils in two or more coats, or equal.

2. System U-2 Overcoat - Acrylic Urethane.

a. Previously painted steel surfaces shall be cleaned in compliance with SSPC-SP 12/NACE No. 5 Surface Preparation of Metals by Water Jetting Prior to Recoating (HP WC) at pressures of 5,000 to 7,000 psi using a zero degree revolving tip.

1) Coatings remaining after being subjected to above shall be uniformly and thoroughly scarified to create a profile using 80 to 100 grit sandpaper.

b. Hot-dipped galvanized components shall be cleaned per SSPC-SP1 Solvent Cleaning followed by SSPC-SP7/NACE No. 4 Brush-Off Blast Cleaning in compliance with ASTM D6386-99(2005) Section 5.4.1, providing a surface profile of 1.5 to 2.0 mils for interior surfaces and a surface profile of 1.0 to 1.5 mils for exterior surfaces.

c. See Paragraph 2.02.D.3 for surface preparation of ductile iron pipe.

d. Spot Prime: Field-applied, two-component epoxy. Product: Tnemec Series 135 Chembuild, IPC Interseal 670 HS or equal at 4.0 to 6.0 dry mils to all bare steel, overlapping adjacent coating by 2 to 4 inches.

e. Full Prime: Field-applied, two-component epoxy. Product: Tnemec Series 135 Chembuild-32GR Light Gray, IPC Interseal 670 HS or equal at 4.0 to 6.0 dry mils.

f. Finish: Field-applied, semi-gloss polyurethane. Product: Tnemec Series 1075-Color Endura-Shield II, IPC Interthane 990 or equal applied at 2.0 to 3.0 dry mils.

3. Surface Preparation for Ductile Iron Pipe

a. Solvent Cleaning

1) Surfaces shall first be inspected and precleaned with appropriate solvents to remove grease, oil and other soluble contaminants.

2) The preferred method of precleaning is through scrubbing of the surface with still bristle brushes soaked in solvent.

3) Prior to evaporation remove solvent by wiping with clean, lint-free cloth rags.

4) Remove rag residue (if any) with dry, oil-free compressed air.

b. Surface Profile

1) Measure surface profile (anchor pattern) in accordance with ASTM D4417, Method C.

2) If surface profile is less than 1.5 mils then proceed with brush-off blast cleaning in accordance with No. 3.c below.

3) If surface profile is 1.5 mils or greater then proceed with hand or power tool cleaning in accordance with No. 3.d.

c. Brush-Off Blast Cleaning

1) Remove all loose annealing oxides, loose rust, dirt and other foreign matter by compressed air nozzle abrasive blast cleaning using a fine abrasive.

2) Remove any dust or other contaminants remaining after blasting with dry, oil-free compressed air or by vacuum cleaning.

3) Recheck surface profile prior to painting.

4) A profile depth of at least 1.5 mils is required.

d. Hand or Power Tool Cleaning

1) Remove all loose annealing oxides, loose rust, dirt and other foreign matter with the use of hand or power tools.

2) Do not use cleaning tools that burnish or smooth the natural roughness (profile) of the cast iron surface.

3) Remove any dust or other contaminants remaining after hand or power tool cleaning with dry, oil-free compressed air or by vacuum cleaning.

E. Coating Systems for New Concrete in Severe Service (High H2S Exposure).

1. System E-5 100% Solids Fiber Reinforced Epoxy.

a. All vertical and overhead concrete surfaces shall be abrasive blasted in compliance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete, ICRI CSP5. All concrete floor surfaces shall be abrasive blasted in compliance with SSPC-SP13/NACE No. 6 Surface Preparation of Concrete, ICRI CSP3.

b. Surfacer: Field applied three-component epoxy mortar. Product: Tnemec Series 218 MortarClad, or equal applied void-free at 1/16" to all vertical and overhead concrete surfaces. Patch and fill voids on floor as required.

c. Primer (Floor Only): Field applied two-component 100% solids epoxy. Product: Tnemec Series 201 Epoxoprime, or equal applied at 6.0 to 12.0 dry mils.

d. Finish: Field applied two-component fiber reinforced polyamine epoxy. Product: Tnemec Series 436 Perma-Glaze FR, no known equal, applied pinhole free at 60.0 to 70.0 dry mils in one coat to all concrete surfaces.

e. For areas inaccessible by spray, use Tnemec Series 435 Perma Shield (E-4), no known equal, applied pinhole free at 30.0 to 40.0 dry mils in two coats or more to all concrete surfaces.

F. Coating Systems for New Concrete, Interior – Non-Immersion.

1. System E-6 Aliphatic Amine Epoxy for Interior PIP Concrete.

   a. All concrete surfaces shall be prepared in compliance with SSPC SP13/NACE No. 6 Surface Preparation of Concrete, ICRI CSP 3.

   b. Filler: Field applied three-component epoxy mortar. Product: Tnemec Series 215 Surfacing Epoxy, or equal. Patch and fill voids as required.

   c. Prime: Field applied two-component aliphatic amine epoxy. Product: Tnemec Series 280 Tneme-Glaze, IPC Interseal 670 HS or equal applied at 6.0 to 8.0 dry mils.

   d. Finish: Field applied two-component aliphatic amine epoxy. Product: Tnemec Series 280 Tneme-Glaze, IPC Interseal 670 HS or equal applied at 6.0 to 8.0 dry mils.

2. System S-1 Clear Silicate Sealer / Densifyer for Interior Concrete Floors.

   a. Surfaces shall be power-wash cleaned per SSPC-SP12/NACE No. 5 (LPWC).

   b. Sealer: Field applied one-component clear silicate sealer. Product: Tnemec Series 629 CT Densifyer or equal, applied in one coat by low pressure spray at a spread rate of 300 to 350 square feet per gallon. Do not allow puddles to remain on surface.

G. Coating System for Buried Ferrous Metal

1. System M-1 Petrolatum Based Wrapping Tape

   a. Comply with AWWA C-217, as modified by this specification.

   b. Clean surfaces per SSPC-SP2 Hand Tool and/or SP3 Power Tool Clean.

   c. Prime Paste

      1) Field apply as recommended by tape manufacturer.

      2) Hand rub or brush all surfaces with priming paste.

      3) Liberally apply priming paste to sharp projects such as threads, irregular contours, or badly pitted areas to ensure maximum protection of metal throughout.

   d. Treat irregularly shaped surfaces such as nuts, bolts, flanges and valves per one of the following two methods:

      1) Apply recommended mastic by hand in sufficient quantity to build an even contour over entire surface. Ensure that all folds and air pockets within the mastic layer are thoroughly pressed out prior to subsequent application of tape.

      or

2) Cut and carefully mold an extra layer of tape around all sharp projections, nuts, bolts, etc., before final application of tape to meet specified system thickness.

e. Tape

1) Spirally wrap with a 55% overlap and sufficient tension and pressure to provide continuous adhesion without stretching the tape.

2) Continuously smooth and seal by hand the edges of tape by hand during wrapping.

3) On vertical applications, begin at bottom and proceed upward, creating a weather board overlap.

f. Minimum Finished Thickness

1) Smooth contours: 50 mils.

2) Irregular shaped surfaces: 100 mils.

H. Coating System for Concrete Surfaces in Chemical Storage Areas

1. System E-8 Polyamine Novolac Epoxy for Interior Walls and Floors.–

a. Applicability: Reinforced concrete floors; exposed surfaces of tank housekeeping pads; interior faces of containment walls including integral column bases, full height; drainage groove and sump; and grout pads.

b. Surface Preparation: Abrasive blast or equivalent all specified surfaces to remove laitance, form release agents, curing compounds, sealers and other contaminants and to provide surface profile in accordance with SSPC SP12/NACE 6, ICRI CSP3-5 and with Tnemec recommendations.

c. Patch & fill: MortarClad Series 218; apply a full parge coat to all specified surfaces at a thickness of 1/32", filling voids up to 1/4" deep.

d. First Coat: Tneme-Glaze Series 282-Color; apply 6.0 to 12.0 mils DFT (Horizontal) 4.0 to 8.0 mils DFT (Vertical) to all specified surfaces per Tnemec recommendations.

e. Second Coat: Tneme-Glaze Series 282-Color; apply 6.0 to 12.0 mils DFT (Horizontal) 4.0 to 8.0 mils DFT (Vertical) to all specified surfaces per Tnemec recommendations.

I. Coating System for Submerged Steel- Water Storage and Hydro-pneumatic Tanks (Potable Service)

1. System E-10 Zinc-Rich Urethane Primer with High Solids Epoxy – One Prime/Two Finish.

a. Steel surfaces shall be abrasive blasted in compliance with SSPC-SP 10/NACE No. 2 Near White Metal Blast Cleaning. Obtain an anchor pattern between 1.5 and 2.0 mils.

b. Primer: Shop-applied zinc-rich aromatic urethane. Product: Tnemec Hydro-Zinc, Series 91-H20 or Series 94-H2O, 2.5-3.5 mils DFT. Comply with ANSI/NSF Standard 61 for potable water service.

c. Intermediate: Field applied two-component polyamidoamine epoxy. Product: Tnemec Pota-Pox Plus, Series 140F-1255 Beige, 4.0-6.0 mils DFT on floor and shell, and 2.0-6.0 mils DFT on roof above the knuckle for fabricated steel storage tanks. Provide 4.0-6.0 mils DFT for hydro-pneumatic tank.

d. Stripe Coat: Brush-apply to all welds and sharp edges per SSPC-PA 1, 6.6 Striping, 2.0-4.0 mils DFT.

e. Finish: Field applied two-component polyamidoamine epoxy. Product: Tnemec Pota-Pox Plus, Series 140F-15BL Tank White, 4.0-6.0 mils DFT on floor and shell, and 2.0-6.0 mils DFT on roof above the knuckle for fabricated steel storage tanks. Provide 4.0-6.0 mils DFT for hydro-pneumatic tank.

f. Provide total system DFT of not less than 10.5 mils or more than 16.0 mils (excluding stripe coat).

2.03 ABRASIVES FOR BLAST CLEANING

A. Use only new materials that are clean and free of contaminants.

B. Certified by the California Air Resources Board (CARB) for use in dry, open air abrasive blasting.

C. Comply with all applicable requirements of the local Air Quality Management District.

D. Purchase only from firms which can accept spent abrasives, then process spent abrasives for recycle or proper disposal.

PART 3 - EXECUTION

3.01 PROTECTION OF THE WORK

A. Techniques

1. Use coverings or drop cloths to protect floors, concrete, appurtenances, equipment, prepared surfaces and applied coatings or paints.

2. Take precautions to prevent damage or contamination of coated surfaces from personnel entering containment areas or walking near coated surfaces.

3. Exercise care to prevent coating from being spattered onto surfaces that are not to be coated.

4. Recoat surfaces from which such material cannot be removed satisfactorily to produce a finish satisfactory to the Construction Manager.

B. Where protection is required or provided for coated surfaces, maintain protection until the coating film has properly cured.

C. Do not handle, work on or otherwise disturb coated areas until the coating has cured to “dry to handle”.

3.02 SAFETY AND HEALTH REQUIREMENTS

A. General

1. Comply with the applicable health and safety requirements of CAL/OSHA, State of California Construction Safety Orders, and the recommendations of the product manufacturer.

2. Provide and require the use of proper personal protective and life saving equipment for all persons visiting or working in or about the project site.

B. Ventilate work areas to control potential exposure and hazard to workers and employees of the plant.

1. Ventilation System

a. Furnish and install in accordance with these specifications.

b. Modify as directed by the supplier of the equipment, to insure a safe working environment and provide complete removal of all solvent vapors.

c. Equipment: Explosion proof, of industrial design, and of adequate capacity to reduce the concentration of air contaminants to the degree that a hazard to workers or employees of the plant does not exist.

d. Size ventilation system to maintain air changes within the confined space per CAL/OSHA regulations.

2. Remove contaminated air, vapors, and other potential hazardous substances from the confined space.

3. Forced air ventilation during blast cleaning, abrasive removal, coating application, and curing is mandatory in confined spaces.

C. Confine blasting debris and paint over spray to within the bounds of the site.

1. Prevent adverse offsite consequences from the blasting and coating operations.

2. Complaints received by the Construction Manager regarding potential off site problems will be immediately referred to the Contractor for resolution.

a. Immediately halt work and take corrective action required to mitigate such problems.

b. Protect site properties and/or correct damage to property caused by blasting or coating operations at no additional cost to the Owner.

D. Abrasive Blasting

1. Provide and require workers to use approved supplied air protective abrasive blasting hoods.

2. Require workers to wear protective hoods while in the immediate vicinity of the blasting work.

3. During abrasive blasting operations, require the nozzle person(s) to wear U.S. Bureau of Mines approved blasting hoods at all times.

4. Require other personnel in the vicinity of the blasting work, who may be exposed to blasting dust, to wear approved renewable cartridge filter type respirators and plastic safety goggles.

5. Paper dust masks or standard glasses are not acceptable protection.

E. Coating Application

1. When coatings are applied in confined areas, require all personnel directly exposed to coating vapors to wear OSHA approved air supplied hoods.

2. Paper dust masks or standard glasses are not acceptable protection.

3. During the mixing and application of coatings and paints, prohibit all flames, welding and smoking within fifty (50) feet of the work area.

4. Post "No Smoking" signs in appropriate places to warn visitors and workers of the no smoking area.

F. Illumination

1. Provide spark proof artificial lighting for all work in confined spaces.

2. Equip light bulbs with a protective cage to prevent breakage.

3. For lighting fixtures and bulbs, comply with the requirements of Section 70 of the National Fire Protection Association (NFPA), "National Electric Code", for the applicable atmosphere.

4. For lighting and other electrical systems, provide ground fault type, complying with NFPA 70.

5. As directed by the Construction Manager, provide additional illumination: to fully illuminate all areas to be inspected. Level of illumination: As determined by the Construction Manager and as specified.

6. Provide a minimum of 50 foot candles of illumination during all surface preparation and coatings application. Comply with SSPC – Guide 12.

G. Ground all blasting, spray and air hoses to prevent accumulation of static electric charges. Use heavy duty industrial insulated electrical cords with twist lock type connectors.

H. Abrasive Blasting Nozzles

1. Equip with "deadman" emergency shut off switches. Keep switches properly maintained and in working order whenever abrasive blasting is in progress.

2. Wrap all abrasive blast hose connections with duct tape prior to pressurizing.

a. Visually inspect taped connections for leaks at the start and at the conclusion of blast cleaning operations.

b. Immediately repair leaking connections to prevent further damage to the equipment or injury to personnel.

I. Solvents

1. The solvents used with the specified protective coatings are explosive at low concentrations and are highly toxic to humans.

2. Because of toxicity, keep the maximum allowable concentration of vapor below the maximum safe concentration level as defined by CAL/OSHA.

3. In addition, never exceed Lower Explosive Limit in the confined space.

4. Comply with all regulations, manufacturer's recommendations, and directives from the Owner, related to safety of personnel and the handling of the coating materials.

J. Fire Extinguishers

1. Keep a minimum of two (2) ten pound (10lb) ABC type fire extinguishers present in the work area whenever work is proceeding.

2. Train all personnel in the use of this type of fire extinguisher.

K. Noise

1. Whenever the occupational noise exposure exceeds the maximum allowable sound level as set forth by CAL/OSHA regulations or the regional Air Pollution Control District, provide and require the use of approved ear protection devices.

2. General maximum sound levels for the project are defined as those which will not affect routine facility or neighborhood activities.

3. Whenever levels are objectionable, or exceed these limits, adjust operations to reduce noise levels, as directed by the Construction Manager or the local agency of jurisdiction.

L. Ladders, Scaffolding and Rigging

1. Design for their intended use.

2. Comply with all requirements of CAL/OSHA regulations.

3. Erect where requested by the Construction Manager to facilitate inspection and move to the locations requested by the Construction Manager.

4. Equip scaffolding with proper "outriggers", cross bracing, handrails, ladders, and CAL/OSHA approved and tested planking.

M. Follow carefully the manufacturer's recommendations, precautions, and warnings regarding the handling and use of specified cleaning and coating materials.

1. Coating materials may be irritating to the skin and eyes, and may cause an allergic reaction in certain persons.

2. When handling and mixing coatings and paints, require workers to wear proper protective clothing and equipment, including gloves, respirators and eye protection.

3. Identify flammability, toxicity, allergenic properties, and any other characteristic requiring field precautions and follow specific safety practices recommended by manufacturer.

N. Remove spent abrasives and other debris.

1. Comply with requirements of all regulatory agencies for handling and disposing of such wastes.

3.03 CONDITION OF EQUIPMENT

A. Use coating equipment designed for application of the material specified and maintain in good working condition at all times.

1. Equip compressors with suitable traps and filters to remove water, dust and oils from the air.

2. Conduct blotter or white cloth tests in the presence of the Construction Manager at each start-up period or as deemed necessary by the Construction Manager.

3. Verify cleanliness of compressed air supply daily, or as deemed necessary by the Construction Manager.

a. Direct a stream of air, without abrasive, from the blast nozzle onto a white blotter or cloth for twenty (20) seconds.

b. If oil or water appears on the blotter or cloth, blow down all traps and separators until two (2) subsequent twenty (20) second tests show no further oil or water.

c. Use a compressed air system capable of delivering a continuous nozzle pressure to achieve the required surface cleanliness and profile, typically 90 pounds per square inch (psi) minimum to each nozzle in operation.

B. Compressed Supplied Breathing Air

1. For respiratory protection devices, meet Compressed Gas Association, Inc. Specification G-7 for Grade D breathing air.

2. Design and locate breathing air compressors to prevent avoid entry of contaminated air into the air supply system.

3. Equip oil lubricated compressors with an in line air purification system that includes air-purifying absorbent beds and filters that remove water, dust particles, odors, oil, and other hydrocarbons. Also include carbon monoxide sensor and alarm.

4. Provide written certification that the breathing air supplied by the compressors has been tested and the air complies with Specification G-7 Grade D.

3.04 LIMITATIONS ON ABRASIVE BLAST CLEANING

A. Do not blast clean when conditions would not permit the subsequent application of coating.

B. Prepare surfaces to acceptable limits of good painting practice, after completion of surface preparation and before corrosion or recontamination occurs.

C. Surfaces prepared under temperature and humidity control may use an extended recoat window but only after surface preparation re inspection confirms the specified cleanliness.

D. In the event that a cleaned surface colors, oxidizes, or becomes moist, blast clean again and secure inspection/approval from Construction Manager before applying the coating.

3.05 ABRASIVE BLAST CLEANING

A. Use dry method field abrasive blast cleaning for all steel surfaces. Maintain dust emissions below the legal limit and below a level which would create a nuisance.

B. Prior to abrasive blasting, remove all weld splatter by mechanical means. Comply with NACE Weld Designation D, per RP0178-95.

C. Pre-clean per SSPC-SP1 and as approved by Construction Manager prior to abrasive blasting.

1. Clean surfaces until free of dirt, mildew, grinding/welding/cutting debris and visible contaminants.

2. Keep surface clean and dry prior to the abrasive blasting operation.

3. Keep surface temperature 5 degrees above the dew point.

D. After completion of blast cleaning work, sweep, collect, and remove all debris and waste materials from the work area as specified. Keep the area of the work in a clean condition and do not permit blasting particles to accumulate and create a nuisance or hazard.

E. Use the maximum particle size recommended by the manufacturer to produce the specified surface profile, as recommended by the manufacturer, subject to approval of the Construction Manager.

F. Evaluation of surface preparation will be based upon comparison with the latest revisions of the "Visual Standard for Abrasive Blast Cleaned Steel Surfaces", Steel Structures Painting Council (SSPC) VIS 1 02 -12.

G. Perform blast cleaning from rolling scaffolds only within confines of interior perimeter of scaffold.

1. Reaching beyond limits of perimeter will be allowed only if blast nozzle is maintained in a position, which will produce a profile acceptable to the Construction Manager.

2. Proper position for the blast nozzle is a perpendicular angle to the flat surface of the work to be blasted.

H. During abrasive blasting and cleaning operations, do not expose existing and new, previously placed coatings to abrasion from blast cleaning operations.

1. Program and coordinate cleaning and coating operations so that dust, dirt, grit, etc., will not damage or fall upon wet or newly coated surfaces.

2. Restore any damaged coatings to their specified condition.

I. Interior Remedial Work

1. Perform by spot blast cleaning the defective areas.

2. Thoroughly abrade or scarify coating adjacent to the defective area to ensure the repair coating being applied will have satisfactory adhesion to the completely cured existing coating.

3. Upon completion of the repair work, check repaired areas within holiday detector and perform additional repair work as required.

J. Do not distribute spent abrasives on the job site or surrounding properties.

1. Clean, remove from site, and dispose of spent abrasives and other debris.

2. Comply with the requirements of all regulatory agencies for handling and disposing of such wastes.

K. After blast cleaning and prior to application of coating, dry clean surfaces to be coated by dusting, sweeping, and/or vacuuming to remove residue from blasting.

3.06 LIMITATIONS ON THE APPLICATION OF COATINGS

A. Do not apply any coating outside the limits recommended by the manufacturer without written approval by the Construction Manager.

B. Weather Condition Restrictions

1. Do not apply any coating when the surrounding air temperature or the temperature of the surface to be painted is below forty five (45) degrees F or in excess of one hundred and twenty (120) degrees F.

2. Do not apply any coating when the temperature of the material to be applied is less than fifty (50) degrees F or more than one hundred (100) degrees F.

3. Do not apply any coating to wet, moist, or damp surfaces, or during snowy, rainy, foggy, or misty conditions, or when the relative humidity exceeds eighty five (85) percent, or when the ambient air temperature is less than five (5) degrees F above the dew point.

4. Do not apply any coating when it is expected that the relative humidity will exceed eighty five (85) percent or that the ambient air temperature will drop below forty five (45) degrees F within eight (8) hours after the application of the coating.

5. Do not apply any coating when the surface temperature is expected to drop to less than 5 degrees F above the dew point within eight hours after application of coating.

6. Do not apply any coating when wind speed exceeds fifteen (15) miles per hour in the immediate coating area.

C. The Construction Manager may require the Contractor to roll the coatings if high winds create the potential for damage to surrounding property by airborne paint particles. This does not reduce the Contractor's responsibility for any damage to property caused by blast cleaning or painting operations.

1. If above conditions are prevalent, delay or postpone the coating application work until conditions are favorable.

2. Anticipate dew or moisture condensation and if such conditions are prevalent, delay coating work until midmorning to be certain that the surfaces are dry.

3. Complete each day's coating work in time to permit the film sufficient drying time, per manufacturer's recommendations, and prior to subjecting coatings to potentially damaging climatic conditions.

D. The Construction Manager may utilize psychrometers and other measuring gauges at the work site to monitor climatic conditions. Repair coatings damaged by a change in climatic conditions. As directed by the Construction Manager, restore coating to specified requirements at no cost to the Owner.

3.07 PROCEDURES FOR THE APPLICATION OF COATINGS

A. Contact the Construction Manager to schedule inspection and approval of prepared surfaces prior to each application of coating materials.

1. The Construction Manager may order the removal of any coatings applied by the Contractor prior to inspection and approval.

2. If so ordered by the Construction Manager, remove coatings, prepare surfaces, schedule inspection, obtain approval, and reapply coating. Perform work at no additional cost to the Owner.

B. After blast cleaning and prior to application of coatings and paintings, clean the surfaces to be coated by air blowing with clean dry air, dusting, sweeping, or vacuuming to remove any residue from blasting as directed by the Owner.

C. Remove and reapply any coating applied to an improperly prepared surface. Perform this work to the satisfaction of the Construction Manager and at no additional cost to the Owner.

D. Follow the recommendations of the coating material manufacturer including the selection of application equipment, thinners, mixing, drying time, temperature and humidity of application, and safety precautions. Address any conflicts between coating manufacturer's recommendations and requirements in this specification at the Pre-Construction Conference meeting and resolve at that time.

E. Properly cure and clean any surface which will receive subsequent coating layers. Remove over spray from previous coats, dirt or dust accumulation, or scuff marks from worker traffic.

F. Comply with SSPC PA 1 for all coating and painting application work.

G. Stir and strain as required, and keep coating materials at a uniform consistency during application.

H. Use a different shade or tint (or as selected by Construction Manager) on succeeding coating or painting applications to indicate coverage.

1. Apply each coating evenly, free of sags, runs, and other evidence of poor workmanship.

2. Produce finished surfaces free from holidays, defects, or blemishes.

I. Difficult Surfaces

1. Includes all interior steel surfaces, all welds, sharp edges, nuts, bolts irregular surfaces.

2. Other difficult surfaces include, but are not limited to, welds, roof lap seams, nuts, bolts, ends and flanges of rafters, or other irregular shapes.

3. To insure complete coverage, brush coat the specified material per SSPC-PA 1, 6.6 Striping, 7.4.6 Application Method (Brush).

4. Brush coating in multiple directions to insure penetration and coverage.

J. Thinners

1. Do not use thinners unless recommended by the coating manufacturer.

2. If thinning is allowed, do not exceed the maximum allowable amount of thinner per gallon of coating material.

3. Do not reduce coating materials more than is absolutely necessary to obtain the proper application characteristics.

4. Materials thinned to achieve proper application characteristics must still meet the specified minimum dry film thickness.

5. Do not use any coatings which have been so severely modified or thinned that their application would cause established VOC limits to be exceeded. Contractor is responsible for any fines, costs, required remedies, or legal action and costs which may result from exceeding VOC limits.

K. Spraying

1. Use a spray technique that results in a film free of fog, spatter or over spray.

2. Hold the spray nozzle perpendicular and sufficiently close to surfaces being coated to avoid excessive evaporation of volatile constituent and loss of material into the air or the bridging of cracks and crevices.

3. Reaching beyond limits of scaffold perimeter will not be permitted.

4. Remove all over spray as directed by the Construction Manager.

5. Approval of Contractor's over spray prevention procedures and Construction Manager's presence on project site does not free Contractor from responsibility for over spray.

6. Obtain Construction Manager's approval of procedures will be required prior to start of spray operations.

L. Drying Time

1. Strictly observe manufacturer's printed instructions for drying time between coats and time between applications of coats.

2. If the recommended minimum or maximum recoat time is violated, prepare the surface as directed by the coating manufacturer.

M. Dry Film Thickness

1. Apply coating systems within the specified minimum/maximum range dry-film thickness as measured from above the peaks of the surface profile.

2. Measure per SSPC-PA 2 and correct for the magnetic effect of the surface profile.

N. Cleaning Cast Iron

1. Clean per SSPC-SP1 by thorough scrubbing with stiff bristle brushes soaked in solvent.

2. Brush-off blast cleaning may be necessary in order to provide a minimum surface profile of 1.5 mils.

3. Once a 1.5 mil profile (or greater) is verified, hand or power tool clean (reference SSPC-SP2/SP3) but do not use cleaning tools that burnish or smooth the natural roughness (profile) of the cast iron surface.

4. Remove any dust or other contaminants remaining after hand or power tool cleaning with dry, oil free compressed air or by vacuum cleaning.

5. It is not the intent to remove the annealing.

6. If the cast iron has bituminous coating, trace amounts may remain in the pours of the cast iron.

O. Do not break down kits. Do not mix partial kits.

P. Produce coating termination and transition details per manufacturer's recommendations.

3.08 FIELD QUALITY CONTROL

A. Inspection

1. All materials and work are subject to inspection by the Construction Manager. Unless otherwise noted herein, the Owner will pay the cost of 3rd party inspection.

2. The Construction Manager may perform inspection on all phases of the surface preparation, abrasive blast cleaning, and application of the coating and painting systems.

3. Provide all inspection equipment including that which may be operated by the Construction Manager. The Construction Manager may elect to use his own equipment.

4. Use quality assurance procedures and practices to monitor all phases of surface preparation, application and inspection throughout the duration of the project. Procedures or practices not specified may be utilized if they meet appropriate professional standards and are approved by the Construction Manager.

5. Comply strictly to specified quality of materials, workmanship, and diligent execution of the contract. Contractor's use of a consultant to inspect the work does not reduce or alter Contractor's responsibility for the quality control, and quality assurance, or other requirements of the contract.

6. Work performed in the absence of the Construction Manger's inspection is at the risk of the Contractor.

   a. After written notice from the Construction Manager, the Contractor may be required to remove and replace the uninspected work.

   b. The entire cost of removal and replacement of uninspected work, including the cost of any materials furnished by the Owner and used in the work thus removed, is the responsibility of the Contractor, regardless of whether or not the work removed is found to be defective.

7. Provide, as a minimum, 200 foot candles of illumination for all inspection. Comply with SSPC – Guide 12.

3.09 FINISH SCHEDULE

A. Specific coating systems, colors and finishes for rooms, galleries, piping, equipment, and other items which are painted or have other finishes are specified in the following coating systems schedule. After approval of coatings, submit draw downs of all the specified colors to the Construction Manager for final color approval using the appropriate finish coating.

B. Unless otherwise specified in the coating system schedule, the word "interior" means the inside of a building or structure and the word "exterior" means outside exposure to weather elements.

C. If surfaces are not specified in the LOCATION SPECIFIC FINISH SCHEDULE, finish according to the following GENERAL FINISH SCHEDULE:

3.10 GENERAL FINISH SCHEDULE

SURFACE	SYSTEM	COLOR
A. Equipment and Metal Appurtenances		
1. Equipment, equipment supports, mounting stands, utility stations, non-immersed, non-stainless, non-ferrous metals, unless otherwise specified.	—	—
a. Interior	U-1	Match adjacent piping
b. Exterior	U-1	See Note 1
2. Equipment, immersed or high spray, unless otherwise specified.	—	—
a. Non-potable	E-2	See Note 1
3. Existing equipment not damaged or modified by work in this contract	Uncoated	—
4. Existing non-stainless equipment damaged or modified by work in this contract	—	—
a. Interior	U-1	Match existing
b. Exterior	U-1	Match existing
5. Electrical switchgear panels, motor control centers, power transformers, distribution centers and relay panels; interior and exterior	See Division 16	See Division 16
6. Instrumentation panels, graphic indicating panels, indicating and transmitting field panels, unless stainless steel; interior or exterior	See Division 16	See Division 16
7. Existing electrical and instrumentation panels not damaged by work in this contract	Uncoated	—
8. Existing electrical and instrumentation panels damaged by work in this contract	—	—
a. Interior	E-3	Match Existing
b. Exterior	U-1	Match Existing
B. Process Piping		
1. Submerged iron or steel piping, appurtenant hangers and supports, including galvanized (except stainless steel and non-ferrous)	E-2	Match Existing
2. Ferrous, non-ferrous and galvanized piping, appurtenant hangers and supports, non-immersed, non-stainless steel	—	—
a. Interior	E-3	See Note 1
b. Exterior	U-1	See Note 1
3. Plastic PVC and CPVC Piping	—	—
a. Interior	E-3	See Note 1

SURFACE	SYSTEM	COLOR
b. Exterior	E-3	See Note 1
4. Flexible Tubing	Uncoated	—
C. Miscellaneous Electrical		
1. Conduit, outlet and junction boxes, lighting transformers, lighting communication and small power panels, control stations, appurtenant hangers, trays, clamps and supports; interior and exterior	See Division 16	See Division 16
2. Existing conduit, outlet and junction boxes, lighting transformers, lighting, communication and small power panels, control stations, lagged ductwork, appurtenant hangers, clamps and supports on uncoated surfaces, unless otherwise specified	—	—
a. Not damaged or modified by work in this contract	Uncoated	—
b. Damaged or modified by work in this contract	—	—
1) Interior	E-3	See Note 1
2) Exterior	U-2	See Note 1
D. Ductwork (Except as specified)	Uncoated	—
E. Concrete, Grout, Masonry, and Plaster		
1. Structural concrete, exposed	Uncoated	—
2. Structural concrete, buried, immersed, non-corrosive environment, unless otherwise specified	Uncoated	—
3. Walls and Ceilings (Not Used)	—	—
4. Concrete equipment pads	E-6	See Note 1
5. Concrete Floors	S-1	See Note 1
F. Existing Doors, Door Frames and Louvers damaged by work in this contract; interior and exterior	U-2	See Note 1
1. FRP	Uncoated	—
G. Existing Handrails, Gratings, Floor Plates, Manhole Covers, and Hatches		
1. Not damaged by work in this contract	Uncoated	—
2. Damaged by work in this contract	—	—
a. Interior	E-3	See Note 1
b. Exterior (non-walking surfaces)	U-2	See Note 1
H. Aluminum Flashing, Light Standards, and Supports; interior and exterior	Uncoated	—
I. Other		
1. Equipment and appurtenances which are made of fiberglass, plastic, rubber, including flexible hose, conduit, and plastic coated tubing, expect as specified	Uncoated	—

SURFACE	SYSTEM	COLOR
2. Buried, sleeve-type couplings, flanged pipe, couplings, valves, mechanical and electrical penetrations not encased in concrete, except as specified	M-1	See Note 1
J. Aluminum surfaces in contact with concrete.		See Note 2

Notes:
1. Owner to select from manufacturer's color charts
2. High build polyamide epoxy paint, Tnemec 46-465 or equal (total thickness of system DFT-8.0 mils)

3.11 LOCATION SPECIFIC FINISH SCHEDULE

SURFACE	SYSTEM	COLOR
A. Biological Odor Control System		
1. Stainless steel items and exposed anodized aluminum	Uncoated	—
2. Aluminum surfaces in direct contact with concrete		See Note 6
3. Skid-mounted equipment items which are not stainless steel (ferrous metal)	U-2	—
4. Equipment drive motors and gear reducers	U-2	See Note 1
5. Exposed piping, fittings, and valves which are not stainless steel	U-1	See Note 1
6. Buried flexible or rigid couplings and restraining hardware	M-1	—
7. New miscellaneous ferrous metal	E-2	See Note 1

Notes:
1. Owner and Architect to select colors from manufacturer's color charts
2. FF = Factory Finish.
3. Not used.
4. Not used.
5. Not used.
6. High build polyamide epoxy paint, Tnemec 46-465 or equal (total thickness of system DFT-8.0 mils)

3.12 EXCLUSIONS

A. Do not prepare or coat the following items or surfaces:

1. Mortar coated pipe and fittings
2. Sacrificial anodes and support wires
3. Copper, brass
4. Name Plates
5. Fiberglass items
6. Piping insulation, insulation covers, or insulation jackets.

B. Where surfaces specified as "not to be coated" are damaged, coated or otherwise do not comply with these Specifications, clean, repair or otherwise restore such surfaces to the satisfaction of the Construction Manager, at no additional cost to the Owner.

3.13 VENTILATION

A. General Requirements

1. Use forced air ventilation at all times to effectively remove solvents for proper drying of coats on the interior containment structures.
2. Remove solvent vapors released during application and from the deposited film using explosion proof exhaust blowers, suction fans, or as an integral part of the dehumidification equipment.
3. Duct exhaust blowers or suction fans should be ducted to or from the bottom of the structure.

3.14 FINAL CURE (INTERIOR LININGS)

A. Follow manufacturer's recommendations, as approved by the Construction Manager.

1. Minimum Cure Time: Seven (7) days (168 hours) at a temperature of 70 degrees F at a relative humidity of 50%.
2. Do not provide less than minimum cure time, unless recommended in writing by the manufacturer and approved by the Construction Manager.

B. After completion of curing cycle, test the applied coating via a "solvent" or "hardness test".

1. Verify to the Construction Manager that adequate curing has been achieved.
2. Perform "solvent" tests or "hardness" tests, including the solvent and number of double-rubs, recommended by coating manufacturer.

C. Solvent Wipe Test

1. Verify completion of the final cure.
2. Use a rubbing a cloth saturated with solvent as recommended by manufacturer on the area to be tested.
3. If the area tested becomes tacky, the coating is not fully cured.
   a. Extend the curing period until the coating is fully cured to the satisfaction of the Construction Manager.
   b. Test per ASTM D5402.

D. If final cure has not been attained, based on tests described above, extend the curing time until applied coating passes the "double rub solvent test" per manufacturer's instructions.

3.15 INSPECTION AND TESTING

A. Perform inspection and testing as specified. Include additional inspection, sampling and testing work that the Construction Manager may require to verify compliance with these Specifications.

B. Notify the Construction Manager three (3) working days in advance of any field operations involving abrasive blast cleaning or coating applications.

C. Assistance to Construction Manager

1. Coordinate work with the inspection, sampling and testing requirements of the Construction Manager

2. Assist the Construction Manager as required for the performance of duties.

3. Provide all lighting and scaffolding to enable the Construction Manager to perform inspection and testing.

4. Provide the level of illumination and scaffolding locations for inspection purposes as directed by the Construction Manager.

5. Furnish Construction Manager with safety equipment and devices during abrasive blast cleaning, coating and painting operations. Provide a helmet with continuous fresh air supply for observation during cleaning operations and coating application.

D. The Construction Manager will perform such tests as are required to help ensure compliance with all phases of the surface preparation, and application of the coating systems. Provide test equipment including, but not be limited to the following: SSPC surface preparation standards; surface profile test tape; micrometer; abrasive sieve test; ultraviolet lamp; sling psychrometer; mirror; certified thickness calibration plates; magnetic type dry film thickness gage; and a nondestructive holiday detector.

E. Inspection by the Construction Manager does not relieve the Contractor of the responsibility of compliance with all the requirements of these specifications.

1. In cases of dispute concerning surface profiles, film thickness, film continuity (holidays), etc., the Construction Manager's measurements and tests shall be final. Abide by the Construction Manager's decisions and directives.

2. Correct deficiencies in the continuity of the coating, or painting film or in the dry film thickness by applying additional coats as required, at the sole expense of the Contractor.

F. The Construction Manager will determine the degree and surface profile of the field blast cleaned surface per test method NACE RP0287. Perform additional blast cleaning over areas not conforming to the specified degree of surface preparation and surface profile.

G. Perform tests on surfaces of abrasively blast-cleaned steel to detect oil and other contaminants which might be deposited on surfaces as a result of abrasive blasting

operations. This may include chemical tests or ultraviolet (black light) tests, as required.

H. Perform all mixing, thinning, application and holiday detection of coatings in the presence of the Construction Manager.

I. The Construction Manager may completely inspect each application of coating to determine thickness and integrity.

1. Each coating application will be checked, and deficiencies marked.
2. After observing specified recoat time apply additional coating materials over areas not having the specified minimum dry film thickness and areas having any holidays or pinholes.
3. After correction of deficiencies, the Construction Manager will re inspect those areas to determine the acceptability of the additional coating.
4. Each coating application must be one hundred (100) percent to the satisfaction of the Construction Manager prior to proceeding with successive coating applications.

J. Dry Film Thickness Measurement

1. Use an approved magnetic type non-destructive dry film thickness gauge.
2. Determine that the specified dry film thickness has been obtained.
3. Measure specified dry film thickness' above the peaks of the surface profile.
4. Perform as many dry film thickness measurements, as described in SSPC – PA2, as required to verify compliance with this specification. Use a Type II Constant Pressure Probe Dry Film Thickness Gauge.

K. Furnish calibrated inspection devices in good working condition for detection of holidays and measurement of dry film thickness.

1. Calibrate and operated per manufacturer's instructions.
2. Furnish U.S. Department of Commerce; National Bureau of Standards certified thickness calibrated plates to test the accuracy of dry film thickness gauges and certified instrumentation to test the accuracy of holiday detectors.
3. Keep dry film thickness gauges and holiday detectors available onsite at all times until final acceptance of the application.

L. Construction Manager may elect to furnish inspection devices and render decisions based solely upon test results from these devices.

M. For coating film continuity detection tests on interior structure coated surfaces with 20 mils or less dry film thickness, use a non destructive holiday detector.

1. Provide personnel to operate coating film continuity detection devices under the direction of the Construction Manager.

2. Operate inspection devices per the manufacture's recommendations in accordance with NACE RPO188.

N. Test the coating integrity of the interior surfaces below the overflow line.

1. Mark all pinholes and repair manufacturer's written recommendations, or as directed by the Construction Manager; and then retest.

2. Holidays or other irregularities are not permitted in the completed coating system.

3. During the testing, keep the detecting blade in continuous contact with the coated surface.

4. Do not proceed with holiday detection until the completed coating system has been cured per the manufacturer's recommendations.

O. Upon completion of the epoxy application to the interior structure surfaces, retest for holidays those areas of the lower shell which may have been subjected to abrasive blast rebound from the floor, repaired as noted herein. Repair areas as required and retest.

P. Dew Point

1. Measure using a sling psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychrometric Tables, a digital sling psychrometer thermo hygrometer, or equivalent.

2. Comply with specified temperature and dew point for all surface preparation and coating operations.

Q. Measure anchor profile for prepared surfaces using a non-destructive instrument such as a Testex Press O Film System.

R. The Construction Manager will verify completion of the final cure of the interior lining using a solvent wipe test.

1. Solvent wipe test: Consists of rubbing a solvent saturated rag on the area to be tested per ASTM D5402, using solvent recommended by manufacturer.

2. If any coating material is removed or the surface being tested becomes tacky, the coating is not fully cured. Extend curing time and if required continue dehumidification until the coating is fully cured.

S. The Construction Manager may suspend the work if the cleaning and coating operations of the Contractor are creating a localized condition detrimental to facility operation, personnel or adjacent property. In the event of an intermittent or emergency suspension of the work by the Construction Manager, correct deficiencies immediately.

T. Prepare, sign, and submit to the Construction Manager daily inspection reports.

U. Nonconformance Reports

1. When a nonconformance report is required, prepare, sign, and submit to the Construction Manager within one working day from the time it is written.

2. After confirming that all non-conforming work has been corrected and/or the coating work is in compliance with this specification, prepare and submit a conformance verification report shall be completed for the specific item or area.

3. This report must be signed by the inspector.

3.16 FINAL CLEANUP

A. Leave all areas in a neat and presentable condition.

B. Remove rubbish, construction debris and waste, surplus construction materials, scaffolding, tools, equipment, and coating, and thinner containers, and excess coating, and thinners, and other objectionable materials.

C. Dispose of such materials away from the site of work and in conformance with all applicable codes, ordinances and regulations.

D. Remove coating spots upon adjacent surfaces.

E. Clean, repair or refinish all damage to surfaces resulting from the work.

3.17 WARRANTY INSPECTION

A. Warranty: See Paragraph 1.08.

B. Conduct a warranty inspection of all coating and painting work between the period of eleventh (11th) month through eighteenth (18th) month following final acceptance of the Contract work.

C. The Construction Manager will establish the date for the inspection and will notify the Contractor at least 30 days in advance.

D. The Construction Manager may, by written notice to the Contractor, reschedule the warranty inspection to another date within the eleventh through eighteenth month inspection period, or may cancel the warranty period altogether.

E. Attendance

1. Attend the warranty inspection.

2. Notifying all directly involved parties of the date and time of the inspection.

3. The Construction Manager suggests all personnel present at the pre-construction conference be present at this inspection.

F. Preparation

1. The Owner will completely drain each vessel and hose clean the interior sufficiently for inspection.

2. Provide (Contractor) suitable lighting, ventilation and scaffolding for the structure inspection.

3. Use SSPC – Guide 12 for Illumination, and provide a minimum of 200 candle foot illumination for inspection.

G. Inspect visually the entire interior and exterior coating systems to determine whether any repair work is necessary or if a more detailed inspection will be needed.

H. The Construction Manager will prepare and deliver to the Contractor an Inspection Report:

1. The report will cover the warranty inspection, setting forth the number and types of failures observed, the percentage of the surface area where failure has occurred, and the names of the persons making the inspections.

2. Color photographs illustrating each type of failure will be included in the report.

3. A coating system failure is defined as any location where coatings have peeled off, bubbled, or cracked, and any location where rusting is evident.

4. Upon completion of inspection and receipt of Inspection Report, the Construction Manager will establish a date for the Contractor to proceed with remedial work.

I. Commence repairs on the date established by the Construction Manager and completed within one month (thirty days).

1. Repair all coating system failures.

a. Remove the deteriorated coating, clean the surface and recoat with the same coating system in strict accordance with the specification and manufacturer's recommendations, to the satisfaction of the Construction Manager.

b. If the area of failure exceeds twenty five (25) percent of the area of a portion of the structures surface, then remove the entire coating system and recoat that surface

J. All costs for warranty inspection are the responsibility of the Contractor, exclusive of the costs of the coatings inspection firm retained by the Owner for the warranty inspection. All costs for repair of defective work discovered during the warranty inspection, and the additional cost for re-inspection of repaired work by the coatings inspection firm, are the responsibility of the Contractor. .

K. If the contractor fails to complete the remedial work to the satisfaction of the Construction Manager, the Owner may elect to perform the remedial work. The Contractor is liable for actual cost of all such remedial work, plus 20% for Owner’s administrative cost.

L. Perform final cleanup in accordance with this Section.

END OF SECTION

SECTION 10020

WARNING SIGNS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Informational and accident prevention signs.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 11000 – General Requirements for Equipment

1.03 DESIGN REQUIREMENTS

A. Regulatory Compliance

1. Accident Prevention Signs: Conform to design required by OSHA Section 1910.145 of Subpart J, Part 1910, Chapter XVII, Title 29 of the Code of Federal Regulations.
2. Exit Signs: Conform with Section 1910.37(g) of the OSHA Safety and Health Standard for General Industry, Article 10, Section 10.113 of the Uniform Fire Code, and where applicable with local fire regulations.

B. Size Requirements

1. Sign sizes shall be as follows:
   a. Size A: 14” x 20”
   b. Size B: 10” x 14”
   c. Size C: 7” x 10”
   d. Size D: 24” x 24”

C. Color Requirements

1. Danger Signs:
   a. Background: White.
   b. Heading: White lettering in a red oval with a white border around the oval. Position oval in a black rectangular field in the upper portion of the sign.
   c. Message: Black lettering.
2. Caution Signs:
   a. Background: Yellow.

b. Heading: Yellow lettering in a black rectangle. Position black rectangle in the upper portion of the sign.

c. Message: Black lettering on the yellow background.

3. Safety Signs:

a. Background: White.

b. Heading: White lettering in a green rectangle. Position green rectangle in the upper portion of the sign.

c. Message: Black lettering on the white background.

4. Warning Signs:

a. Background: Orange.

b. Heading: Black lettering in an orange diamond with black border forming the diamond. Position orange diamond in the upper portion of the sign.

c. Message: Black lettering.

1.04 SIGN TYPES

A. Sign Types and Messages

Type	Message
DANGER SIGNS	
I	DANGER—HIGH VOLTAGE
II	DANGER—480 VOLTS
III	DANGER—CONFINED SPACE ENTRY
IV	DANGER—CONFINED SPACE—HAZARDOUS ATMOSPHERE
CAUTION SIGNS	
V	NON-POTABLE WATER—DO NOT DRINK
VI	CAUTION—CORROSIVE CHEMICALS
VII	CAUTION—HIGH TEMPERATURE
SAFETY SIGNS	
VIII	EAR PROTECTION REQUIRED BEYOND THIS POINT
IX	EMERGENCY EYEWASH AND SAFETY SHOWER
X	EMERGENCY EYE WASH
XI	NOT AN EXIT
WARNING SIGNS	
XII	WARNING—AUTOMATIC EQUIPMENT MAY START AT ANY TIME
XIII	WARNING—FOREIGN VOLTAGE
XIV	(NFPA hazardous material sign with appropriate chemical ratings)

1.05 SUBMITTALS

A. Comply with Section 01330.

B. Samples: Submit 2 sets, typical of sign type. One set of samples will be retained by the CM, other returned to Contractor.

C. Color samples of each color, 150 mm x 150 mm (6”x 6”). Show anticipated range of color and texture.

D. Sample of typeface, arrow, and symbols in a typical full size layout.

E. Manufacturer’s Literature: Manufacturer’s printed specifications, anchorage details, installation and maintenance instructions.

PART 2 - PRODUCTS

2.01 GENERAL

A. Sign Lettering: Single stroke and contrasting in color with the background.

B. Use standard and commonly accepted international symbols on signs with messages that include such symbols.

C. Chain Mounted Signs: Provide signs with lettering on both sides.

2.02 MATERIALS

A. Signs shall be 0.100” thick fiberglass with embedded fade-proof legends.

2.03 SIGN SCHEDULE

A. Provide signs in accordance with the following schedule:

Location	Size	Type	Mount
Hose Bibs	B	V	48” above floor
Automatic Equipment	B	XII	See also Section 11000

PART 3 - EXECUTION

3.01 INSTALLATION

A. Mount signs using round head stainless steel bolts or screws.

B. Securely mount signs level, plumb and true to plane positions.

END OF SECTION

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SECTION 11000

GENERAL REQUIREMENTS FOR EQUIPMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. General requirements applicable to mechanical equipment and systems.

B. Ensure mechanical equipment meets the requirements of this Section in addition to the specific requirements of the individual equipment specification Sections.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 01610 – Seismic Anchorage and Bracing
3. Section 01825 – Equipment and System Testing
4. Section 01999 – Reference Forms
5. Section 09960 – High Performance Coatings
6. Section 10020 – Warning Signs

1.03 GENERAL REQUIREMENTS

A. Equipment shall be of new construction and comply with the following requirements:

1. Designed for all stresses that may occur during fabrication, transportation, erection, and during continuous or intermittent operations.
2. Adequately anchored, leveled, aligned, and ready for operation without binding or overloading of critical components or motors.
3. Installed with necessary appurtenances required for proper operation and installation in a neat and workmanlike manner.
4. Tested by factory trained service mechanics or engineers.

1.04 UNIT RESPONSIBILITY

A. Equipment systems shall be assembled as a unit by a single manufacturer responsible for the entire unit.

1. Responsibility extends to selecting components of the system to assure compatibility, proper operation, and compliance with specified performance requirements.
2. Unit responsibility does not relieve Contractor of responsibility to Owner for performance of the Work.

1.05 QUALITY ASSURANCE

A. Arrangement

1. The arrangement of equipment shown on the Drawings is based upon information available at the time of design and is not intended to show exact dimensions particular to a specific manufacturer.

2. Some features of the illustrated equipment installation may require revision to meet actual equipment installation requirements.

3. Structural supports, foundations, connected piping, and valves shown may have to be altered to accommodate the equipment provided. Additional payment will not be made for such revisions and alterations.

B. Balance: Fully assemble all rotating elements in motors, pumps, blowers and centrifugal compressors before performing static and dynamic balance. Where specified, submit balancing reports, demonstrating compliance with this requirement.

1.06 SUBMITTALS

A. Comply with Section 01330.

B. General: Provide separate submittals for each equipment item or group of related equipment items.

C. Equipment Anchorage: Submit anchor bolt sizing calculations.

D. Bearing Life Calculations: Submit bearing L-10 life calculations in accordance with AFBMA requirements.

1.07 OPERATION AND MAINTENANCE MANUALS

A. Furnish operation and maintenance manuals for each equipment system in accordance with the Division 1 requirements.

1.08 PROTECTION DURING SHIPMENT

A. Shipping: Ship equipment in sealed, weather-tight, enclosed conveyances, and protected against damaging stresses during transport and handling.

B. Bearing Housings: Wrap or otherwise seal to prevent contamination by grit and dirt, and tape closed ventilation and other types of openings.

C. Repair any damaged materials to conform to the requirements of the Contract before the assembly is incorporated into the Work. The Contractor shall bear the costs arising out of dismantling, inspection, repair, and reassembly.

PART 2 - PRODUCTS

2.01 PIPING CONNECTIONS ON EQUIPMENT

A. Flanges on Equipment: Conform to dimensions and drilling specified in ANSI B16.1, Class 125 unless otherwise required by Division 15 pipe specifications or the Drawings.

B. Pipe Flanges: Conform to dimensions and drilling specified in AWWA C207, Class D, 125 lb flanges provided on connection pipe.

C. Threaded Flanges: Flat faced with standard taper pipe thread conforming to ANSI B1.20.1.

D. Pipe Threads: Conform in dimension and limits of size to ANSI B1.1, coarse thread series, Class 2 fit.

E. Flange Assembly Bolts and Nuts

1. Heavy pattern, hexagonal head, stainless steel machine bolts with heavy pattern, hot pressed, hexagonal nuts conforming to ANSI B18.2.1 and B18.2.2.

2. Threads: Unified Screw Threads, Standard Coarse Thread Series, Class 2A and 2B, ANSI B1.1.

2.02 BEARINGS

A. Service: Unless otherwise specified, equipment bearings shall be oil or grease lubricated, ball or roller type, designed to withstand the stresses of the service specified.

B. Rating

1. L-10 Rating Life: Minimum 50,000 hours unless otherwise specified. Determine rating life using the maximum equipment operating speed.

2. Determine rating in accordance with the latest revisions of AFBMA Methods of Evaluating Load Ratings of Ball and Roller Bearings.

3. Where individual equipment Sections specify higher bearing life ratings, those requirements supersede the minimum bearing life specified above.

C. Grease Lubricated Bearings

1. Fit with easily accessible grease supply, flush, drain and relief fittings, except those bearings specified to be factory sealed and lubricated.

2. Extend non-accessible grease fittings to an easily accessible location using 1/4-inch diameter stainless steel tubing as an extension tube.

3. Grease supply fittings: Standard hydraulic Alemite or Zerk type.

D. Oil Lubricated Bearings

1. Equip with either a pressure lubricating system or a separate oil reservoir type system.

2. Size oil lubrication systems to safely absorb the heat energy normally generated in the bearing under a maximum ambient temperature of 60°C.

3. Equip with a filler pipe and an external level indicator gage.

E. Incorporate bearing housings with sufficient cooling to maintain surface temperature at 65 degrees C or less for continuous operation at bearing rated load and a 50 degrees C ambient temperature, or install appropriate shielding on bearings that are accessible to touch.

F. Bearing Isolators

1. Provide for bearing where the shaft exits the bearing housing.

2. Motor Bearings: Provide Inpro/Seal style VBX vapor blocking isolators.

3. Gears: Provide Inpro/Seal "Double Runner" bearing isolator for shafts exiting the gear casing.

4. Pumps, Blowers and Compressors: Provide Inpro/Seal style VBX blocking bearing isolators where shafts exit casings/housings.

5. Pillow Block Bearings: Provide Inpro/Seal "Pop-In" style bearing isolators.

2.03 DRIVE COMPONENTS

A. V-Belt Drives

1. Design with sliding base or other suitable tension adjustment.

2. Design with service factor of at least 1.6 at maximum speed.

3. Statically balance sheaves. In addition, dynamically balance sheaves that will operate at peripheral speed of more than 5,500 feet per minute.

4. Belts: Provide anti-static belts when explosion-proof equipment or environment is specified.

B. Gear Reducers

1. Provide drives with nominal input horsepower rating equal to or greater than the nameplate horsepower of the drive motor.

2. Provide gear drives manufactured in accordance with AGMA Class II service requirements.

2.04 SHAFT COUPLINGS

A. Type and Rating: Non-lubricated, designed for a minimum of 50,000 hours operating life.

B. Equipment with a driver greater than ½ horsepower, and where the input shaft of a driven unit is directly connected to the output shaft of the driver, shall have its two shafts connected by a flexible coupling which can accommodate angular misalignment, parallel misalignment and end float, and which cushions shock loads and dampens torsional vibrations.

C. Provide couplings recommended by the coupling manufacturer for the specific application, considering horsepower, speed of rotation, and type of service.

D. Install couplings in conformance to the manufacturer's instructions.

2.05 GUARDS AND CAUTION SIGNS

A. Guards: Enclose exposed moving parts with guards that meet the requirements of federal and state OSHA requirements. Enclose drive shafts to at least 7 feet above floors or operating platforms.

B. Materials

1. Fabricate guards of 14 gauge steel and expanded metal screen to provide visual inspection of moving parts without removal of the guard.

2. Galvanize after fabrication and paint with the equipment.

3. Fasteners: Type 304 stainless steel.

C. Warning Signs: Provide warning signs near equipment with moving parts that operate automatically or by remote control. Provide warning signs with wording, size and colors specified in Section 10020.

2.06 PRESSURE TAPS AND GAUGES

A. Pressure Taps and Gauges: Unless otherwise indicated, provide on the discharge and suction sides of pumps, blowers and compressors.

B. Pressure Gauges: 4-1/2-inch size, range as specified, stainless steel case, liquid filled, safety glass, weather proof, bronze tube and brass socket, industrial grade stainless steel movement with brass hairspring, 1.5% accuracy, and 1/2-inch NPT lower connection. Supply with 1/2-inch brass gauge cock.

2.07 NAMEPLATES AND LIFTING EYES

A. Nameplates: Provide on each item of equipment with the specified equipment name or abbreviation and equipment number. Engrave or stamp on stainless steel and fastened to the equipment in an accessible location with stainless steel screws or drive pins.

B. Lifting Eyes: Provide on all equipment weighing over 80 lbs.

2.08 SPARE PARTS AND LUBRICANTS

A. Spare Parts: Provide for each item of mechanical, electrical, and instrumentation equipment a supply of spare parts and special tools required for the starting, testing, adjustments, and initial operation. Pack spare parts required by individual equipment specifications:

1. Pack spare parts with individual weights less than 50 pounds in a heavily constructed painted wood box with hinged cover and a locking clasp.

2. Provide a typed inventory of spare parts stapled to the underside of the cover.

3. Tag and wrap each part in a waterproof container. Spare bearings shall be encapsulated in an airtight plastic film.

B. Lubricants: Provide for each item of mechanical equipment of the type recommended by the equipment manufacturer a supply of the lubricant for startup, testing, and initial operation.

1. Provide a list showing the required lubricants for each item of mechanical equipment. List estimated quantity of lubricant needed for a full year's operation, assuming the equipment will operate continuously.

2. Lubricants shall be products of the Owner's current lubricant supplier.

3. Limit the various types of lubricants by consolidating them, with the equipment manufacturer's approval, into the least number of different types.

2.09 ANCHOR BOLTS

A. Size anchor bolts and concrete anchors for equipment in accordance with Section 01610.

2.10 FACTORY APPLIED COATINGS

A. Ship each item of equipment to the site of the work with a shop applied prime coating prepared in accordance with the requirements of Section 09960 and compatible with the finish coatings.

B. Finish Painting of Motors: Factory-apply finish coats using manufacturer's standard coating, unless otherwise specified in Section 09960.

2.11 SPECIAL TOOLS AND ACCESSORIES

A. Furnish with each piece of equipment all tools, instruments, or accessories of a special nature that are required to assemble, disassemble, maintain, or repair any item of equipment.

1. Tag and mark each piece indicating their service and the piece of equipment for which their use is intended.

2. Include a list and description or pictorial representation of all special tools required for a given piece of equipment for insertion into the equipment operation and maintenance manual.

2.12 FASTENERS AND DIELECTRIC ISOLATION

A. Fasteners for Aluminum: Stainless steel.

B. Isolate steel surfaces, other than stainless steel, from aluminum with stainless steel, neoprene, non-metallic washers or other acceptable material.

C. Dissimilar Metals: Protect from galvanic corrosion by means of pressure tapes, coatings, or isolators.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install, align and test each item of equipment within the tolerances recommended by the equipment manufacturer.

B. When specified in individual Sections, install and test equipment under the direction of installation engineers who have been factory trained by the equipment manufacturer.

C. Perform all work in accordance with manufacturer's recommendations.

3.02 QUALITY CONTROL

A. Test equipment in accordance with Section 01825 and the individual equipment Section.

B. Furnish written certification from the equipment manufacturers that each item has been installed, aligned, and tested correctly and that the installation meets the manufacturer's requirements for efficient, trouble-free operation. Utilize certification form provided in Section 01999.

C. Equipment manufacturer’s certification shall not be construed as relieving the Contractor of his overall responsibility for this portion of the work.

END OF SECTION

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SECTION 11002

EQUIPMENT MOUNTING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Equipment mounting requirements, including fabricated steel equipment bases, concrete equipment pads, supports, anchorage, and accessories.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 05501 – Anchor Bolts and Anchoring Devices

1.03 QUALITY ASSURANCE

A. Provide supports, anchorage, and equipment mounts that are sized and designed to resist the calculated forces and that are in accordance with the manufacturer's recommendations, the current Uniform Building Code (UBC), and industry standards requirements.

1.04 DESIGN REQUIREMENTS

A. Design equipment mounts and anchorages to resist the minimum lateral force required by the latest edition of the UBC, the manufacturer of the equipment, or a lateral seismic force of 60% of the operating weight of the equipment, whichever is greater.

B. Equipment anchor bolt sizes shown on the Drawings are the minimum required size.

C. Equipment anchorage design and calculations shall be prepared and signed by a civil or structural engineer currently registered in the state where equipment is installed.

1.05 MOUNTING REQUIREMENTS

A. Mount equipment and driver on a common fabricated steel baseplate with ample rigidity to support equipment and maintain shaft alignment without excessive deflection.

B. Mount equipment baseplates on concrete equipment pads.

1.06 SUBMITTALS

A. Comply with Section 01330.

B. Shop Drawings: Provide drawings of equipment bases and anchorage details.

C. Anchorage Calculations: Submit stamped and signed anchor bolt sizing calculations.

PART 2 - PRODUCTS

2.01 ANCHOR BOLTS AND CONCRETE ANCHORS

A. Provide anchor bolts and concrete anchors in accordance with Section 05501.

2.02 CONCRETE EQUIPMENT PADS

A. Construct concrete pedestals at least 6 inches wider and longer than the steel or cast base so that the distance between the anchor bolts and the edge of concrete is at least 3 inches.

B. Unless otherwise shown or specified, all conduits, piping connections, drains, etc. shall be enclosed by the concrete base.

C. Shape concrete pedestals to drain away from the base.

D. Allow concrete to cure 14 days or until the concrete has cured to 75 percent of its specified compressive strength before placing equipment on the concrete pedestal.

E. Do not start equipment placed on the concrete pedestal until the concrete has cured for 28 days or to 100 percent of its specified compressive strength.

2.03 STRUCTURAL STEEL EQUIPMENT BASES

A. Provide structural steel bases with thickened steel pads for doweling.

1. Fabricate equipment base using continuous welds to seal seams and contact edges between steel members.

2. Grind welds smooth.

B. Design equipment bases with perimeter steel beams, intermediate stiffeners and baseplate.

1. Provide perimeter steel beams with minimum depth equal to 1/10th of the longest dimension of the base.

2. Beam depth need not exceed 14 inches provided that the baseplate deflection is kept within acceptable limits to minimize misalignment, as determined by the manufacturer.

C. Provide grout holes for the bases of equipment where vibration isolation is not specified.

D. Provide minimum 1-inch thick steel mounting baseplate for equipment with drivers 20 horsepower and larger.

E. Shop-apply prime coat prepared in accordance with the requirements of Section 09960 and compatible with the finish coatings

PART 3 - EXECUTION

3.01 GENERAL

A. Connect piping to equipment with flexible connections and/or expansion joints such that the intended use of these joints is maintained in the piping system.

B. Coordinate the location of electrical conduit and piping penetrations within the concrete pad and equipment base.

1. Stub-up penetrations on the same side of the equipment as required for connection to the equipment.

2. Locate equipment drains for proper drainage away from equipment.

3.02 EQUIPMENT MOUNTING

A. Mount equipment on equipment baseplates using stainless steel shims so that equipment and driver are level in both directions and mounted within machined areas on baseplate. Do not use wedges to obtain level and alignment.

B. Utilize templates for placement of anchor bolts prior to placing concrete for equipment pad.

C. Apply a non-seize or non-galling compound on the threads of anchor bolts and concrete anchors.

3.03 SHAFT ALIGNMENT

A. After the complete unit has been installed on the equipment pad and leveled, check the factory shaft alignment by disassembling coupling and measuring angular and parallel orientations.

B. Use reverse-indicator dial or laser type alignment equipment to align shafts to within the manufacturer's required tolerance. Allow for thermal expansion, spacer coupling length and other factors that affect proper shaft alignment.

3.04 GROUTING EQUIPMENT BASES

A. After alignment has been completed, tighten anchor bolts and grout between equipment base and equipment pad. Use non-shrink and non-ferrous grout no less than 7/8 inch and no more than 1-5/8-inches thick.

B. Allow 48 hours for grout to harden and then remove jacking screws. Re-check torque on anchor bolts and re-check shaft alignment, making corrections as necessary.

END OF SECTION

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SECTION 11060

ELECTRIC MOTORS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Low-voltage alternating current induction motors, 250 horsepower or less.

B. This section does not specify medium voltage (over 600 volts) motors and specialty motors such as submersible motors, hoist motors, valve operator motors or torque rated motors.

C. Unless specified otherwise, require electric motors to be provided by the manufacturer of the driven equipment per of Section 11000.

D. Unless specified otherwise in the particular equipment specifications, comply with these specifications.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 01600 – Materials and Equipment
3. Section 01782 – Operation and Maintenance Information
4. Section 01999 – Referenced Forms
5. Section 11000 – General Requirements for Equipment

1.03 QUALITY ASSURANCE

A. Unit Responsibility

1. Comply with Section 11000.
2. Unless otherwise specified, assign unit responsibility for motors to the individual manufacturers of the driven equipment.

B. Product Delivery, Storage, and Handling

1. Comply with Section 01600.

C. Basic Standards

1. Manufacture per UL 674, UL 1004, NEMA Standard MG 1, and the requirements specified.

1.04 ENVIRONMENTAL CONDITIONS

A. Refer to individual equipment sections and drawings for installation locations.

1.05 SUBMITTALS

A. Comply with Section 01330.

B. Include a copy of the contract document control diagrams and process and instrumentation diagrams, with addenda updates, that apply to the equipment in this section.

1. Mark to show specific changes necessary for the equipment proposed in the submittal.

2. If no changes are required, mark the drawing or drawings “No Changes Required”.

3. Failure to comply with this paragraph is sufficient cause to reject the entire submittal.

C. Include the following items:

1. Completed Motor Data Form (Section 01999).

2. For motors 100 horsepower and larger, a motor heating curve.

3. Motor outline, dimensions, and weight.

4. Manufacturer's descriptive information relative to motor features.

5. Where a winding over-temperature device is required, provide a response curve for the temperature device.

6. For all inverter duty motors, the motor manufacturer's certification that the motor is compatible with the adjustable frequency drive to be used with the motor as specified in this section.

7. Motor performance data showing motor full load current, efficiency, and power factor for the motor operating at 25, 50, 75, 100 and 125 percent of full load.

8. Operating and maintenance information specified in Section 01782.

9. Overhaul instructions for each motor 5 horsepower and above.

1.06 DESIGN REQUIREMENTS

A. NEMA “B” design, unless otherwise specified.

B. NEMA Class B temperature rise above 40 degrees C ambient.

1.07 WARRANTY

A. Provide two-year warranty from date of substantial completion unless manufacturer’s standard warranty is longer.

B. Complete the Extended Warranty Form in Section 01999.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. General

1. The below listed manufacturer's motors generally meet the class and performance requirements of this specification when furnished with appropriate modifications and additional features as specified.

B. Horizontal Motors

1. Types 1 and 2 – Premium efficiency motors manufactured by General Electric Inc., Type KS; and Reliance Electric Co., Type XEX, or equal.

2. Type 3 – Premium efficiency explosionproof motors manufactured by General Electric Inc., Type KS, Class I, Group D; and Emerson US Motor, Type LCE, or equal.

C. Vertical Motors

1. Types 1 and 2 – Premium efficiency motors manufactured by General Electric Inc., Type KS; and Emerson US Motors, Type TUCE Corroduty, or equal.

2. Type 3 – Premium efficiency explosionproof motors manufactured by General Electric Inc., Type KS, Class I, Group D; and Emerson US Motors, Type LUCE, or equal.

D. Inverter Duty Motors

1. Baldor, Inverter Motor; General Electric, ASD; Reliance, RPM-AC (XT) and US Motors Varidyne Inverter Duty, or equal.

2.02 MATERIALS

A. Cast iron frames for motors 1/2 horsepower and larger. Steel frames for motors smaller than 1/2 horsepower. Aluminum frame motors will not be permitted.

B. Cast metal fan blades and shrouds.

C. Stainless steel hardware.

D. Nonhygroscopic leads.

2.03 NAMEPLATES

A. Material: Engraved or stamped stainless steel or brass.

B. Information: Include items listed in NEMA Standard MG 1, Paragraph 10.37, 10.38 or 20.60, as applicable.

C. For motors 1/2 horsepower and larger, indicate the ABMA L-10 rated life for the motor bearings.

D. For motors 2 horsepower and larger, list the nominal efficiency.

E. For explosionproof motors, indicate UL frame temperature limit code.

F. Permanently fasten to the motor frame and position for easy visible inspection.

2.04 MOTORS 1/2 HORSEPOWER THROUGH 250 HORSEPOWER

A. General

1. Type: Three phase, squirrel cage, full voltage start induction type.

2. Unless otherwise specified, provide a NEMA MG 1-1.16 design for the duty service imposed by the driven equipment such as frequent starting, intermittent overload, high inertia, mounting configuration, or service environment.

B. Rating

1. 460 volts, three phase, 60 Hz.

2. Continuous time rated per NEMA Standard MG 1, paragraph 10.40.

3. Unless specified otherwise, provide a service factor of 1.15, but size not to exceed the nameplate rating at any point on the operating curve (non-overloading) of the driven equipment.

C. Classifications

1. General:

a. Comply with the requirements specified in the following paragraphs.

b. Definition of terms: Per NEMA MG 1.

c. Temperature rise: for all motor types, do not exceed that permitted by Note II, paragraph 12.42, NEMA MG 1. The insulation shall be nonhygroscopic.

2. Type 1 Motors:

a. Drip-proof guarded enclosures

b. Class F insulation and Class B temperature rise at the motor's nominal rating.

3. Type 2 Motors:

a. Totally enclosed, fan cooled.

b. Class F insulation and Class B temperature rise at the motor's nominal rating.

c. Conform to IEEE 841.

d. Coat all internal surfaces with an epoxy paint.

4. Type 3 Motors

a. Explosion proof motors, UL listed per UL 674 for Class I, Group D hazardous atmospheres.

b. Class F insulation.

c. Conform to IEEE 841.

d. Provide UL-approved breather/drain device in the motor drain hole.

e. Provide a frame temperature thermostat which meets the UL frame temperature limit code T2B (260 degrees C). Include automatically reset, normally closed contact rated 2 amperes at 115 volts AC.

D. Thermal Protection

1. Unless specified otherwise, provide thermal protection as defined in NEMA MG 1-12.53.1, as follows:

	Thermal Protection	
Motor type	Type 2 - Thermostats	Type 1 - RTDs
Noninverter duty	50-150 HP	200-250 HP
Inverter duty	1-60 HP	75-250 HP

2. Provide thermal protection in each stator winding.

a. Thermostats: Bimetallic switch type, self-resetting.

b. Resistance temperature detectors (RTDs): 10-ohm copper type (two per phase).

c. On larger frame sizes where the motor manufacturer does not offer copper type RTDs, provide 100-ohm platinum type (two per phase).

3. For explosion proof motors, provide the motor winding thermal protection as specified above in addition to the motor frame thermostat specified in Paragraph 2.05.c.4.e.

E. Inverter Duty Motors

1. Use with adjustable frequency controllers employing Pulse Width Modulation (PWM) technology.

2. Do not exceed NEMA MG 1, Class B, temperature rise when operating over the specified speed range on the specified load speed/torque characteristics required by the associated driven equipment

3. Provide certification from the motor manufacturer of compatibility with the adjustable frequency controller to be used with the motor.

4. Designed to operate over the speed or frequency range specified.

5. Insulation: Meet NEMA MG 1, Part 31 (1600 volt peak at a minimum of 0.1 microsecond rise time).

6. Provide with thermal protection as specified above.

7. Provide Grounding Unit

a. Provide with a shaft grounding unit mounted on the fan housing with stub shaft extended from the motor shaft.

b. Equip with two brushes, totally enclosed and sealed against environmental contamination.

c. Exception: Grounding unit and brushes not required for vertical turbine pumps.

8. Totally Enclosed, Air-Over, Blower-Cooled (TEBC) Type

a. Provide where specified or required by the specified application requirements.

b. Blowers: Driven at constant speed by 460-volt, 3-phase motors meeting Type 2 requirements specified in Paragraph 2.04 C.3.

c. Manufacture blower and ducting as an integral part of the main motor frame.

d. Provide air intake filter.

e. Construct scroll case of cast aluminum or iron, and fan wheel of Type 304 stainless steel.

9. Inverter duty motors may be NEMA MG1-1.16, design A.

F. Vertical Motors

1. Provide solid-shaft P-base type specifically designed for vertical installation.

2. Universal position motors are not acceptable.

3. Comply with Type 2, Type 3, and/or Inverter Duty Motor requirements as specified.

4. Thrust bearing rating: Demonstrate compatibility with the loads imposed by the driven equipment.

G. Minimum Nameplate Efficiency

1. Determine per IEEE 112B testing procedures, when operating on a sinusoidal power source.

2. Comply with the following:

Motor Horsepower	Motor Minimum Efficiency, percent			
	900 rpm	1200 rpm	1800 rpm	3600 rpm
1	72.0	82.5	83.0	84.0
1.5	75.5	84.0	85.0	84.0
2	81.5	85.5	82.5	82.5
3	86.5	88.5	89.5	87.5
5	87.5	89.5	89.5	89.1
7.5	88.5	91.0	91.7	90.2
10	89.5	91.1	91.7	91.0
15	89.8	91.7	92.4	91.7
20	90.2	91.7	93.0	91.7
25	91.0	92.4	93.5	92.0
30	91.0	93.0	93.6	92.4
40	91.7	93.6	94.1	93.0

Motor Horsepower	Motor Minimum Efficiency, percent			
	900 rpm	1200 rpm	1800 rpm	3600 rpm
50	92.4	93.6	94.1	93.0
60	93.0	93.9	94.5	93.6
75	93.0	94.5	95.0	94.1
100	93.6	94.5	95.4	94.5
125	94.5	94.5	95.4	94.9
150	94.5	95.4	95.8	95.0
200	94.5	95.4	95.8	95.4
250	94.5	95.4	95.8	95.4

H. Conduit Boxes

1. Type: Cast iron, split construction with threaded hubs.
2. Conform to IEEE 841.
3. Furnish at least one size larger than NEMA standard for the given motor size.
4. Design to rotate in order to permit installation in any of four positions 90 degrees apart.
5. Furnish with petroleum-resistant gaskets at the base of the conduit box and between the halves of the conduit box.
6. Provide grounding lug located within the box for the ground connection.
7. Minimum length of pigtail leads:
   a. 12 inches for motors up to 50 horsepower.
   b. 16 inches for motors larger than 50 to 250 horsepower.

I. Bearings

1. Type: Oil or grease lubricated ball or angle contact roller bearings.
2. Rating: Minimum L-10 life of 100,000 hours per ABMA 9 or 11 at the ambient temperature specified.
3. Motor designs employing cartridge type bearings will not be accepted.
4. Fit with lubricant fill and drain or relief fittings.

J. Lifting Eyes

1. Fit motors weighing more than 50 pounds with at least one lifting eye.

K. Current Imbalance

1. Base upon the lowest value measured.

2. Do not exceed the values tabulated below when the motor is operating at any load within its service factor rating and is supplied by a balanced voltage system:

   a. Under 5 horsepower: 25 percent

   b. 5 horsepower and above: 10 percent

L. Space Heaters

1. Where specified, size and design to prevent condensation inside the motor enclosure after shutdown.

2. Type: Cartridge or flexible wraparound type.

3. Power Requirements: 120 volts, single phase, 60 Hz.

4. Mark the rating in watts and volts on the motor nameplate or on a second nameplate.

5. Bring terminals to a separate terminal block or to pigtails in the conduit box.

PART 3 - EXECUTION

3.01 TESTING

A. Perform winding insulation resistance and current imbalance testing as specified in Division 16.

B. Test for correct rotation during preoperational checkout.

END OF SECTION

SECTION 11302

BIOLOGICAL ODOR CONTROL SYSTEM

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Biotrickling filter odor control system designed for removal of hydrogen sulfide, organic reduced sulfur compounds and other odorous compounds from the foul air stream.

B. Scope of supply:

1. FRP biotrickling filter vessel.
2. Plastic, synthetic, non-reactive media.
3. Water/nutrient injection spray system.
4. UL, factory-labeled electrical control panel housing a single Programmable Logic Controller (PLC) system and other components required for the control and monitoring of the System.
5. A water panel that houses all components necessary for the control and monitoring of the media irrigation system, including an Automatic Flow Control system with capability to automatically compensate for water supply pressure changes.
6. Odor control fans to move the odorous air from the source and be able to compensate for all pressure losses at the design airflow.

C. Equipment Numbers

1. Foul Air Fan No. 1: Tag No. FAN711
2. Biotreatment Control Panel: Tag No. PNL710
3. Startup Pump: Tag No. PMP713

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section:

1. Section 01330 – Submittals
2. Section 01610 – Seismic Anchorage and Bracing
3. Section 01650 – Shipment, Protection, and Storage
4. Section 01782 – Operation and Maintenance Information
5. Section 01999 – Reference Forms
6. Section 03301 – Cast-in-Place Concrete
7. Section 05501 – Anchor Bolts and Anchoring Devices

8. Section 11000 – General Requirements for Equipment
9. Section 11002 – Equipment Mounting
10. Section 11060 – Electric Motors

1.03 DESIGN PARAMETERS

1. Airflow: 14,000 cfm
2. Average H_2S concentration: 5 ppmv
3. Maximum H_2S concentration: 25 ppmv
4. Pressure drop across vessel: 1.0-inch water column maximum
5. Location: outdoors
6. Inlet air temperature: 55 – 100 degrees F
7. Maximum biotrickling filter structure dimensions: 28 feet long, 10 feet wide, 18 feet tall

1.04 PERFORMANCE REQUIREMENTS

A. When operating under the design parameters, the performance requirements for the biotrickling filter system are:

1. H_2S removal: 99 percent for inlet air H2S concentrations ≥ 50 ppmv but ≤ 100 ppmv
2. Outlet H_2S concentration: < 0.5 ppmv for inlet air H2S concentrations ≤ 50 ppmv

B. The biotrickling filter must be capable of operating continuously 24 hours per day, 7 days per week and must be capable of continuous operation over a 12-month period.

1.05 DESIGN REQUIREMENTS

A. Provide one (1) biotrickling filter to meet the performance requirements.

B. Select materials that provide appropriate resistance to corrosion.

1.06 SUBMITTALS

A. General

1. Comply with Section 01330
2. Include a copy of this specification section, check-marked to indicated compliance and with deviations requested, as detailed in Section 01330.
3. Include a copy of the contract document mechanical layout drawings, control diagrams, and process and instrumentation diagrams, with addenda updates, that apply to the equipment in this section.

a. Mark to show specific changes necessary for the equipment proposed in the submittal.

b. If no changes are required, mark the drawing or drawings "No Changes Required".

c. Failure to comply with this paragraph is sufficient cause to reject the entire submittal.

4. In all submitted product data, call out model, configuration, size etc. of proposed equipment and/or cross out model, configuration, size etc. of non-applicable equipment.

a. Failure to comply with this requirement is sufficient cause to reject the entire submittal.

B. Bill of Materials with quantity, originating manufacturer and part number, and description. List all spare parts separately at the end of the Bill of Materials.

C. Product Data

1. Submit manufacturer's standard catalog data, descriptive literature, motor data, parts list, equipment weights and lifting points, and detailed specifications describing all system components forming a part of the equipment furnished under this section.

2. Submit applicable Material Safety Data Sheets (MSDS)

D. Calculations

1. Submit structural calculations and drawings for the main reactor vessel anchor bolt design calculations, stamped and signed by a California-licensed professional civil or structural engineer. Comply with Sections 01610, 03301, and 05501.

E. Shop Drawings

1. Submit drawings showing the general arrangement of the entire assembly, including:

a. Dimensional information

b. Plan and section views of the equipment layout

c. Location and size of piping connections

d. Auxiliary equipment locations

2. Wiring diagrams and electrical schematics for all control equipment to be furnished.

F. Process control narrative, including but not limited to narratives for irrigation flow control and startup operation

G. Control Panel:

1. Comprehensive Bill of Materials list which includes component description, quantity of each component, manufacturer and specific part/model number for each item.

2. Catalog data for each component included with the complete, integrated control panel with specific model numbers, features and options clearly "arrowed".

3. Panel plan and elevation drawings which include device layouts for both exterior panel door and interior back panel, dimensions, device identification legend, nameplate schedule and conduit entrance locations.

4. Complete interconnection wiring diagrams which include point-to-point depiction of all control panel wiring including connections to external field devices, and power sources Owner's SCADA system equipment. Connections solely within the control panel shall be shown as solid lines with external electrical connections indicated with a dashed line.

5. PLC I/O wiring diagrams showing all wiring requirements for each instrument loop. Graphic symbols shall with ISA S5.4 drawing standards. A loop diagram shall be furnished for each analog and digital I/O process and all PLC I/O points. Energy sources – electrical power, air supply, pneumatic and hydraulic fluid supply, designating voltage, current, pressure, etc. shall be shown in detail on the diagram along with input/output signals in engineering units.

H. Modeling results, in graphical format, with velocity contour plots at 24" media height over the entire media cross section shall be provided to confirm that the airflow through the media is homogeneous at the average airflow rate. For the purpose of this specification, homogeneous is defined as being when the upflow velocity over the entire media cross sectional area is equal to the average upflow velocity ± 10%.

I. Submit a certificate of Unit Responsibility. See Section 01999.

J. Submit motor data in accordance with Section 11060.

K. Submit equipment mounting information in accordance with Section 11002.

L. Complete and submit the following forms from Section 01999:

1. Motor Data Form.

2. Unit Responsibility Form.

3. Extended Warranty Forms.

M. Deferred Submittals:

1. Submit as-built dimension drawings showing plan and elevation views of the system and all applicable connections

2. Submit as-built process and instrumentation diagrams

3. Submit operating and maintenance (O&M) information as specified in Section 01782 a minimum of 10 days before equipment shipment.

4. Following installation and startup, submit completed Manufacturer's Installation Certification Form.

1.07 QUALITY ASSURANCE

A. Unit Responsibility

1. Assign unit responsibility, as specified in Section 11000, to the biotrickling filter manufacturer for the equipment and controls specified in this Section.

2. Submit a certificate of unit responsibility (Section 01999).

B. Experience

1. Demonstrate a minimum of 10 years experience in the design, application, and supply of biotrickling filters in wastewater treatment plants or pump stations for control of odors.

2. Submit a list of no less than 10 operating installations as evidence of meeting the experience requirement.

3. The Engineer may require evidence, in the form of operating records, from these installations to substantiate any claims concerning the ability of the equipment to perform as required.

1.08 PRODUCT DELIVERY STORAGE, & HANDLING

1. Comply with Section 01600.

1.09 WARRANTY

A. Materials and Workmanship

1. Length: Minimum period of five (5) years from date of acceptance of system by City.

2. Coverage: All defects or failures of materials or workmanship which occur as the result of normal operation and service except for normal wear parts.

3. Complete the Extended Warranty Form in Section 01999.

B. Biotrickling Filter Performance

1. Guarantee biotrickling filter performance as specified under "Design Requirements" above.

2. Length: Two (2) years from date of acceptance of system by City.

3. Complete the Extended Warranty Form in Section 01999.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. BioAir Solutions, LLC

B. Perry Fiberglass, Inc.

C. Or equal, as specified in Section 01330.

2.02 PROCESS DESCRIPTION

A. The odor control system shall remove hydrogen sulfide, organic reduced sulfur compounds and other odorous compounds from the foul air stream using a biotrickling filter operating in a counter-current fashion. Co-current systems shall not be allowed.

B. The foul air shall enter the system at the bottom of each reactor and flow upward through each of the media layers. The airstream is then released to the atmosphere via the exhaust stack at the top of the reactor.

C. The media bed shall be intermittently irrigated from above using suitable reclaimed water or potable water in a once through fashion. The water then trickles through the media and is collected in a sump at the bottom of the reactor. The drain water from the system will pass from the sump in the bottom of the reactor vessel and be piped to a discharge point as detailed on the Contract drawings.

2.03 SYSTEM COMPONENTS

A. Biotrickling Filter Vessel

1. The biotrickling filter vessel shall be free standing and of rectangular configuration operating in a counter-current manner.

2. Each vessel shall consist of one (1) or more modules containing plastic, structured media and one (1) top piece.

3. Each module shall be constructed from Fiberglass Reinforced Plastic (FRP) and be designed with adequate strength to support the number of required modules.

4. Each FRP module shall contain, as a minimum, a 100 mil vinyl ester resin corrosion barrier. The structural layer shall consist of isophthalic resin with chop strand and continuous glass. The exterior top coat shall be isophthalic resin with UV resistant pigment (minimum service life of 10 years). The exterior color shall be CCP base white enamel (W005).

5. Biotrickling filter vessels shall not provide access to any area beneath the media or any location within the vessel where there is a chance for dripping acidic filtrate or hydrogen sulfide gas.

6. The reactor vessels shall be provided with 316 stainless steel hold down lugs to account for all anticipated loads to comply with local seismic and wind code requirements.

B. Media

1. The structured media shall be high porosity, chemically resistant, engineered, plastic, synthetic porous material made from polyvinyl chloride, polyethylene or polyurethane. Organic media, carbon derived lava rock or lava rock media and/or random synthetic or non-synthetic inorganic media materials shall not be allowed.

2. The media characteristics (available surface area, density, and pressure drop) shall be structured and uniform throughout the media bed with pre-manufactured, engineered flow channels. Random media types (chips, clay balls, foam cubes, etc.) shall not be allowed.

3. The media shall have a minimum available specific surface area of 230 ft2/ft3 and a void opening of more than 96%. Pressure drop shall not exceed 0.5" w.g. per ft of media depth.

4. The media shall be guaranteed not to clog or require cleaning, scrubbing, backwashing, acid-washing or replacement for a period of ten (10) years.

5. Media shall resist compaction or swelling due to varying moisture levels and shall not degrade when subjected to low pH (i.e. pH < 2) conditions.

6. The uniform structure of the media shall minimize the potential for short circuiting and encourage a uniform water and air flow pattern over the entire media cross sectional area.

7. The manufacturer shall provide evidence that the airflow through the media at 24" height from the bottom of the media is homogeneous at the average airflow rate. For purposes of this specification, homogeneous is defined as being when the upflow velocity over the entire media cross sectional area is equal to the average upflow velocity ± 10%. The airflow modeling results with velocity contour plots at 24" media height over the entire cross section shall be provided in graphical format as part of the Submittal requirements.

8. Sufficient media shall be provided to ensure the performance requirements listed in Paragraph 1.04 are met.

9. Media shall be pre-installed in the FRP module (s) by the system manufacturer prior to shipment to the job site. Medias that require a contractor for installation or placement are not permitted.

C. Irrigation System

1. Each reactor shall be configured with at least one (1) irrigation point which shall distribute the irrigation water evenly over the entire upper surface of the media layer.

2. Each spray nozzle shall be tested by the Manufacturer and a certificate of conformity supplied with the shop drawings to show that the nozzle has been tested and meets the specified standards for uniform distribution.

3. If applicable, the irrigation system shall be supplied with a nutrient addition system to provide the macro and micronutrients required by the bacteria for optimal metabolism of the odorous compounds being treated.

D. Control System

1. Electrical Control Panel (ECP)

a. The ECP enclosure shall be NEMA 4X and constructed of 316SS, and the panel shall come with a 316SS panel stand.

b. The ECP shall house the necessary electronic components and an Allen Bradley MicroLogix 1400 PLC with PanelView 800 (HMI) for the control and monitoring of the irrigation system.

c. Dry contacts shall be provided for external notification of alarm status. Alarms, at a minimum, shall be provided for:

1) Low irrigation water flow
2) High irrigation water flow
3) No nutrient flow
4) Blower fail
5) General Biofilter Alarm

d. Provide at a minimum the following panel indicators:

1) Foul air fan run
2) Foul air fan fail
3) Foul air fan elapsed time meter
4) Foul air fan high pressure
5) Irrigation system run
6) Irrigation system fail
7) Grease filter high pressure
8) Foul air fain elapsed time-meter, non-resettable with 99,999.9 hour readout.

e. An Ethernet connection shall be provided to allow for remote monitoring/control of the system.

f. There shall be an allowance to manually open the irrigation spray valve (located in the water control panel) for the purpose of routine maintenance checks but the valve should be normally closed.

g. The system shall contain a PLC with an Ethernet/IP port, two (2) serial ports, on-line editing capability, a built-in backlit LCD screen, and a built-in high speed counter. The PLC shall be expandable with up to seven (7) additional input/output modules.

h. ECP shall house all relays, starters, switches, indicating lights, and other components for a complete and operable system.

i. The ECP shall require a single electrical connection of 480V/3Phase/60Hz. Transformers shall be provided as necessary for power and control voltages.

2. Water Control Panel (WCP)

a. The Water Control Panel shall be constructed of 316SS and be mounted on the common 316SS panel stand, back-to-back with the ECP.

b. The WCP shall contain a panel heater, valves, motorized ball valves, strainers, instruments and piping for the control of the irrigation system and shall operate from control signals from the ECP.

c. The WCP shall contain a pulse generating, paddlewheel water flow meter. Irrigation water flow shall be monitored and recorded to ensure proper operation and aid in trouble-shooting. Monitoring irrigation water pressure alone is not acceptable.

d. The WCP shall allow for a single connection to either a potable water source or suitable final effluent plant water source.

e. The WCP shall house the nutrient addition system.

f. The WCP shall also contain a flexible spray hose with a hand trigger to allow for convenient rinsing of the strainer, filling of the nutrient barrel, and general convenience. A dedicated ball valve shall be provided in front of the spray hose to allow for the operation of the water panel while simultaneously allowing for isolation in case of a leak in the hose.

3. Automatic Flow Control System

a. The ECP and WCP shall contain the necessary programming, circuitry, and hardware for an Automatic Flow Control System, which shall have the following features and shall be capable of meeting the Automatic Flow Control System performance test outlined in Section 3.04.H:

1) The system will periodically monitor the irrigation water flow rate during the irrigation sequence.

2) If the irrigation water flow rate is outside of the target flow range the irrigation valve will automatically adjust to correct the irrigation water flow rate.

3) The following parameters shall be operator-adjustable:

a) Target irrigation flow rate

b) Allowable flow error

c) Amount of valve adjustment when error is detected

d) Flow evaluation period

b. The following non-adjustable readings shall be shown on the ECP HMI:

1) Instantaneous irrigation water flow rate

2) Actual irrigation valve open %

c. The following will NOT be considered to be meeting the Automatic Flow Control Systems requirements:

1) Systems using mechanical-only means of adjusting the irrigation water flow such as manual diaphragm valves, globe valves, pressure reducing or adjusting valves.

2) Systems that require operator interaction in order to correct the irrigation water flow.

E. Wet Well Exhaust Fan

1. The fan shall be single-width wheel, single-inlet as designed and manufactured by:
   a. Verantis
   b. The New York Blower Company
   c. Hartzell Air Movement or
   d. Approved equal.
2. Performance
   a. Airflow rate
      1) 14,000 cfm
   b. Pressure losses
      1) System supplier shall select fan to compensate for all pressure losses in the system, including losses in the ductwork from the wet well to the biological odor control vessel and losses in the biological odor control vessel, at the design airflow
   c. Maximum horsepower
      1) 30 hp
   d. Noise
      1) The fan sound level shall not exceed 85 dBA at a distance of 3 feet from the fan.
3. Fan and motor shall be explosion proof designed for Group D, Class 1, Division 1 electrical classification. Blower housing and blades shall be anti-static design with electrical grounding external to the fan.
4. Fan shall be designed for continuous service.
5. Fan shall be AMCA Arrangement 9 or 10. AMCA Arrangement 4, which places the motor shaft in the odorous airstream, is not allowed.
6. Fan shall be statically and dynamically balanced.
7. Fan ratings shall be based on tests made in accordance with AMCA Standard 210 and licensed to bear the AMCA Certified Ratings Seal for Air Performance. Blowers not licensed to bear the AMCA Seal for performance shall be tested, at Contractor's expense, in an AMCA Registered Laboratory.
8. Materials
   a. The blower shall be constructed such that all surfaces in contact with the odorous airstream are made of corrosion resistant FRP.
   b. Nuts, bolts and fasteners in contact with the gas stream shall type 316 stainless steel.
   c. Blower shall have a 316 stainless steel shaft.
   d. Blower housing shall be constructed of polyester resin.

e. Blower shall be equipped with a Teflon shaft seal.

9. Fan shall be constructed in accordance with ASTM D4167 standard specification for FRP blowers and blowers to ensure structural integrity.

10. Wheel shall be radial or backwardly-inclined, non-overloading design. Wheel shall be fabricated of vinyl ester resin.

11. Wheel hub shall be securely fastened to the shaft and completely encapsulated in FRP to ensure corrosion-resistant integrity.

12. The blower motor shall be a standard efficiency, explosion proof, 480V/3Phase/60Hz electric motor as manufactured by US Electric Motors, Baldor, Reliance or approved equal.

13. A secondary subbase with spring isolators with seismic restraint snubbers shall be provided.

F. Recirculation System

1. Systems requiring a permanent recirculation system shall not be allowed.

2.04 SPARE PARTS

A. At a minimum, supply the following spare parts with the equipment.

1. One (1) set of fuses, one (1) for each fuse rating.

2. One (1) set of lamp lenses.

3. One (1) strainer.

4. One (1) set of blower bearings.

5. One (1) fan belt.

6. One (1) fan shaft seal.

7. One (1) fan wheel and shaft assembly.

B. Store spare parts on site and hand over to the Owner at equipment handover.

PART 3 - EXECUTION

3.01 FACTORY TESTING

A. Reactor Vessel

1. Inspect FRP reactor vessel prior to shipping for conformance to the following:

a. Dimensions match those shown on submittal drawings and are within Manufacturer's specified tolerances.

b. Flanges and connections between reactor parts fit securely without improper bending or stressing of parts.

c. Damage or imperfections to paint or fiberglass work, including cracking/crazing are minimal and in accordance with FRP specifications in Paragraph 2.03.A.

d. Manufacturer shall keep a record of the quality control document for each reactor vessel(s) that is available to the Engineer upon request.

B. Electrical Control Panel

1. Inspect electrical control panel prior to shipping for conformance to the following:

a. NEMA rating according to Section 2.05D and bear the UL508 label.

b. PLC program and HMI shall be tested for proper communication and functionality.

c. PLC digital and analog inputs shall be electrically tested to ensure input recognition in the proper area of the PLC program.

d. Check all wiring between panel components and terminal strips for proper labeling and connection.

C. Water Panel

1. Test all water panel piping and/or other pre-installed piping prior to shipping for conformance to the following:

a. System shall have no leaks when subjected to a pressure test at 80 psi for a minimum of 1 hour.

b. All installed instruments, sensors, pumps, actuated valves, and other electrical components shall be tested for proper operation.

c. All wiring from terminal strips to all electrical components shall be tested to ensure proper wiring.

D. Spray nozzle

1. Spray nozzle shall be factory tested to ensure compliance with Manufacturer standards for uniform distribution.

3.02 INSTALLATION & EQUIPMENT STARTUP

A. Minimize the need for on-site assembly by pre-assembling equipment when reasonable. Media shall be pre-installed by the Manufacturer and certified to meet the specified performance requirements.

B. Install equipment in accordance with Manufacturer's written installation and startup instructions and by workers experienced in the handling of fiberglass vessels, electrical work, plumbing, and instrumentation.

C. The final installation must be certified by the Manufacturer as complete and correct.

D. The Manufacturer shall provide the Contractor with required clearances, tolerances and limitations, such as smoothness/flatness of concrete pad and shall be available to answer questions prior to and during the installation of the equipment.

E. Once the installation has been certified by the Manufacturer, start the System, with assistance from the Manufacturer, to begin the biological acclimation period.

1. The startup period shall take no longer than six (6) weeks

2. At the direction of the Manufacturer, switch the system from startup operation mode to normal operation mode.

3. Perform any minor re-piping or plumbing required in the Manufacturer's installation and startup manual.

F. Any special tools or materials required for this startup/acclimation period shall be provided by the Manufacturer.

G. Conduct the performance test in the presence of the Engineer, as detailed in Paragraph 3.04 below, after satisfactory startup and the corresponding switch over to normal operation.

3.03 FIELD PAINTING & CORROSION PROTECTION

A. If painted surfaces are damaged during shipment, off-loading or installation, as long as the damage is surface only and in no way affects the integrity of the equipment or its ability to perform, these blemishes, scratches or other imperfections, touch up in accordance with instructions from the Manufacturer. Use materials compatible with the original coating material in quality and color.

3.04 PERFORMANCE TESTING

A. Performance testing shall not commence until the Manufacturer and Engineer agree that the system has been satisfactorily started-up and sufficient time has been allowed for the acclimation of the bacteria.

B. After the odor control system has been satisfactorily started-up and switched to normal operation, demonstrate, in the presence of the Engineer, that the system will perform as specified in Paragraph 1.04 of this specification.

C. Provide the Engineer with a written test protocol. The performance test may not be conducted until the test protocol has been reviewed and approved by the Engineer.

D. The Manufacturer may be present during the performance test and, at its own discretion, may conduct a parallel performance test as long as they do not interfere with the performance test being conducted by the Contractor.

E. Supply, install and operate all equipment, sensors and instrumentation required to complete the performance test.

F. H2S Testing procedure

1. Measure airflow into each unit and, if necessary, adjust to the design airflow of 14,000 cfm +/- 10%. Airflow balancing will be conducted by the manufacturer and witnessed by the Engineer and Contractor.

2. Airflow shall be measured at the beginning of the test period. The set position on the damper(s) will be marked or noted. Airflow will not change as long as damper(s) remain in position.

3. Measure pressure drop across the biotrickling filter at beginning of test period.

4. Measure temperature of the inlet, outlet and ambient air.

5. Performance test period to begin at a noted time and last for four (4) hours. H2S data from the common inlet location and from the outlet of each odor control system will be measured and logged once every 10 minutes to demonstrate performance during test period.

   a. The inlet H2S data will be logged with a pre-calibrated OdaLog gas data logger with appropriate range and accuracy for the inlet air stream (0-1000 ppmv or 0 - 200 ppmv range, 1 ppm display resolution or 0.0 - 50.0 ppmv range, 0.1 ppmv display resolution).

   b. The outlet H2S data will be logged with a pre-calibrated OdaLog gas data logger with appropriate range and accuracy for the outlet air stream. (0.00 - 2.00 ppmv range, 0.01 ppmv display resolution or 0.0 - 50.0 ppmv range, 0.1 ppmv display resolution).

G. H2S Acceptance criteria:

1. The System's H2S removal efficiency shall be determined by calculating the average inlet H2S concentration and the average outlet H2S concentration and using the following formula: H2S removal efficiency (%) = (1 – (average outlet H2S concentration/average inlet H2S concentration)) x 100. The system shall have passed the H2S performance test if the H2S removal efficiency is 99% or more for inlet air H2S concentrations ≥ 50 ppmv but ≤ 100 ppmv, or the average outlet air H2S concentration is ≤ 0.5 ppmv, whichever is greater.

2. In the event that the average inlet H2S concentration during the four (4) hour test period exceeds the specified average inlet H2S concentration as listed in this Specification, or the maximum inlet H2S concentration during the four (4) hour test period exceeds the specified maximum inlet H2S concentration as listed in this Specification, the H2S acceptance criteria shall not apply and the system shall be considered to have passed the performance test.

H. Automatic Flow Control System testing procedure

1. In the presence of the Engineer, the Manufacturer shall demonstrate the operation of the Automatic Flow Control System as given below.

   a. Review the requirements list given in Paragraph 2.03.D.3 and prove or demonstrate compliance with each point.

   b. The following procedure shall be followed for each irrigation valve in the system. The cycle time shall be minimized to allow the procedure to be completed within 30 minutes.

      1) Open all manually controlled valves to allow for maximum flow through the WCP. Set the target irrigation flow rate to 3x the normal irrigation flow rate (to allow the irrigation

valve to fully open). Demonstrate that the valve will reach 100% open status within 20 seconds during irrigation.

2) In between irrigation cycles, while the irrigation valve is CLOSED, set the target irrigation flow rate to the proper design irrigation flow rate. Demonstrate that the irrigation valve will automatically close in order to reach the design flow rate within 30 seconds during its next irrigation cycle.

3) Repeat steps a. and b. above for a minimum of 3 additional set points both above and below the normal target irrigation flow rate.

4) Set the target irrigation flow rate to the normal target irrigation flow rate. Partially close at least one valve upstream of the modulating ball valve and demonstrate that the irrigation valve will automatically adjust to a more open position in order to reach the design flow rate within 30 seconds during its next irrigation cycle.

5) Return all Automatic Flow Control settings to their normal positions and fully open all upstream and downstream valves. Demonstrate that the system will return to normal flow control operation.

3.05 MANUFACTURER'S SERVICES

A. In addition to being available by phone to assist the Contractor during the offloading, installation, and startup of the equipment, the following Manufacturer's services shall be provided with the number of trips and days on site as a minimum.

B. Startup assistance: One (1) trip, two (2) days on site

C. Performance testing assistance/training: One (1) trip, one (1) day on site

D. Notwithstanding the above, the Manufacturer shall continue to assist the Contractor with questions, issues and remote assistance until the system is properly installed, running satisfactorily and handed over to the Owner.

END OF SECTION

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SECTION 11303

MIST AND GREASE ELIMINATOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Two-stage, duct-mounted filter for removing grease and mist from foul air stream.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section:

1. Section 01330 – Submittals
2. Section 01650 – Shipment, Protection, and Storage
3. Section 01999 – Reference Forms
4. Section 11000 – General Requirements for Equipment

1.03 DESIGN PARAMETERS

1. Airflow: 14,000 cfm
2. Pressure drop across vessel: 1.0-inch water column with clean filter
3. Location: outdoors
4. Inlet air temperature: 55 – 95 degrees F

1.04 PERFORMANCE REQUIREMENTS

A. When operating under the design parameters, the performance requirements for the mist and grease eliminator are:

1. 99 percent removal efficiency at 12 microns

1.05 SUBMITTALS

A. General

1. Comply with Section 01330
2. Include a copy of this specification section, check-marked to indicated compliance and with deviations requested, as detailed in Section 01330.
3. In all submitted product data, call out model, configuration, size etc. of proposed equipment and/or cross out model, configuration, size etc. of non-applicable equipment.
   a. Failure to comply with this requirement is sufficient cause to reject the entire submittal.

B. Product Data

1. Submit manufacturer's standard catalog data, descriptive literature, parts list, equipment weights and lifting points, and detailed specifications describing all system components forming a part of the equipment furnished under this section.

1.06 QUALITY ASSURANCE

A. Unit Responsibility

1. Assign unit responsibility, as specified in Section 11000, to the grease and mist eliminator manufacturer for the equipment specified in this Section.

2. Submit a certificate of unit responsibility (Section 01999).

B. Experience

1. Demonstrate a minimum of 5 years experience in the design, application, and supply of grease and mist eliminators in wastewater treatment plants or pump stations.

2. Submit a list of no less than 10 operating installations as evidence of meeting the experience requirement.

3. The Engineer may require evidence, in the form of operating records, from these installations to substantiate any claims concerning the ability of the equipment to perform as required.

1.07 PRODUCT DELIVERY STORAGE, & HANDLING

1. Comply with Section 01650.

1.08 WARRANTY

A. Materials and Workmanship

1. Length: Minimum period of five (5) years from date of acceptance of system by City.

2. Coverage: All defects or failures of materials or workmanship which occur as the result of normal operation and service except for normal wear parts.

3. Complete the Extended Warranty Form in Section 01999.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. FanAir Company

B. Perry Fiberglass Products, Inc.

C. Or equal.

2.02 EQUIPMENT FEATURES

A. Provide with latched removable lid to access mesh filter.

B. Each mesh filter shall be individually removable for cleaning.

C. Provide mechanical differential pressure gauge mounted to housing.

1. Manufacturer: Magnehelic
2. Scale: Inches of water column.
3. Range: As determined by drum scrubber manufacturer.
4. Mounting bracket and hardware: Type 316 stainless steel.
5. Tubing: Type 316 stainless steel.

D. Provide adequate support to the unit through use of support legs with base flange.

2.03 MATERIALS

A. Mist and Grease Eliminator shall be constructed of fiberglass reinforced plastic

B. Resin shall be corrosion-resistant vinyl ester resin

C. Seal all cut edges with a resin coating of the same resin used in the fabrication.

D. Construct housing using laminate construction consisting of an inner surface or "C" glass veil, an inner layer and an exterior layer or laminate body. No cracks or delaminating will be permissible

E. Provide EPDM gasket for access panels

F. The first stage filter pad shall be 316 stainless steel mesh

G. The second stage filter pad shall be woven polypropylene

2.04 PIPING CONNECTIONS

A. Housing shall be transitioned and flanged for installation in the foul air FRP ductwork

B. Inlet and outlet piping connection size: 36-inches

C. Provide flanged inlet and discharge with 1/8-inch EPDM gaskets.

D. Drill flanges per ASTM D-3982

E. Provide drain connection with PVC ball valve

2.05 SPARE PARTS

A. Two (2) spare filters for the mist and grease eliminator

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install as indicated on the drawings and as recommended by the manufacture

B. Provide adequate support for the unit so that there is no strain on the ductwork to which it is connected

C. Using colored tape, mark the differential pressure gage during commissioning:

1. Mark the low point as the initial clean filter pressure

2. Mark the high point as either the manufacturer's recommended maximum differential or 1-inch w.c. higher than the low point, whichever is lower

END OF SECTION

SECTION 13235

FIBERGLASS REINFORCED PLASTIC (FRP) DUCTWORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Fiberglass Reinforced Plastic (FRP) ductwork, dampers, and associated appurtenances for nonflammable corrosive vapor exhaust systems.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section:

1. Section 01330 – Submittals
2. Section 01610 – Seismic Anchorage and Bracing
3. Section 01782 – Operations and Maintenance Information
4. Section 03301 – Cast-in-Place Concrete
5. Section 05501 – Anchor Bolts and Anchoring Devices

1.03 QUALITY ASSURANCE

A. Referenced Standards:

1. ASTM International (ASTM):
   a. ASTM D2310, Standard Classification for Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
   b. ASTM D2412, Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
   c. ASTM D3567, Standard Practice for Determining Dimensions of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings
   d. ASTM D2996, Filament-Wound Fiberglass (Glass Fiber-Reinforced Thermosetting Resin) Pipe
   e. ASTM D4097, Contact-Molded Glass-Fiber-Reinforced Thermoset Resin Chemical-Resistant Tanks
   f. ASTM E84, Test Method for Surface Burning Characteristics of Building Materials
2. Factory Mutual (FM):
   a. FM 4922, Test Standard for Evaluating Fume Exhaust Ductwork
3. Underwriters Laboratories (UL)
   a. UL 181, Factory-Made Air Ducts and Connectors

4. U.S. Department of Commerce

a. PS 15-69, Custom Contact-Molded Reinforced Polyester Chemical-Resistant Process Equipment

1.04 DESIGN REQUIREMENTS

A. Design for not less than 20 inches water column pressure and 10 inches water column vacuum

B. Design for continuous operation with air containing corrosive and flammable vapors and gases generated from the conveyance of municipal wastewater.

1. Vapors and gases may be expected to include methane, hydrogen sulfide, chlorine gas, sulfur dioxide, gasoline vapors, ammonia, and water-saturated air.

2. The airstream may also be expected to contain droplets of dilute sulfuric acid.

3. Air temperatures are expected to vary between 50 degrees F and 130 degrees F.

C. Filament wound with wall thickness as follows:

1. 2" thru 22" diameter: 0.125”

2. 24" thru 36" diameter: 0.187”

D. Specified duct sizes represent the nominal inside diameter, or its equivalent net free area required for that service.

E. A minimum structural safety factor of 5 to 1 shall be used in the design of ducting.

F. Meet requirements of ASTM D2996 for filament wound pipe, and ASTM D4097 for hand layed-up shapes.

1.05 SUBMITTALS

A. Shop Drawings:

1. See Section 01330 for submittal process requirements.

B. Include the following:

1. Product Data:

a. Complete specifications

b. Duct material,

c. Hanging weight,

d. Fabrication techniques

e. Proposed resins and fillers.

2. Published, illustrated installation and maintenance instructions and field joint installation instructions.

3. Construction, location, and installation details of inspection plates.

C. Calculations

1. Submit structural calculations and drawings for bypass stack anchorage design calculations, stamped and signed by a California-registered professional civil or structural engineer. Comply with Sections 01610, 03301, and 05501.

D. Construction details for supports and hangers

E. Layout drawings: proposed plan for location and type of supports, including location of any required expansion joints.

1. Acceptance of the proposed locations and construction details by the Engineer and Construction Manager is required prior to the start of fabrication.

F. Certifications:

1. Current listing and test report from Factory Mutual or UL specifically stating the results of ASTM E84 ratings on both inside and outside surfaces of the duct in up to 3/8-inch thicknesses and that the ductwork complies with UL 181 standards.

2. Test reports from a nationally recognized laboratory on both pressure and vacuum capabilities of the duct.

G. Contract Closeout Information:

1. Operation and Maintenance Data:

a. See Specification Section 01782 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:

1. Perry Fiberglass

2. Spunstrand

3. Or approved equal as defined in Section 01330.

B. Submit request for substitution in accordance with Specification Section 01330.

2.02 MATERIALS

A. Grade: Type 1, Grade 2 RTRP polyester, Class E per ASTM D2310.

B. Type A resin: Hetron 99P or Q6367

1. Select to meet the exposures and temperatures of the air to be exhausted.

C. Fillers, other than those added for flame retardance when required, shall not be allowed, and should not exceed 5% by weight.

D. Flame spread rating: 25 or less per ASTM E84.

E. Inner corrosion liner: 20 mil thick minimum surface veil saturated with polyester resin consisting of approximately 90% resin and 10% glass content by weight.

1. Overlap surface a minimum of 1".

F. Structural layer: filament wound of Type A premium grade polyester resin and glass.

G. Exterior shall:

1. Contain sufficient resin to ensure a relatively smooth surface free from exposed glass fibers or sharp projections.

2. Include an ultra violet inhibiting agent.

H. Standard lengths: in accordance with the manufacturers published product data sheets.

I. Wall thickness: not less than 87.5% of the nominal specified wall thickness when measured in accordance with ASTM D3567.

J. Duct stiffness: The duct shall have sufficient strength to exhibit, without structural damage, a minimum rated stiffness in accordance with ASTM D2412 for the design conditions and pipe laying conditions.

K. Duct manufactured with a composite structural wall containing sand, alumina or other granular fillers is not acceptable.

2.03 FABRICATION

A. All FRP ductwork shall be fabricated and installed in accordance with PS 15-69 and duct manufacturer's instructions.

B. Transitions shall have tapers whose length is minimum as shown. All ducts and fittings shall be of seamless construction longitudinally; material shall not be cut from molds and rebonded.

C. Fabricate transitions to the same standards as specified for round duct.

D. Labels: Duct and fittings shall bear labels which contain the following information:

1. The identity of the manufacturer and their location.

2. The product identity or brand name.

3. The ASTM E84 ratings for both inside and outside surfaces of the duct in thicknesses to 3/8 inch.

2.04 FASTENERS

A. Bolts, nuts, and washers: stainless steel, AISI Type 316. Apply anti-galling compound before assembly.

B. Employ Type 316 stainless steel backing strips at all connections to fans, demisting sections, and wherever shear or moment loads may be encountered on duct connections.

2.05 GASKETS

A. Neoprene or Buna-N.

2.06 EXPANSION BOOTS

A. One-piece molded reinforced neoprene, a minimum thickness of 1/8 inch, secured with Type 316 stainless steel bands.

2.07 SUPPORTS AND HANGERS

A. Comply with the California Mechanical Code and design in accordance with CBC for a hazardous facility in a seismic Zone IV and a basic wind speed of 90 mph, exposure "C".

B. Fabricate hangers and supports from FRP, bars, angles, and straps secured with Type 316 stainless steel hardware, unless otherwise specified.

C. Provide abrasion-resistant shields between the lower half of the duct and the duct hanger to allow expansion and contraction of the duct freely in its supports.

1. 4-inch wide by 1/8-inch thick neoprene, bonded to hanger.

D. Support ductwork at intervals no greater than 10-foot centers. Supports and hangers shall transmit all ductwork loads into the building structural frame through a system of intermediate beams and struts as necessary to meet the requirements of these specifications.

E. Where supports and hangers are detailed on the drawings, provide as shown.

2.08 DAMPERS

A. Fabricate FRP Dampers with the same materials as the duct. No resin variations will be acceptable.

1. Blade:

a. FRP 2-piece molded including blade stiffeners per schedule on drawing.

b. Offset 5° in closed position to form a normal stop on wall of duct.

2. Axle: pultruded FRP made with same resin and continuous strand roving.

3. Bearing: Teflon.

4. O-rings: Viton.

5. No metal parts or cut edges in the airstream will be allowed.

B. Balancing Damper Manufacturers:

1. Spunstrand Inc. BA series

2. Swartwout model 912 with blade stop, axle shaft seals, and locking hand quadrant

3. Or equal.

C. Isolation damper manufacturers:

1. Spunstrand Inc. ZL Series (Zero Leak)

2. Ershigs type "B"

3. Swartwout model 914 with blade seals, axle shaft seals, and gear operator

4. Or equal.

D. Include flanges on all isolation dampers, and on balancing dampers when shown on drawings.

E. Dampers shall have AMCA certified leakage rates, or shall be individually water tested and certified leak free.

2.09 INSPECTION PLATES

A. Provide removable inspection plates, not less than 6 inches square or 8 inches round, at all fan inlet and discharge connections, and upstream and downstream from all fittings.

B. Inspection plates shall be gasketed and shall make an airtight seal with the parent duct.

C. Fabricate of the same material as the parent duct.

2.10 BYPASS STACK

A. Fabricate with same materials as duct

B. Design bypass stack to discharge foul air minimum of 15 ft above ground level

C. Provide weather shroud to protect discharge nozzle from intrusion of rain or other environmental debris

2.11 DRAINS

A. Provide drain sumps, with 1-1/2-inch minimum flanged outlets, at all low points. Fit all drain sumps with a 1-1/2-inch ball valve.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install all material and equipment as specified and as required by applicable state and local codes.

B. All ductwork indicated on the drawings is schematic. Changes in duct size, duct configuration, and location may be necessary to conform to field conditions.

C. Install and support ductwork in accordance with Chapter 6 of the California Mechanical Code and SMACNA.

D. Support terminal ends of ducts independently.

E. Provide flexible connections consisting of EPDM gasketing materials and stainless steel clamps between fans and ductwork.

END OF SECTION

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SECTION 15050

PIPING SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Systems of process piping and general requirements for piping systems.

B. Detailed specifications for the components listed on the Piping System Specification Sheets (PIPE SPEC) are found in Division 15 and other technical specifications.

C. Use this section in conjunction with those sections.

1.02 REFERENCED SECTIONS

A. A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 01600 – Materials and Equipment
3. Section 02320 – Trenching
4. Section 15060 – Pipe Hangers and Supports
5. Section 15076 – Piping and Valve Identification Systems
6. Section 15097 – Seismic Restraints for Piping
7. Section 15100 – Plastic Pipe
8. Section 15110.2 – Manual Valve and Gate Actuators and Accessories
9. Section 15114 – Ball Valves
10. Section 15122 – Piping Connections
11. Section 15250 – Insulation for Exposed Piping and Equipment
12. Section 15951 – Testing Gravity Flow Pipelines
13. Section 15996 – Testing Pressure Pipe

1.03 DEFINITIONS

A. Pressure terms used in Division 15 are defined as follows:

1. Maximum: The greatest continuous pressure at which the piping system operates.
2. Test: The hydrostatic pressure used to determine system acceptance.

B. Hazardous Gas Systems

1. Propane

2. Natural gas
3. Sludge gas
4. Hydrogen
5. Other flammable gases

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Equipment and Piping Coordination and Installation Drawings

1. The drawings show only the general arrangements of the project equipment, piping and appurtenances.

2. Prepare and submit coordination and installation drawings.

1) Show the specific locations and dimensions of equipment, tanks, control panels, piping, pipe hangers and supports, seismic restraints for piping, trench and rack mounted piping, valves, appurtenances, platform gratings, and related items.

2) Base upon dimensions for the actual equipment to be furnished from the accepted shop drawings.

3. The coordination and installation drawings are required for the following systems:

1) Chemical storage, feed, and piping systems.
2) Equipment and associated piping in Division 11.
3) Exposed and buried piping in Division 15.

4. Drawing Requirements

1) Prepared with AutoCAD 2010 or later software.
2) Use PC compatible hardware platform using Microsoft Windows XP operating system.
3) Submit drawing files with each piping system print.
4) Submit drawing files on rewritable CDROM disks.
5) Print at a minimum scale of 3/8” = 1’, on a minimum sheet size of 11” x 17”.
6) Show piping in plan and section views, or alternatively, as isometric piping spool drawings.
7) Piping of nominal size less than 8” may be single line with scaled lay lengths and fittings.
8) Show piping of size 8” and greater double line with scaled flanges, lay lengths, and fittings. Each pipe run shall be dimensioned.

9) Show all pipe supports, thrust restraints, and seismic bracing.

10) Show all devices indicated on the mechanical layout and schematic drawings and the P&ID drawings.

5. During preparation of the drawings, provide interface and coordination between all equipment suppliers and subcontractors, and, including as a minimum, the structural, architectural, mechanical, electrical, and instrumentation and control elements of the work, including the process and instrumentation diagrams.

6. Include load and sizing calculations for pipe supports, thrust restraints, seismic bracing and related items which have been prepared, stamped, and signed by a professional civil, mechanical, or structural engineer licensed by the State of California. See also Sections 15060 and 15097.

7. Complete submittal and review of the coordination and installation drawings at least 30 days prior to commencement of piping fabrication for each system.

8. For piping systems that are field-fabricated, complete submittal and review at least 30 days prior to construction of each system.

1.05 QUALITY ASSURANCE

A. Fittings and coupling compatibility: To assure uniformity and compatibility of piping components, fittings and couplings for grooved end piping systems and plastic piping systems shall be furnished by the same manufacturers.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Comply with Section 01600.

PART 2 - PRODUCTS

2.01 PIPING MATERIALS

A. Unless otherwise specified, select piping materials, including pipe, gaskets, fittings, connection and joint assemblies, linings and coatings, from those listed on the piping system specification sheets.

B. Comply with detailed specifications for each type of pipe and piping appurtenance specified in Division 2 and the other sections of Division 15.

C. If, in addition to the pipe service symbol, the Drawings contain specific callouts for pipe materials, the information on the Drawings governs on an exception basis.

D. Gasket Material: As specified for individual piping systems and as specified in Section 15122.

2.02 VALVES

A. For same size and service provide from a single valve manufacturer.

B. Provide packing made from non-asbestos material.

C. Ensure actual lengths of valves are within 1/16" (plus or minus) of the manufacturer's specified length.

D. Flanges: meet the requirement of ANSI B16.5.

E. Push-on and mechanical joints: meet the requirements of AWWA C111.

F. Valve operators are specified in Sections 15110.2.

2.03 PIPE INSULATION

A. Comply with Section 15250.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Location

1. Provide as specified except for adjustments to avoid architectural and structural features and coordinate with electrical construction.

B. Piping Sizes

1. Where the size of piping is not specified, provide piping of the sizes required by UPC.

C. Pipe Support, Anchorage, and Seismic Bracing

1. Support by anchor brackets, guides, saddles or hangers.

2. See Drawings and specifications for acceptable types of supports, guides, saddles, hangers and structure attachments for general pipe support, expansion/ contraction and for seismic bracing, as well as anchorage details.

3. Minimum spacing: as shown or specified.

4. Vertically support piping by anchor brackets, guides, saddles or hangers and seismically brace where indicated to resist lateral load.

5. Provide support on each run at each change of direction.

6. Material: Type 316 stainless steel as indicated on the mechanical detail drawings and in Sections 15060 and 15097.

7. Unless otherwise specified do not use existing pipes and supports to support new piping.

D. Anchorage for Buried Piping

1. Anchor all plugs, caps, tees and bends in buried pressure piping systems using restrained joints as specified.

2. Unless specified otherwise, reaction backing consisting of concrete thrust blocks is not an acceptable substitute for restrained joints and will not be permitted.

E. Bedding and Backfill

1. Bedding and backfill for buried piping: as specified in Section 02320.

F. Pipe Identification

1. Place plastic tracer tape and magnetic tracer tape as specified in Section 15076 above the centerline of each buried pipe.

2. Identify exposed interior and exterior piping, as specified in section 15076.

G. Pipe Insulation

1. Unless otherwise noted on the drawings or specified, insulate all exposed piping of size 4" and less installed outdoors and in areas and locations subject to freezing.

2. Insulate exposed piping in unheated ceiling or attic space areas.

3. Insulate exposed piping in areas above suspended or other type ceilings or above electrical equipment for condensation control.

4. Comply with Section 15250.

H. Manual Air Vents and Drains

1. Provide manual air vents and drains at the locations shown on the Drawings.

3.02 TESTING

A. General

1. Upon completion of piping, but prior to application of insulation on exposed piping, test the piping systems.

1) Pressures, media and test durations: as specified in the pipespec.

2) Isolate equipment which may be damaged by the specified test conditions.

3) Use calibrated test gages and calibrated volumetric measuring equipment to determine leakage rates.

4) Select each test gage so that the specified test pressure falls within the upper half of the gage's range.

5) Unless otherwise specified, notify the Construction Manager 24 hours prior to each test.

6) Test in accordance with Sections 15996 and 15951.

2. Unless otherwise specified, tests include existing piping systems which connect with new pipe systems.

1) Test existing pipe to the nearest existing valve.

2) Repair any piping which fails the test.

3) Repair of existing piping will be considered and paid for as extra work.

B. Gas, Air, and Vapor Systems

1. Unless otherwise specified, comply with the following:

Pipeline Size	Specified Test Pressure	Testing Medium
2-inch and smaller	75 psi or less	Air or water
2-inch and smaller	Greater than 75 psi	Water
Greater than 2-inch	3 psi or less	Air or water
Greater than 2-inch	Greater than 3 psi	Water

2. Allowable leakage rate for hazardous gas systems, insulated systems, and systems tested with water is zero at the specified test pressure throughout the specified test period.

3. Allowable leakage rate for other systems tested with air is a maximum pressure drop of 5% of the specified test pressure for the duration of the period. Prior to starting a test interval using air, set air at ambient temperature and specified test pressure.

C. Liquid Systems

1. Allowable leakage rate is zero at the specified test pressure throughout the specified duration for the following systems:

   1) Exposed piping, buried insulated piping, and buried or exposed piping carrying liquid chemicals.

2. Unless otherwise specified comply with Sections 15996 and 15951 for allowable leakage from other liquid piping systems.

D. Drains

1. Building and structure drain systems, other than pumped drain systems, shall be tested in accordance with UPC.

3.03 CLEANING AND FLUSHING

A. General

1. Clean piping systems following completion of testing and prior to connection to operating, control, regulating, or instrumentation equipment.

2. The Contractor may clean and test sections of buried or exposed piping systems. Use of this procedure, however, will not waive the requirement for a full pressure test of the completed system.

3. Unless specified otherwise, first clean piping 24” in diameter and smaller by pulling a tightly fitting cleaning ball or swab through the system.

4. Piping larger than 24” in diameter may be cleaned manually or with a cleaning ball or swab.

B. Temporary Screens

1. Upon completion of the cleaning, connect the piping systems to related process equipment.

2. Provide with locator tabs that remain visible from the outside when the screens are in place.

3. Insert in pipelines at the suction of pumps and compressors in accordance with the following table:

Equipment suction or piping size, inches	Maximum screen opening, inches
0 –1	1/16
1-1/4 – 3	1/4
3-1/2 – 6	1/2
Over 6	1

4. Maintain the screens during testing, initial start-up, and initial operating phases of the commissioning process.

   1) In special cases, screens may be removed as required for performance tests.

   2) Remove temporary screens and make the final connections after the screens have remained clean for at least 24 consecutive hours of operation. Systems handling solids are exempted.

C. Gas and Air Systems

1. Unless otherwise specified, blow out gas and air system piping 6” in diameter and smaller, using air or the testing medium specified.

2. Clean piping larger than 6” by drawing a swab or “pig” through the separate reaches of pipe.

3. Upon completion of cleaning, drain and dry the piping with an air stream.

D. Liquid Systems

1. After completion of cleaning, unless otherwise specified, flush with clean water.

2. With temporary screens in place, circulate the liquid through the piping system using connected equipment for a minimum period of 15 minutes and until no debris is collected on the screens.

3.04 PIPING SPECIFICATION (PIPESPEC)

A. Piping and valves for groupings of similar plant processes or types of service lines are specified on individual piping specifications (PIPESPECS).

B. Piping services are grouped according to the chemical and physical properties of the fluid conveyed and/or by the temperature or pressure requirements.

C. Each grouping of services (PIPESPEC) is identified by a piping system number.

D. Piping services specified in the PIPESPECS and on the Plans are alphabetically arranged by designated service symbols as shown in Table A.

E. Table A also indicates the system number, fluid category, and pipe marker background color of each service.

Table A. Piping Services

Symbol	Service	System	Fluid Category	Pipe Marker Background
D	Drain, Process	14	Drain	Green
FA	Foul Air	22	Foul Air	Yellow
RWL	Recycled Water	11	Recycled Water	Purple
NIR	Nutrient Irrigation	19	Chemical	Yellow

Notes:
1. This table contains only those pipe services which require work under this contract.

3.05 PIPING SPECIFICATION SHEET—PIPESPEC – SYSTEM 11

A. Piping Symbol/Service:

1. RWL—Recycled Water

B. Test Requirements:

1. Medium: Water
2. Pressure:
   1) 150 psi
3. Duration: 120 minutes

C. Gasket Requirements:

1. Flange: Compressed gasketing consisting of organic fibers (Kevlar) and neoprene binder
2. Push-on/Mech Cpl: Nitrile or Neoprene

D. Exposed Pipe and Valves (See Remarks): (See drawings for pipe size and valve type.)

1. (3” and smaller)
   1) Pipe:
   2) Steel; ASTM A53, galvanized.
   3) Conn; taper threaded, ANSI B1.20.1. See Remarks.

4) Fittings; malleable iron, ASTM A197, ANSI B16.3, Class 150, galvanized.

5) PVC, Sch 80, where shown on Drawings. Ref. Section 15100.

6) Valves:

7) Ball

a) Jamesbury Fig. 351,

b) Nibco T-580,

c) or equal.

8) Globe

a) Crane 7TF or 17TF,

b) Lunkenheimer 123 or 214,

c) or equal.

9) Swing check

a) Crane 137,

b) Lunkenheimer 230,

c) or equal.

E. Buried and Encased Pipe and Valves (See Remarks): (See drawings for pipe size and valve type. Omit coating on encased pipe.)

1. (3" and smaller)

1) Pipe

2) PVC; ASTM D1784, Class 12454-B, ASTM D1785, Sch 80.

3) Ref. Section 15100.

4) Provide plastic and magnetic tracer tape.

5) Conn; plain end; solvent weld with threaded or flanged adapters for valves.

6) Fittings; PVC, Sch. 80, socket weld.

7) Valves

8) Gate

a) Ref. Section 15111, with extension stem and valve box.

b) Coating to be cement mortar per Section 15092.

3.06 PIPING SPECIFICATION SHEET—PIPESPEC – SYSTEM 14

A. Piping Symbol/Service

1. D—Process Drain

B. Test Requirements

1. Medium: Water

2. Pressure: 100 psig

3. Duration: 120 minutes

C. Gasket Requirements

1. Flange: Compressed gasketing consisting of organic fibers

2. (Kevlar) and neoprene binder

3. Push-on/Mech Cpl: Nitrile or Neoprene

D. Exposed Pipe: (See drawings for pipe size and valve type.)

1. (1" thru 4")

1) Pipe

2) CPVC; ASTM D1785, Type 4, Grade 1, Sch 80.

3) Ref. Section 15100.

4) Provide plastic and magnetic tracer tape.

5) Conn; plain end; solvent weld with threaded or flanged adapters for valves.

6) Ftgs; CPVC, Sch. 80, socket weld.

E. Buried and Encased Pipe and Valves: (See drawings for pipe size and valve type. Omit coating on encased pipe.)

1. (3" and smaller)

1) Pipe

2) PVC; ASTM D1784, Class 12454-B, ASTM D1785,

3) Sch 80. Ref. spec Section 15100.

4) Provide plastic and magnetic tracer tape.

5) Conn; plain end; solvent weld with threaded or flanged adapters for valves.

6) Ftgs; PVC, Sch. 80, socket weld.

7) Valves: Not applicable

F. Remarks:

1. Concrete encase all piping beneath structures.

2. Omit polyethylene encasement on concrete encased pipes.

3.07 PIPING SPECIFICATION SHEET—PIPESPEC – SYSTEM 19

A. Piping Symbol/Service:

1. NIR—Nutrient Irrigation

B. Test Requirements:

1. Medium: Water

2. Pressure:

1) 100 psi

3. Duration: 120 minutes

C. Gasket Requirements:

1. Flange: Compressed gasketing consisting of organic fibers (Kevlar) and neoprene binder

2. Push-on/Mech Cpl: Nitrile or Neoprene

D. Exposed Pipe and Valves (See Remarks): (See drawings for pipe size and valve type.)

1. (4" and smaller)

1) Pipe:
2) CPVC; ASTM D1785, Type 4, Grade 1, Sch 80.
3) Ref. Section 15100.
4) Provide plastic and magnetic tracer tape.
5) Conn; plain end; solvent weld with threaded or flanged adapters for valves.
6) Ftgs; CPVC, Sch. 80, socket weld.
7) Valves:
8) Ball: Ref. Section 15114

E. Buried Pipe (See Remarks): (See drawings for pipe size.)

1) (Pipe:
2) CPVC; ASTM D1785, Type 4, Grade 1, Sch 80.
3) Ref. Section 15100.
4) Provide plastic and magnetic tracer tape.
5) Conn; plain end; solvent weld with threaded or flanged adapters for valves.
6) Ftgs; CPVC, Sch. 80, socket weld.
7) Valves:
8) Ball: Ref. Section 15114

F. Remarks:

1. Unless otherwise specified, provide flanged butterfly valves capable of dead-end isolation with the downstream pipe flange removed.

2. Provide a water hammer arrestor in each pipeline branch

3. For RW use purple PVC pipe for buried service. Schedule 80 PVC pipe for buried W3 service may be coated purple or tape wrapped with purple tape.

4. Omit polyethylene encasement on concrete encased pipes.

3.08 PIPING SPECIFICATION SHEET—PIPESPEC – SYSTEM 22

A. Piping Symbol/Service

1. FA—Foul Air

B. Test Requirements

1. Medium: Air
2. Pressure: lesser of 125 psig or 125% of max. operating pressure
3. Duration: 120 minutes

C. Gasket Requirements

1. Neoprene or Buna-N

D. Exposed Pipe and Valves: (See drawings for pipe size and valve type.)

1. Pipe

1) FRP
2) Ref. Section 13235.
3) Provide plastic and magnetic tracer tape.

END OF SECTION

SECTION 15060

PIPE HANGERS AND SUPPORTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Hangers and supports for piping systems.

B. This section does not include pipe supports for fire sprinkler systems, pipe anchors, guides or seismic restraints.

C. For seismic restraint requirements for piping, see Section 15097.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this section

1. Section 01330 – Submittals
2. Section 01610 – Seismic Anchorage and Bracing
3. Section 05501 – Anchor Bolts and Anchoring Devices
4. Section 15050 – Piping Systems
5. Section 15097 – Seismic Restraints for Piping
6. Section 15250 – Insulation for Exposed Piping and Equipment

1.03 QUALITY CONTROL

A. Operating Conditions

1. The hangers and supports specified in this section are provided to resist pipe loads occurring primarily in the downward (gravity) direction. For the purpose of pipe hanger and support selection, this section establishes pipe support classifications based on the operating temperatures of the piping contents. Pipe support classifications are as follows:

a. Hot Systems: A. 120°F to 450°F.

b. Ambient Systems: B. 60°F to 119°F.

c. Cold Systems: C-1. 33°F to 59° F, C-2. -20°F to 32°F.

B. Hanger and Support Selection

1. Select pipe hangers and supports as specified. Base selections upon the pipe support classifications specified in this section, the piping insulation thickness specified in Section 15250, and any special requirements which may be specified in the contract documents.

2. Review the piping layout in relation to the surrounding structure and adjacent piping and equipment before selecting the type of support to be used at each support point.

3. Design and select hangers and supports to withstand all static and specified dynamic conditions of loading to which the piping and associated equipment may be subjected. As a minimum, consider the following conditions:

   a. Weights of pipe, valves, fittings, insulating materials, suspended hanger components, and normal fluid contents.

   b. Weight of hydrostatic test fluid or cleaning fluid if normal operating fluid contents are lighter.

   c. Reaction forces due to the operation of safety or relief valves.

   d. Wind, snow, or ice loadings on outdoor piping.

4. Size hangers and supports to fit the outside diameter of pipe, tubing, or, where specified, the outside diameter of insulation.

5. Where negligible movement occurs at hanger locations, use rod hangers for suspended lines, wherever practical. For piping supported from below, use bases, brackets or structural cross members.

6. For the suspension of size 2-1/2" and larger pipe and tubing, use hangers capable of vertical hanger component adjustment under load.

7. Provide supporting systems which provide for and control the free or intended movement of the piping including its movement in relation to that of connected equipment.

8. Where there is horizontal movement at a suspended hanger location, select hanger components to allow for swing. Do not permit the vertical angle of the hanger rod to exceed 4º at any time.

9. Do not permit contact between a pipe and hanger or support component, constructed of dissimilar metals. Prevent contact between dissimilar metals when supporting copper tubing by using copper-plated, rubber, plastic or vinyl coated, or stainless steel hanger and support components.

10. Unless otherwise specified, do not use existing pipes and supports to support new piping.

11. Unless otherwise specified, do not attach pipe support components to pressure vessels.

12. Use stock hanger and support components wherever practical.

1.04 INDUSTRY STANDARDS

A. This section contains references to the following documents. They are a part of this section as specified and modified. In case of conflict between this section and the listed documents, the requirements of this section shall prevail.

B. Unless otherwise specified, references to documents means the documents in effect at the time of Advertisement for Bids or Invitation to Bid (or on the effective date of the Agreement if there were no Bids).

C. If referenced documents have been discontinued by the issuing organization, references to those documents mean the replacement documents issued or otherwise identified by the organization or, if there are no replacement documents, the last version of the document before it was discontinued.

D. Where document dates are given in the following listing, reference to those documents mean the specific document version associated with that date, whether or not the document has been superseded by a version with a later date, discontinued, or replaced.

Reference	Title
AISC Manual of Steel Construction	American Institute of Steel Construction, Manual of Steel Construction, - 13th Edition
CBC	California Building Code
FEDSPEC WW-H-171e	Hangers and Supports, Pipe
MFMA-4	Metal Framing Manufacturer's Association, Metal Framing Standards Publication
MSS SP-58	Manufacturers Standardization Society Pipe Hangers and Supports—Materials, Design and Manufacture

1.05 SUBMITTALS

A. Comply with Section 01330.

B. Provide a complete cross reference of each support by mark number, including the page number on which each mark number can be found. Set up the cross reference to permit review from the mark numbers to the drawings, not the other way around.

C. Provide hanger and support locations, load calculations, and manufacturer layout and detail drawings as part of the submittals for equipment and piping coordination and installation drawings required in Section 15050.

D. The load and support design calculations shall be stamped and signed by a licensed Civil or Structural Engineer in the State of California. Comply with Sections 01610 and 05501. Coordinate calculations with those required by Section 15097.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. B-Line

B. Carpenter & Paterson

C. Anvil International

D. Pipe Shields, Inc

E. Superstrut

F. Unistrut

G. Or equal

2.02 PRODUCTS

A. Comply with MSS SP-58, FEDSPEC WW-H-1171 for supports and MFMA-4 for framing systems.

B. Material

1. Pipe hangers and supports, structural attachments, rack and trapeze supports, fittings and accessories: Hot dipped galvanized steel unless otherwise noted.

2. Nuts, bolts, washers, and other fasteners: Type 316 stainless steel.

3. Safety end caps on all framing channel.

C. Pipe Hangers and Supports

1. Clevis Pipe Hanger, configuration and components equivalent to MSS and FEDSPEC Type 1.

a. Steel pipe (insulated): B-Line B3100, Anvil International 260, or equal, with insulation shield.

b. Steel pipe (uninsulated): B-Line B3100, Anvil International 260, or equal.

c. Cast and ductile iron pipe: B-Line B3102, Anvil International 590, or equal.

d. Copper pipe (uninsulated): B-Line B3104 CT, Anvil International CT-65, or equal.

e. Copper pipe (insulated): B-Line B3100, Anvil International 260, or equal, with insulation shield.

f. Plastic pipe: B-Line B3100 C, Carpenter & Paterson Fig. 100PVC, or equal.

2. J Pipe Hanger, configuration and components equivalent to MSS Type 5

a. Steel pipe: B-Line B3690, Anvil International 67,

b. or equal.

c. Copper and plastic pipe:Unistrut J 1205N series, or equal.

3. Double Bolt Pipe Clamp, configuration and components equivalent to MSS and FEDSPEC Type 3.

a. Steel pipe (insulated): B-Line B3144, Anvil International 295, or equal, with insulation shield. Insulation shield is optional for hot and ambient systems.

b. Steel pipe (uninsulated): B-Line B3144, Anvil International 295, or equal.

c. Copper pipe (insulated only): B-Line B3144, Anvil International 295, or equal, with insulation shield.

4. Adjustable Roller Hanger, configuration and components equivalent to MSS Type 43 and FEDSPEC Type 44.

   a. Steel pipe (insulated): B-Line B3110, Anvil International 181, or equal, with insulation shield.

   b. Steel pipe (uninsulated): B-Line B3110, Anvil International 181, or equal.

   c. Copper pipe (insulated only): B-Line B3110, Anvil International 181, or equal, with insulation shield.

   d. Plastic pipe: B-Line B3110, Anvil International 181, or equal.

5. Single Pipe Roll, configuration and components shall be equivalent to MSS Type 41 and FEDSPEC Type 42.

   a. Steel pipe (insulated): B-Line B3114, Anvil International 171, or equal, with insulation shield.

   b. Steel pipe (uninsulated): B-Line B3114, Anvil International 171, or equal.

   c. Plastic pipe: B-Line B3114, Anvil International 171, or equal.

6. Framing Channel Pipe Clamp

   a. Steel pipe (uninsulated):

      1) Pipe size 3/8” and 1/2”: 16-gage;

      2) 3/4” through 1 1/4”: 14 gage;

      3) 1-1/2” through 3”: 12-gage;

      4) 3 1/2” through 5”: 11- gage;

      5) 6 and 8”: 10-gage;

   b. Powerstrut PS 1100, Unistrut P 1109 series, or equal.

   c. Steel pipe (insulated): Pipe clamp as described in Paragraph 2.02 C.6.a with insulation shield.

   d. Copper (uninsulated) and plastic pipe:

      1) Pipe size 3/8” and 1”: 16-gage;

      2) 1-1/4” and 1-1/2”: 14-gage;

      3) 2” through 3”: 12-gage;

      4) 4”: 11-gage;

      5) Clamp: copper-plated, plastic coated or lined with dielectric material;

      6) Powerstrut PS 1200, Unistrut P 2024C and P 2024PC series, or equal.

   e. Copper pipe (insulated): Pipe clamp shall be as described in Paragraph 2.02 C.6.a with insulation shield.

7. U-Bolt Configuration equivalent to MSS and FEDSPEC Type 24.
    a. Steel pipe (uninsulated): Anvil International. 137, B-Line B3188, or equal.
    b. Steel pipe (insulated): Anvil International. 137, B-Line B3188, or equal, with insulation shield.
    c. Cast and ductile iron pipe: Anvil International. 137, B-Line B3188, or equal.
    d. Copper pipe (uninsulated): Carpenter & Paterson Fig. 222 CT, B-Line B3501 CT, Anvil International. 137C, or equal.
    e. Copper pipe (insulated): Anvil International. 137, B-Line B3188, or equal, with insulation shield.
    f. Plastic pipe: Anvil International. 137C, B-Line B3188 C, or equal.
8. Adjustable Pipe Roll Support
    a. Steel pipe (insulated): B-Line B3122, Anvil International. 177, or equal, with insulation shield.
    b. Steel pipe (uninsulated): B-Line B3122, Anvil International. 177, or equal.
    c. Copper pipe (insulated only): B-Line B3122, Anvil International. 177, or equal, with insulation shield.
    d. Plastic pipe: B-Line B3122, Anvil International. 177, or equal.
9. Welded Pipe Stanchion
    a. Minimum material thickness: standard schedule pipe, cut to match contour of the pipe elbow.
    b. Limit use of this support to ambient systems only.
10. Pipe Stanchion Saddle and Yoke, comply with MSS Type 37 and FEDSPEC Type 38.
    a. Steel pipe (insulated): Carpenter & Paterson Fig. 125, B-Line B3090, or equal, with insulation shield.
    b. Steel pipe (uninsulated): Carpenter & Paterson Fig. 125, B-Line B3090, or equal.
    c. Cast and ductile iron pipe: Carpenter & Paterson Fig. 125, B-Line B3090 NS, or equal.
    d. Copper pipe (uninsulated): Carpenter & Paterson Fig. 125, B-Line B3090, or equal, with insulation shield or lined with dielectric material.
    e. Copper pipe (insulated): Carpenter & Paterson Fig. 125, B-Line B3090, or equal, with insulation shield.
    f. Plastic pipe: Carpenter & Paterson Fig. 125, B-Line B3090, or equal.
11. Offset Pipe Clamp, Provided with configuration and components specified using standard designs offered by a pipe hanger component manufacturer.

a. Steel pipe (insulated): B-Line B3148, Anvil International 103, or equal, with insulation shield.

b. Steel pipe (uninsulated): B-Line B3148, Anvil International 103, or equal.

c. Cast and ductile iron pipe: B-Line B3148 NS, Anvil International 103, or equal.

d. Copper pipe (insulated): B-Line B3148, Anvil International. 103, or equal, with insulation shield.

e. Copper pipe (uninsulated): B-Line B3148, Anvil International. 103, or equal, lined with dielectric material.

f. Plastic pipe: B-Line B3148, Anvil International. 103, or equal.

g. Vertical pipe support applications: as specified above except do not use insulation shields for insulated pipe.

12. Riser Clamp, configuration and components equivalent to MSS and FEDSPEC Type 8.

a. Steel pipe (insulated): B-Line B3373, Anvil International 261, or equal.

b. Steel pipe (uninsulated): B-Line B3373, Anvil International 261, or equal.

c. Cast and ductile iron pipe: B-Line B3373, Anvil International 261, or equal.

d. Copper pipe (insulated): B-Line B3373 CT, Anvil International CT-121, or equal.

e. Copper pipe (uninsulated): B-Line B3373 CT, Anvil International CT-121, or equal.

f. Plastic pipe: B-Line B3373, Anvil International. 261c, or equal.

13. Framing Channel Pipe Strap, configuration equivalent to MSS Type 26.

a. Steel pipe (uninsulated): Superstrut No. C-708-U, Powerstrut PS 3126, or equal.

b. Steel pipe (insulated): Superstrut No. C-708-U, Powerstrut PS 3126, or equal, with insulation shield.

c. Copper pipe (uninsulated): Superstrut No. C-708-U, Powerstrut PS 3126, or equal, with insulation shield or lined with dielectric material.

d. Copper pipe (insulated): Superstrut No. C-708-U, Powerstrut PS 3126, or equal, with insulation shield.

e. Plastic pipe: Superstrut No. C-708-U, Powerstrut PS 3126, or equal.

D. Rack and Trapeze Supports

1. General

   a. Unless otherwise specified, provide trapeze and pipe rack components minimum thickness of 12 gage, with a maximum deflection 1/240 of the span.

2. Trapeze Pipe Support

   a. For trapeze pipe support cross members, use framing channel as specified in Paragraph 2.02 F.5. For flat plate fittings, 1-5/8" square standard design manufactured by framing channel manufacturer, Unistrut P2471, B-Line B202-2, or equal.

3. Pipe Rack Support

   a. For post and cross members, use framing channel as specified in Paragraph 2.02 F.5. For pipe rack fittings, use standard design manufactured by framing channel manufacturer. For 90º fittings, use gusseted Unistrut P2484, B-Line B844, or equal. Provide post base fittings as specified in Paragraph 2.02 E.5.

E. Structural Attachments

1. Insert For Concrete:

   a. Concrete inserts: Comply with MSS and FEDSPEC Type 18.
   b. Anvil International 282, Carpenter & Paterson Fig. 108, or equal.

2. Side Beam Bracket

   a. Comply with MSS Type 34 and FEDSPEC Type 35.
   b. Anvil International. 202, B-Line B3062, or equal.

3. Beam Clamp with Extension Piece

   a. Comply with MSS and FEDSPEC Type 30.
   b. Anvil International. 218 with Fig. 157 extension piece, B-Line B3054, or equal.

4. Beam Clamp with Eye Nut

   a. Beam clamp and eye nut: forged stainless steel.
   b. For configuration and components, comply with MSS and FEDSPEC Type 28.
   c. Anvil International. 292, Carpenter & Paterson Fig. 297, or equal.

5. Framing Channel Post Base

   a. Standard design offered by framing channel manufacturer.
   b. Single channel: Unistrut P2072A, B-Line B280, or equal.
   c. Double channel: Unistrut P2073A, B-Line B281, or equal.

6. Welded Beam Attachment

   a. Comply with MSS and FEDSPEC Type 22. B-Line B3083, Anvil International. 66, or equal.

7. Welded Steel Bracket

   a. Comply with MSS Type 32 and FEDSPEC Type 33 for medium welded bracket.

   b. Comply with MSS Type 33 and FEDSPEC Type 34 for heavy welded bracket.

8. Bracket

   a. Carpenter & Paterson Fig. 340, or equal.

9. Adjustable Beam Attachment

   a. Carpenter & Paterson Fig. 151, B-Line B3082, or equal.

10. Double Channel Bracket

    a. Wall channel: single channel framing channel as specified in Paragraph 2.02 F.5.

    b. Cantilever bracket: double framing channel assembly, Unistrut P2542 through P2546, B-Line B297-12 through B297-36, or equal.

11. Single Channel Bracket

    a. Wall channel: single channel framing channel as specified in Paragraph 2.02 F.5.

    b. Cantilever bracket: a single framing channel assembly, Unistrut P2231 through P2234, B-Line B198-6, B198-12, B196-18 and B196-24, or equal.

12. Wall Mounted Channel

    a. Wall channel: single channel framing channel as specified in Paragraph 2.02 F.5.

13. Pipe Stanchion Floor Attachment

    a. Base plate: As indicated.

    b. Make anchor bolt holes 1/16” larger than the anchor bolt diameter.

    c. Fill space between the base plate and the floor with nonshrink grout.

F. Accessories

1. Hanger Rods

   a. Rods: threaded on both ends or continuous threaded and sized as specified.

2. Weldless Eye Nut

   a. Eye nut: forged stainless steel and complying with MSS and FEDSPEC Type 17.

   b. Manufacturer: Anvil International. 290, B-Line B3200, or equal.

3. Welded Eye Rod

a. Weld-eye rod closed. Make inside diameter of eye a bolt diameter 1/8” larger than the rod diameter.

b. Manufacturer: Anvil International. 278, B-Line B3211, or equal.

4. Turnbuckle

a. Turnbuckle: forged stainless steel and complying with MSS and FEDSPEC Type 13.

b. Manufacturer: Anvil International. 230, B-Line B3202, or equal.

5. Framing Channel

a. Framing channel: 1-5/8” square, roll formed, 12-gage.

b. Provide channel with a continuous slot along one side with in-turned clamping ridges.

c. Single channel: Unistrut P1000, B-Line B22, or equal.

d. Double channel: Unistrut P1001, B-Line B22A, or equal.

e. Triple channel: Unistrut P1004A, B-Line B22X, or equal.

2.03 THERMAL PIPE HANGER SHIELD

A. Provide thermal shields at hanger, support, and guide locations on pipe requiring insulation.

B. The shield shall consist of an insulation layer encircling the entire circumference of the pipe and a steel jacket encircling the insulation layer.

C. Make the thermal shield the same thickness as the piping system insulation specified in Section 15250.

D. Use the standard shield for hot systems and the vapor barrier shield for cold systems.

E. Use stainless steel band clamps where specified to ensure against slippage between the pipe wall and the thermal shield.

F. Standard Shield

1. Insulation

a. Hydrous calcium silicate, high density, waterproof.

b. Compressive strength: 100 psi average.

c. Flexural strength: 75 psi average.

d. K factor: 0.38 at 100ºF mean.

e. Temperature range: 20ºF to 500ºF.

2. Steel Jacket

a. Stainless steel. Manufacturer’s standard gauge supplied for the given pipe size.

3. Connection

a. Butt connect to pipe insulation. Install with steel jacket and insulation flush with end.

G. Vapor Barrier Shield:

1. Insulation

a. Hydrous calcium silicate, high density, waterproof.

b. Compressive strength: 100 psi average.

c. Flexural strength: 75 psi average.

d. K factor: 0.38 at 100ºF mean.

e. Temperature range: 20ºF to 500ºF.

2. Steel Jacket

a. Stainless steel. Manufacturer's standard gauge supplied for the given pipe size.

3. Connection

a. Butt connect shield to pipe insulation.

b. Extend insulation 1" each side of steel jacket for vaportight connection to pipe insulation vapor barrier.

PART 3 - EXECUTION

3.01 HANGER AND SUPPORT LOCATIONS

A. Locate hangers and supports as indicated near concentrated loads such as valves, flanges, etc.

B. Locate hangers, supports and accessories within the maximum span lengths specified in the contract documents to support continuous pipeline runs unaffected by concentrated loads and as indicated on pipe layout drawings.

C. Indicate hanger and support locations and components on the piping layout drawings required.

D. Locate at least one hanger or support within 2 feet from a pipe change in direction.

E. Locate hangers and supports to ensure that connections to equipment, tanks, etc., are substantially free from loads transmitted by the piping.

F. Where piping is connected to equipment, a valve, piping assembly, etc., that will require removal for maintenance, support piping so temporary supports are not necessary.

G. Locate pipe supports to prevent "pockets" from forming in pipe between supports due to excessive deflection under load from weight of pipe, medium in the pipe, insulation, valves and fittings.

3.02 INSTALLATION

A. Construct welded and bolted attachments to the building structural steel which comply with the AISC Manual of Steel Construction. Unless otherwise specified, do not drill or burn holes in the building structural steel.

B. Do not use hanger components for purposes other than which they were designed. Do not use components for rigging and erection purposes

C. Install items to be embedded before concrete is poured. Fasten embedded items securely to prevent movement when concrete is poured.

D. Use embedded anchor bolts that satisfy the 2010 CBC provisions instead of concrete inserts for supports in areas below water surface or normally subject to submergence.

E. Install thermal pipe hanger shields on insulated piping at required locations during hanger and support installation. Make butt joint connections to pipe insulation at the time of insulation installation per manufacturer's recommendations.

F. When hanger and support components are in contact with plastic pipe, make sure the components are free of burrs and sharp edges.

G. Ensure rollers roll freely without binding.

H. Roughen finished floor to a 1/4-inch amplitude beneath structural attachments and framing channel post bases prior to grouting. Place grout, free of voids and foreign material, between base plate and floor.

I. Cut and drill base plates to specified dimensions prior to welding stanchions or other attachments and prior to setting anchor bolts.

J. Provide plastic or rubber end caps at the exposed ends of all framing channels that are located up to 7' above the floor.

3.03 ADJUSTMENTS

A. Adjust hangers and supports to obtain required pipe slope and elevation.

B. Use shims made of material that is compatible with the piping material.

C. Adjust stanchions prior to grouting their base plates.

END OF SECTION

SECTION 15076

PIPING AND VALVE IDENTIFICATION SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Identification systems for buried and exposed piping and valves.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 09960 – High Performance Coatings
3. Section 15050 – Piping Systems

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Include the following items:

1. Manufacturer's catalog information demonstrating compliance with the materials requirements of this section.
2. Samples of the materials to be used for piping and valve identification.
3. A schedule of piping services and description of identification systems.

PART 2 - PRODUCTS

2.01 PIPE CODING MARKERS

A. Manufacturers

1. One of the following or equal:

a. Brady Company.
b. Seton Name Plate Corporation.
c. Industrial Safety Supply Corporation.

B. Comply with ANSI A13.1.

C. Type

1. Mechanically attached type that is easily removable.
2. Do not use adhesive applied type.
3. Pressure sensitive legends applied to plastic backing which is strapped or otherwise mechanically attached to the pipe.

D. Legend and Backing

1. Resistant to petroleum based oils and grease.

2. Meet criteria for humidity, solar radiation, rain, salt, fog and leakage fungus, as specified by MIL-STD-810C.

E. Withstand a continuous operating temperature range of -40ºF to 180ºF.

F. Manufactured and applied in one continuous length of plastic. Do not provide individual letter type.

G. Provide in the following letter heights: For markers bearing the legends on the background colors specified in Section 15050 (PIPESPEC).

Outside pipe diameter,[(a)] inches	Letter height, inches
Less than 1-1/2	1/2
1-1/2 through 3	1 1/8
Greater than 3	2-1/4
[(a)] Outside pipe diameter shall include insulation and jacketing.	

H. Include uni- and bi-directional arrows in the same sizes as the legend. Provide legends and arrows in white on blue or red backgrounds, and black on other specified backgrounds.

2.02 PLASTIC TRACER TAPE

A. Manufacturers

1. One of the following or equal:

a. Brady Company.

b. Seton Name Plate Corporation.

c. Industrial Safety Supply Corporation.

B. 6” wide, colored the same as the background colors as specified in Section 15050.

C. Material: inert plastic material suitable for direct burial.

D. Capable of stretching to twice its original length.

E. Print two messages on the tape, both messages at maximum intervals of 2 feet.

1. First message: **“CAUTION CAUTION CAUTION PIPE BURIED BELOW”** with bold letters approximately 2” high.

2.03 MAGNETIC TRACER TAPE

A. Manufacturers

1. One of the following or equal:

a. Brady Co.

b. Seton Name Plate Corporation

c. Industrial Safety Supply Corporation.

B. Material

1. Acid and alkali-resistant polyethylene.
2. 3” wide.
3. 0.005” thick.
4. 1,500 psi strength and 140% elongation value.

C. Color the same as the background colors as specified in Section 15050 and inscribe with the words **“CAUTION—PIPE BURIED BELOW”.**

2.04 VALVE IDENTIFICATION

A. Fabricate of stainless steel and inscribed with the specified valve number stamped in 1/4” high letters.

B. The label shall be of 1/16-inch thick stainless steel with a minimum size of 2 inches.

C. See Drawings for valve designation system.

PART 3 - EXECUTION

3.01 PIPING IDENTIFICATION

A. Pipe Coding

1. After application of the specified coating and insulation systems to new or existing piping, as specified in Section 09960, identify exposed piping, interior and exterior, and piping in ceiling spaces, pipe trenches, pipe chases and valve boxes identified with plastic markers.
2. Locate legend markers and directional arrows at each side of walls, floors and ceilings, at one side of each piece of equipment, at piping intersections, and at approximately 50’ centers.

B. Plastic Tracer Tape

1. Provide a single line of plastic tracer tape as specified in this section, 2.5 feet above the centerline of each buried pipe.
2. Spread tape flat with message side up before backfilling.

C. Polyethylene Magnetic Tracer Tape

1. Install 12-18” below ground and parallel to all buried pipes.

3.02 VALVE IDENTIFICATION

A. Label all valves designated with a valve number where valve numbers are indicated on the Drawings.

B. Each label shall be permanently attached to the valve using stainless steel screws, stainless steel wire and connectors, or another method subject to approval.

C. Install tags on valve flanges in a position visible from floor level.

D. For flangeless valves 8” in diameter and larger, attach tags to the valve body by self-tapping corrosion resistant metal screws.

E. For flangeless valves 6” in diameter and smaller, attach tags to the valve stem by stainless steel wire. Use 0.063” wire minimum.

END OF SECTION

SECTION 15095

PIPING APPURTENANCES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Pressure gauges.

B. Exclusions

1. Temperature, pressure, and flow measuring devices used for instrumentation are specified in Division 16.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals

1.03 SUBMITTALS

A. Comply with Section 01330.

PART 2 - PRODUCTS

2.01 PRESSURE DEVICES

A. Analog dial-type pressure gauges and accessories to be furnished and installed at the locations indicated on the drawings and in the Gauge Schedule included herein.

B. Provide in accordance with the schedule, whether or not indicated in the drawings.

C. Gauges to be furnished by an equipment supplier, either with an item of equipment or as a component of an equipment package, are covered in the applicable equipment section.

D. Gauge piping and fittings:

1. Tubing

a. Material:

1) ASTM A269, Grade TP 316, annealed, max hardness Rockwell B80

b. Min wall thickness:

Tube OD, inches	Wall Thickness, inches
1/4 - 3/8	0.065
1/2 - 7/8	0.083
1 - 2	0.109

2. Fittings

a. Compression type

b. Material:

1) AISI Type 316 stainless steel.

c. Manufacturers:

1) Crawford "Swagelok",

2) Parker Hannifin "CPI", "Ferulok",

3) or equal.

E. Pressure Gauges

1. Provide where shown on the Drawings and as specified. Contractor shall be responsible for all gauges shown on the drawings, even if a gauge is not scheduled herein.

2. Select so that the normal operating pressure falls between 50 and 80% of full scale.

3. Components

a. Face: 4-inch with white background and black markings, 270º movement, indicate units of measurement.

b. Accuracy: 1.0% accuracy, full scale.

c. Bottom stem mounting.

d. Type 316 stainless steel bourdon tube.

e. Case

1) 300 series stainless steel case, shatterproof glass, and a 1/2" NPT bottom connection.

2) For gauges installed outdoors, provide weather-proofed cases.

4. For air, gas, and low pressure services (0–10'), provide premium grade, heavy-duty bourdon-tube units (bellow type for vacuum) with Delrin bushings and pinion, and stainless steel sector.

5. For liquid service, comply with above, except provide with an internal pulsation dampening system consisting of either a glycerin fill or a silicone fluid fill. Do not use snubbers or orifices.

6. Manufacturers, one of the following or equal:

a. Ashcroft Duragauge Fig. 1009.

b. Ametek 1535.

F. Gauge Accessories:

1. Isolating Valves

a. Provide each gauge with an isolating, threaded-end eccentric plug valve

b. Furnish valve with Type 316 stainless steel body, plug, bearings and stem. Packing: Buna-N or PTFE. Manufacturers: Dezurik Model PEC, Clow or equal.

2. Gauge Isolators

a. Provide a suitable isolator shall be provided for each gauge, as indicated in the Gauge Schedule included herein, and for all gauges located on chemical lines and all gauges located on wastewater or other solids bearing liquids.

b. Unless otherwise specified, provide a diaphragm seal (DS).

1) Type: Thread-attached type with removable AISI Type 316 stainless steel diaphragm, zinc or cadmium plated carbon steel upper housing, and bronze lower housing.

2) Upper housing: Contour to fit. Provide a seat and seal for the diaphragm. Design to permit removal of the gauge with the system under pressure.

3) Lower housing: Provide with a tapped and plugged 1/4-inch NPT flushing connection.

c. Provide an inline, flow-thru, annular seal, flange type gauge isolator at the locations indicated on the drawings or in the Gauge Schedule included herein, designation AS.

1) Components: Carbon steel housing, carbon steel assembly flanges, and Buna-N flexible cylinder, filled with silicone oil.

2) Furnish suitable for installation between two flat faced ANSI B16.1, Class 125 cast iron pipe flanges, and tapped for a 1/2-inch NPT gauge connection.

d. Manufacturers, one of the following or equal:

1) Ronningen-Petter “Iso-Ring”.

2) Red Valve “Series 40 Flanged Sensor”.

e. Assemble, fill with a suitable fluid, and calibrate as a unit at the factory each isolator, diaphragm seal, and gauge served.

G. Gauge Schedule

Location	Dwg No	Tag No.	Service	Unit	Range (in. W.C.)	Gauge Isolator Type
Grease Trap/Mist Eliminator	M10	DPI781	Foul Air	Inches W.C.	0 - 5	DS
Fan No. 1 Discharge	M22	PI711	Foul Air	Inches W.C.	0 - 10	DS

PART 3 - EXECUTION

3.01 INSTALLATION OF PRESSURE GAUGES

A. Install at the locations indicated on the drawings. Configure to the requirements indicated on the drawings and the Gauge Schedule located herein.

B. Unless otherwise specified herein, do not direct tap pipe walls for installation of gauge connections.

C. Install all gauges and diaphragm in the vertical upright position.

1. Use Teflon thread tape or Teflon thread sealer to assemble threaded connections.

2. Make all connections free from leaks.

D. Purge lines of trapped air at gauge location prior to installation of the gauge or diaphragm seal.

3.02 GAUGE TAPS

A. Provide on the suction and discharge of pumps, fans, compressors, vacuum pumps and blowers.

B. Type: 1/2” gauge valve attached by a threaded nipple to the pipeline, duct, or equipment.

END OF SECTION

SECTION 15097

SEISMIC RESTRAINTS FOR PIPING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Seismic restraints for bracing all piping systems specified in Section 15050.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittal Procedures
2. Section 01610 – Seismic Anchorage and Bracing
3. Section 05501 – Anchor Bolts and Anchoring Devices
4. Section 15050 – Piping Systems

1.03 DEFINITIONS

A. Longitudinal Direction: Direction parallel to the pipe axis.

B. Lateral Direction: Direction perpendicular to the pipe axis.

1.04 OPERATING CONDITIONS

A. Provide seismic restraints, specified in this section, to resist pipe movements and loads occurring as a result of an earthquake or other seismic event.

B. Unless otherwise specified, brace all piping to resist seismic loading caused by forces applied at the individual pipe's center of gravity. For seismic loading see Section 01610.

1.05 RESTRAINT SELECTION

A. Unless otherwise specified, select, locate and provide seismic restraints for piping in accordance with the contract documents.

B. Review the piping layout in relation to the surrounding structure and adjacent piping and equipment before selecting the restraint to be used at each point.

C. Seismic restraints may be omitted from the following installations:

1. Gas piping less than 1" inside diameter.
2. Piping in boiler and mechanical rooms less than 1-1/4" inside diameter.
3. All other piping less than 2-1/2" inside diameter.
4. All piping suspended by individual hangers 12" or less in length from the top of the pipe to the bottom of the support for the hanger.

D. Do not brace piping systems to dissimilar parts of a building or to dissimilar building systems that may respond in a different mode during an earthquake. Examples: wall and a roof; solid concrete wall and a metal deck with lightweight concrete fill.

E. Size restraints to fit the outside diameter of the pipe, tubing, or, where specified, the outside diameter of insulation.

F. Do not permit contact between a pipe and restraint component of dissimilar metals. Prevent contact between dissimilar metals when restraining copper tubing by the use of copper-plated, rubber, plastic or vinyl coated, or stainless steel restraint components.

G. Do not use branch lines to brace main lines.

H. Do not permit seismic bracing to limit the expansion and contraction of the piping system.

1.06 SUBMITTALS

A. Provide seismic restraint locations, load calculations, and manufacturer's drawings as specified in Paragraph 3.01 as part of the submittals for equipment and piping coordination and installation drawings required in Section 15050.

B. Provide seismic restraint load calculations for each seismically restrained pipe system prepared and signed by a civil or structural engineer currently registered in the State of California. See Section 01610 for seismic loading required.

PART 2 - MANUFACTURERS

2.01 MANUFACTURERS

A. Carpenter & Patterson.

B. B-Line.

C. Kin-Line.

D. Anvil International.

E. Michigan.

F. Pipe Shields Incorporated.

G. Superstrut.

H. Unistrut.

I. Or equal as specified in Section 01330.

2.02 PRODUCTS

A. Materials

1. Restraints, including braces and fittings, pipe and structural attachments, trapeze restraints, and accessories: Type 316 stainless steel.

2. Nuts, bolts and washers, fittings and accessories: Type 316 stainless steel.

3. Comply with MSS SP-58

B. Pipe Attachments

1. Type 1s - Clevis Restraint Attachment

   a. Provide Type 1, clevis pipe hanger, as specified in Section 15060, 2.02.B.

2. Type 3s - Double Bolt Restraint Clamp:

   a. Provide Type 3, double bolt pipe clamp, as specified in Section 15060, 2.02.B.

3. Type 4s - Roller Restraint Attachment

   a. Provide Type 4, adjustable roller hanger, as specified in Section 15060, 2.02.B.

   b. Size hold down strap as follows:

      1) 1” through 2” Pipe: 1” by 1/8” thick
      2) 2-1/2” through 4” Pipe: 1-1/4” by 3/l6” thick
      3) 6” Pipe: 2” by 3/l6” thick
      4) 8” Pipe: 2-1/2” by 3/16” thick
      5) 10” through 16” Pipe: 2-1/2” by 1/4” thick
      6) 20” Pipe: 3” by 1/4” thick
      7) 24” Pipe: 3” by 3/8” thick.

4. Type 7s - U-Bolt Restraint

   a. Provide Type 7, U-bolt, as specified in Paragraph 15060, 2.02.B.

5. Type 13s - Framing Channel Strap Restraint

   a. Provide Type 13, framing channel pipe strap, as specified in Paragraph 15060, 2.02.B.

6. Type 14s - Pipe Clamp Restraint

   a. Provide with configuration and components equivalent to MSS and FEDSPEC Type 4.

   b. Rod attachment and longitudinal brace connection stud shall be fabricated and welded by the manufacturer.

   c. Steel pipe (insulated): Superstrut No. S-720, Kin-Line No. S475, or equal, with insulation shield.

   d. Steel pipe (uninsulated): Superstrut No. S-720, Kin-Line No. S475, or equal.

   e. Cast and ductile iron pipe: Superstrut No. S-720, Kin-Line No. S475, or equal.

   f. Copper pipe (insulated): Superstrut No. S-720, Kin-Line No. S475, or equal, with insulation shield.

g. Copper pipe (uninsulated): Superstrut No. S-720, Kin-Line No. S475, or equal, with insulation shield or dielectric lining.

h. Plastic pipe: Superstrut No. S-720, Kin-Line No. S475, or equal.

C. Trapeze Restraints

1. General

a. Unless otherwise specified, provide trapeze members with a minimum steel thickness of 12-gage, with a maximum deflection 1/240 of the span.

2. Type 20s - Single Channel Lateral Restraint

a. Trapeze restraint cross member

1) 1-5/8" square framing channel, Unistrut P1000, B-Line B22, Superstrut A-1200, or equal.

b. Pipe attachments

1) Type 13s or Type 7s specified in Paragraph 2.02.B.

c. Rod stiffeners and lateral brace

1) As specified in Paragraph 2.02.D.

3. Type 21s - Double Channel Lateral Restraint

a. Trapeze restraint cross member

1) a double channel manufactured assembly such as Unistrut P1001, B-Line B22A, Superstrut A-1202, or equal.

2) Pipe attachments

a) Type 13s or Type 7s specified in Paragraph 2.02.B.

b. Rod stiffeners and lateral brace

1) As specified in Paragraph 2.02.D.

4. Type 22s - Double Channel Longitudinal Restraint

a. Trapeze restraint cross member: a double channel manufactured assembly such as Unistrut P1001, B-Line B22A, Superstrut A-1202, or equal.

b. Pipe attachments

1) Type 13s or Type 7s specified in Paragraph 2.02.B.

c. Rod stiffeners, longitudinal and lateral braces

1) As specified in Paragraph 2.02.D.

D. Braces and Fittings

1. Seismic Brace Fitting

a. Provided for use with industry standard framing channel.

b. Provide welded construction, two-piece linked fitting.

c. Provide means to reduce noise and vibration transmission between the linked fitting parts.

d. Manufacturers

1) Superstrut C-749N series seismic brace,

2) Kin-Line No. 633 seismic connector fitting,

3) or equal as defined in Section 01330.

2. Hanger Rod Stiffener Assembly

a. Rod stiffener channel

1) 1-5/8" square framing channel, Unistrut P1000, B-Line B22, Superstrut A-1200, or equal.

b. Rod stiffener clamps, complete with channel nut

1) Superstrut ES-142, Kin-Line No. 635, or equal as defined in Section 01330.

3. Type A1 Seismic Brace

a. Provide 1-5/8" square framing channel, Unistrut P1000, B-Line B22, Superstrut A-1200, Kin-Line No. 4112, or equal as defined in Section 01330.

4. Type A2 Seismic Brace

a. Provide 1-5/8" wide by 3-3/4" deep framing channel, Unistrut P5000, B-Line B11, Superstrut H-1200, Kin-Line No. 8212, or equal as defined in Section 01330.

E. Structural Attachments

1. General

a. Unless otherwise specified, provide hanger rod structural attachments as specified in Section 15060.

b. Structural attachments for longitudinal and lateral seismic braces: as specified in Paragraph 2.02.D.

2. Type SA-1 Attachment

a. Brace fitting: as specified in Paragraph 2.02.D.

b. Concrete anchors

1) As specified in Section 05501 with embedment and location dimensions as specified.

3. Type SA-2 Attachment

a. Brace fitting: as specified in Paragraph 2.02.D.

b. Concrete anchors

1) As specified in Section 05501 with embedment and location dimensions as specified.

c. Framing channel

1) As specified in Paragraph 2.02.F.

4. Type SA-3 Attachment

a. Brace fitting

1) As specified in Paragraph 2.02.D.

b. Cap screw, lockwasher and hex nut materials and finish: compatible with structural steel material.

5. Type SA-4 Attachment

a. Brace fitting

1) As specified in Paragraph 2.02.D.

6. Type SA-5 Attachment

a. Brace fitting

1) As specified in Paragraph 2.02.D.

2) Angle: 4” x 3” x 3/8”.

F. Accessories

1. Hanger Rods

a. Threaded on both ends or continuous threaded and sized as specified.

2. Framing Channel

a. Roll formed, 12-gage.

b. Provide channel with a continuous slot along one side with in-turned clamping ridges.

c. Manufacturers

1) Unistrut P1000 series,

2) B-Line B22 series,

3) Superstrut A-1200 series,

4) or equal as specified in Section 01330.

3. Rod Coupling

a. Provide with sight hole in center of coupling body.

b. Manufacturers

1) Anvil International. 135,

2) Superstrut H-119,

3) or equal as specified in Section 01330.

2.03 THERMAL PIPE HANGER SHIELD (NOT USED)

PART 3 - EXECUTION

3.01 PIPE RESTRAINT LOCATIONS

A. Locate the first seismic restraint on a piping system not more than 10’ from the main riser, entrance to a building or piece of equipment.

B. Brace cast iron pipe on each side of a change in direction of 90º or more. Brace or stabilize joints in risers between floors.

C. Brace no-hub and bell and spigot cast iron soil pipe longitudinally every 20’ and laterally every 10’.

D. Lateral bracing for one pipe section may also act as longitudinal bracing for the pipe section connected perpendicular to it, if the bracing is installed within 24” of the elbow or tee of the same size.

E. Indicate seismic restraint locations and components on the piping layout drawings required by Section 15050.

F. Provide a legend giving load information and restraint component selection at each restraint location.

G. Provide seismic restraint load calculations conforming to the requirements specified in Paragraph 1.06.

3.02 INSTALLATION

A. Use rod stiffener assemblies at seismic restraints for hanger rods over 6” in length. Provide a minimum of two rod stiffener clamps on any rod stiffener assembly.

B. Install lateral and longitudinal bracing between 45º above and 45º below horizontal, inclusive, relative to the horizontal centerline of the pipe.

C. Construct welded and bolted attachments to the building structural steel which comply with the AISC Manual of Steel Construction. Do not drill or burn holes in the building structural steel without approval of the Construction Manager

D. Use embedded anchor bolts instead of concrete inserts for seismic brace installations in areas below water surface or normally subject to submerging.

E. Install thermal pipe hanger shields on insulated piping at required locations during restraint installation. Make butt joint connections to pipe insulation at the time of insulation installation per the manufacturer’s recommendations.

F. Provide restraint components in contact with plastic pipe which are free of burrs and sharp edges.

G. Ensure rollers roll freely without binding.

H. Provide plastic or rubber end caps at the exposed ends of all framing channels that are located up to 7’ above the floor.

END OF SECTION

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SECTION 15100

PLASTIC PIPE

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Polyvinylchloride, chlorinated polyvinylchloride, polyethylene, and polypropylene pipe and fittings.

B. See Section 15050 for service applications.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 15050 – Piping Systems
3. Section 15951 – Testing Gravity Flow Pipelines

1.03 DEFINITIONS

A. For use in the Piping System Specification Sheets (PIPESPEC) in Section 15050 and in this section.

B. The following plastic pipe designations are defined:

1. PVC: Polyvinylchloride
2. CPVC: Chlorinated polyvinylchloride

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Include

1. Manufacturer's data certificates of compliance with the specified standards.
2. Contractor's piping layout drawings as specified in Section 15050.

1.05 QUALITY ASSURANCE

A. To assure uniformity and compatibility of piping components, fittings and couplings for plastic piping systems shall be furnished by the same manufacturer.

PART 2 - PRODUCTS

2.01 PVC PIPE

A. Pressure Pipe and Fittings

1. Material: Conform to ASTM D1784, Class 12454-B.

2. As specified in Section 15050 for pipe systems, Comply with standards below.

   a. ASTM D1785 (Schedule 40, 80, and 120)

3. Provide pressure rating in excess of test pressure specified in Section 15050.

4. For push-on joints provide Neoprene gaskets per ASTM F477.

5. Schedule Pipe Fittings

   a. Schedule 80: Comply with ASTM D2467.

   b. Schedule 40: Comply with ASTM D2466.

   c. PVC solvent weld cement for socket connections: Comply with ASTM D2564.

   d. Schedule 80 PVC threaded fittings: Comply with ASTM D2464.

B. Non-Pressure Pipe

1. Drain, Waste and Vent Pipe and Fittings

   a. Material: Comply with Class 12454-B, ASTM D1784.

   b. Comply with ASTM D2665.

   c. Unless otherwise specified, solvent weld socket connections per ASTM D2564.

   d. For connections to traps, closet flanges, and non-plastic pipe, provide approved adapter fittings.

2.02 CPVC PIPE AND FITTINGS

A. Material: Comply with ASTM D1784, Class 23447-B.

B. Comply with ASTM F441.

C. For push-on joints, provide neoprene gaskets per ASTM F477.

D. Schedule 80 CPVC Socket Fittings: Comply with ASTM F439.

E. Schedule 40 CPVC Socket Type Fittings: Comply with ASTM F438.

F. CPVC Solvent Weld Cement: Comply with ASTM F493.

G. Schedule 80 CPVC Threaded Fittings: comply with ASTM F437.

PART 3 - EXECUTION

3.01 INSTALLATION

A. PVC Socket Fittings and Solvent Welding

1. Comply with ASTM F402.

2. Comply with the manufacturer's/supplier's instructions and recommended procedures.

B. Unless otherwise specified, join PVC pipe 4” in diameter and greater using gasketed push-on joints and steel or ductile iron push-on or mechanical joint fittings.

C. Make connections to different types of pipe using flanges, specified adapters or transition fittings. Where sleeve couplings are used, torque uniformly per pipe manufacturer’s recommendation.

D. Remove foreign material from the pipe interior prior to assembly.

E. Provide flanged adapters for connection to valves and where specified.

3.02 COATINGS

A. Application: All exposed PVC and CPVC pipe shall be coated.

B. Surface Preparation: Hand sand plastic surfaces to be coated with a medium grit sandpaper to provide tooth for the coating system. Large areas may be power sanded or brush-off blasted, provided sufficient controls are employed so surface is roughened without removing excess material and adjacent surfaces are not damaged.

C. Material: Apply two coats of Acrylic Latex, 320 SFPGPC, to interior surfaces; apply one coat Polyurethane Enamel, 320 SFPGPC, to exterior surfaces.

3.03 TESTING

A. Test as specified in Section 15050.

B. Conduct the tests in the presence of the Construction Manager.

3.04 PERFORMANCE REQUIREMENTS

A. Gravity flow sanitary sewers and drainage pipelines are required to have a straight alignment and uniform grade between manholes.

B. Plastic pipe is required to have no more than 5% deflection when measured at least 30 days following completion of backfilling for the segment being tested, using a standard mandrel as defined herein.

C. Plastic pipe is required to have no more than 7.5% deflection when measured at least 11 months following substantial completion of the project, using a standard mandrel as defined herein.

D. The maximum allowable leakage per mile of gravity and drainage pipelines is 200 gallons per 24 hours for each inch of diameter. Refer to Section 15951 for measuring leakage in gravity and drainage pipelines.

E. Replace or repair sections of pipelines and manholes that fail any test and retest.

END OF SECTION

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SECTION 15110.1

GENERAL REQUIREMENTS FOR VALVES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements for valves.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section:

1. Section 01330 – Submittals
2. Section 09960 – High-Performance Coatings

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Provide the following information, at a minimum:

1. Shop drawings
   a. Valves and actuators
   b. Associated wiring diagrams
   c. Electrical data
   d. Control system information
2. A schedule of valves indicating the label location, attachment method, and proposed label text for each valve.
3. A schedule of responsible manufacturers for the project and contact information, planned site visits, and compliance tests to be performed.
4. Design calculations, test and performance data, and other information required to substantiate that the valve units proposed will meet the performance requirements specified and shown.
5. Protective Coatings: Manufacturer's data.

1.04 DEFINITIONS

A. Responsible Manufacturer: Manufacturer or manufacturer's representative who will ensure satisfactory performance of equipment.

B. Valve: Device for mechanically regulating pipeline or open-channel flow.

C. Actuator: Devices added to obtain mechanical advantage or power assist in operation.

1.05 RESPONSIBLE MANUFACTURER

A. Furnish, adjust, test, and ensure satisfactory performance of each valve.

B. Provide any field adjustments, settings, and tests required for satisfactory performance of each valve at no additional cost to Owner.

C. The valve manufacturer shall be the Responsible Manufacturer for the complete valve unit even if the assembly includes an electric motor, cylinder, or other type of powered actuator.

D. The actuator supplier shall be the Responsible Manufacturer for the complete valve unit for valves that require a standby electric battery or hydraulic closure system that will be used with an electric motor or hydraulic cylinder actuator

1.06 QUALITY ASSURANCE

A. Unless specified otherwise, factory test each valve body with a test pressure equal to twice the listed working pressure rating.

B. Submit a certified copy of the pressure test reports for all valves over 12 inches in nominal size prior to shipping valves to the Site. Format these test reports per the requirements of the applicable reference standards.

C. Storage and Preparation for Installation

1. Package and store valves to prevent exposure to sunlight, chemical exposure, and atmospheric pollution.

2. Inspect each valve prior to installation for damage. Repair any damage to seats, machined surfaces, or protective coatings before installation. Clean each valve to remove any dirt and debris from the interior surfaces and seat areas. Install valves in the closed position.

3. Some valves must be installed with seats or seat adjustment rings on the downstream side of the valve. Determine these requirements prior to installation and install the valve in the correct orientation.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide valves, gates, actuators, stem extensions, and other accessories as indicated on the Drawings or specified. All valves shall be new and of current design. For valves of the same type, provide identical valves supplied by a single manufacturer.

B. Provide actuators with position indicators on valves 6 inches and larger.

C. Provide valves and actuators with the name of the manufacturer, nominal size, flow direction arrow, design working pressure, and the reference standard cast in raised letters or indelibly marked on an appropriate part of the body.

D. Provide valves and actuators designed for submerged service for the following locations

1. Located outdoors
2. Within a building below the adjacent finished grade
3. In vaults
4. Where otherwise indicated. All other units shall be weather-tight and suitable for outdoor service.

E. Unless otherwise specified, all interior bronze parts of valves shall conform to the requirements of ASTM B62.

F. Wetted parts shall be lead-free as defined by California AB1953, California Prop-65, or the most stringent of current regulations.

2.02 VALVE ACTUATORS

A. Furnish valves and gates with an actuator as indicated in the valve Technical Specification.

B. Assemble valve actuators to the valve, adjust, and test the completed unit by Responsible Manufacturer prior to shipment to the Site.

PART 3 - EXECUTION

3.01 VALVE INSTALLATION

A. Install valves per the manufacturer's written instructions and as indicated on the Drawings and specified.

B. Fit, support and brace gates to prevent warping, binding, and bending under all operating conditions. Accurately position and support embedded parts cast into concrete during concrete placement.

C. Assembly of Valves and Piping

1. Install valves with piping prior to the assembled piping or attached supports being cast into concrete or attached to supports.
2. Sequence construction and operations so that the adjacent piping supports the valves, and so that the valves do not support the piping. Where permanent supports are located at valves, install the supports after the piping and valves have been installed as a completed assembly on temporary supports.
3. Install piping and valve assemblies so that the piping does not exert forces on the valves from settlement or assembly operations.
4. Correct piping alignment deviations before the valve is joined to the piping.
5. Unless shown otherwise, install butterfly, plug, and ball valves with the shafts in the horizontal position.
6. Install gates, gate valves, and other types of valves with the stems in the vertical position.

7. For manually operated valves 3 inches in nominal size and smaller, orient the valve operators and indicators to be visible to the operator.

D. Install floor boxes, valve boxes, extension stems, and floor stands vertically centered over the operating nut, with couplings as required. Adjust the elevation of the box top to conform with the elevation of the finished floor, grade, or pavement at the completion of the Work. Support boxes and stem guides during concrete placement to maintain vertical alignment and proper orientation.

3.02 TESTING

A. Pressure test valves as part of the pipeline testing. Demonstrate valve operation (open/close) after the valve is installed including valve box and riser, as appropriate.

B. Test coating per Section 09960.

END OF SECTION

SECTION 15114

BALL VALVES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Ball valves 2” size or smaller for control of water and gas.

B. Type: Open and close service type.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Include the following items:

1. Manufacturer’s data, performance data, wiring diagrams, and outline drawings.

2. Operating and maintenance information.

1.04 QUALITY ASSURANCE

A. Unit Responsibility

1. Assign unit responsibility to the ball valve manufacturer for the combined equipment consisting of valve and operator.

2. Responsibility of the manufacturer extends to proper selection, assembly, factory testing, and furnishing of specified products.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. For ball valves, one of the following or equal:

1. Apollo Bronze Series 82.

2. Jamesbury Series 4000.

3. Marwin Series 8800.

B. Modify equipment as necessary to meet this specification.

2.02 MATERIALS

Item	Material
Body and Cap	ASTM A351, stainless steel, Type 316
Ball	ASTM A351, stainless steel, Type 316
Shaft	ASTM A351, stainless steel, Type 316
Trim Material	Type 316 stainless steel,
Body Seal	PTFE
Seat	PTFE
Body Bolt and Tie Rod	ASTM A193, Grade B8

2.03 COMPONENTS

A. Ball Valves

1. Full port ball valves with bolted, 3-piece bodies, threaded ends.
2. Suitable for water service at a temperature of 100ºF and 800 psi.
3. For fully closed valves of size 2" and less at a differential pressure of 100 psi, maximum allowable opening torque is 20 ft-lbs of torque to open.

B. Equip manually-operated valves with handle operators

PART 3 - EXECUTION

3.01 GENERAL

A. Operators shall have their manual operating accessories, where specified, mounted and operable from the floor.

3.02 INSTALLATION

A. Install each valve as shown on the contract drawings and in accordance with manufacturer's printed instructions.

3.03 TESTING

A. After completion of installation, field test each control valve to demonstrate compliance with performance requirements as specified.

END OF SECTION

SECTION 15122

PIPING CONNECTIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Methods of connecting metallic piping: flanges, threading, mechanical couplings, dielectric unions, and welding.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 09960 – High Performance Coatings
3. Section 15050 – Piping Systems

1.03 SUBMITTALS

A. Comply with Section 01330.

B. For each welder, provide a welder qualification certificate indicating the welder is certified for pipe welding in accordance with ASME Boiler and Pressure Vessel, Section IX.

C. Submit each welder's certificate to the Construction Manager per Section 01330 prior to that welder working on the job.

PART 2 - PRODUCTS

2.01 FLANGE ASSEMBLIES

A. Flanges

1. General

a. Provide flat-faced flanges or convoluted ring flanges as specified in the following paragraphs.

2. Flat Faced Flanges

a. Cast iron flanges: face per ANSI B16.1.

b. Where companion flanges are used, reface the flanges on pipe refaced to be flush with the companion flange face.

c. Class 150 and Class 300 forged steel flanges: comply with ANSI B16.5.

d. Lightweight slip-on flanges: comply with AWWA C207, Class B and ANSI B16.5.

e. Unless otherwise specified, provide steel flanges per ANSI B16.5, Class 150 or AWWA C207, Class D.

f. Provide Class E AWWA flanges where test pressure exceeds 175 psi.

g. Do not bolt flat faced flanges to raised face flanges.

3. Convoluted Ring Flanges

a. Materials: Ductile iron, forged steel or cast stainless steel.

b. Design to bear on hubs welded to the pipe.

c. Manufacturer

1) Improved Piping Products.

2) The engineer knows of no equal.

d. Rating: not less than 150% of the test pressures listed in Section 15050.

e. Comply with ANSI B 16.5 and AWWA C207.

f. If required by the Construction Manager, provide manufacturer-certified pressure tests demonstrating that the flanges will meet these requirements.

B. Gaskets

1. Material: As specified Paragraph 2.05 of this Section.

2. For flat-faced flanges provide full-face type.

3. Thickness: 1/16” for pipe 10” and less in diameter and 1/8” for pipe 12” and larger in diameter.

C. Bolts and Nuts

1. Comply with ANSI B18.2.1 standard square or hexagon head bolts with ANSI B18.2.2 standard hexagon nuts.

2. Threads: Comply with ANSI Bl.1, standard coarse thread series.

3. Bolts: Class 2A.

4. Nuts: Class 2B.

5. Bolt length: Comply with ANSI B16.5.

6. Materials

a. Unless otherwise specified, provide carbon steel machined bolts with hot pressed hexagon nuts.

b. Submerged service: Type 316 stainless steel complying with ASTM F593 and ASTM F594, markings F593F and F594F.

c. Buried service: non-corrosive high-strength, low-alloy steel per AWWA C111 (ANSI A21.11), regardless of any other protective coating.

2.02 MECHANICAL COUPLINGS

A. Manufacturers

1. Sleeve-type mechanical pipe couplings: Rockwell Type 411, Dresser Style 38, or equal, with the stop removed from the middle ring.
2. Reducing couplings: Rockwell Type 415, Dresser Style 62, or equal.
3. Sleeve-type flanged coupling adapters: Rockwell Type 913, Dresser Style 128, or equal.
4. Insulating couplings: Rockwell Type 416, Dresser Style 39, or equal.
5. Bolts and nuts for submerged service: Type 316 stainless steel in conformance with ASTM F593 and ASTM F594, markings F593F and F594F.
6. Bolts and nuts for buried service: Non-corrosive high-strength, low-alloy steel having the characteristics specified in AWWA C111 (ANSI A21.11), regardless of any other protective coating.
7. Gaskets: comply with Paragraph 2.05 and AWWA C111.

B. Plain End Couplings

1. Pipe sizes 6” and smaller: Gustin-Bacon 200, Victaulic Style 99, or equal for Schedule 80 pipe and Gustin-Bacon 205, Victaulic Style 90, or equal for lighter weight pipe.
2. Pipe sizes 8” and larger shall be Gustin-Bacon 200, Victaulic Style 99, or equal.
3. Bolts and nuts: Comply with AWWA C606.
4. Gaskets: Comply with Paragraph 2.05 this Section and AWWA C606.

C. Grooved End Couplings

1. Flexible-type: Gustin-Bacon 100, Victaulic Style 77, or equal.
2. Rigid-type Gustin-Bacon 120 Rigi-Grip, Victaulic Style 07 Zero-Flex, or equal.
3. Use flexible-type couplings:
   a. For all piping greater than 12” in diameter.
   b. For pipe 12” in diameter and less in rack-mounted tunnel piping applications.
   c. For grooved joints adjacent to pump or blower suction and discharge where grooved couplings are used for noise and vibration control.
4. For all other applications of piping 12” and less in diameter use rigid-type couplings.
5. Flanged coupling adapters: Gustin-Bacon 154, Victaulic Style 741, or equal.

6. Snap-joint couplings: Gustin-Bacon 115, Victaulic Style 78, or equal.

7. Cut grooves are not permitted on fabricated or light wall pipe.

8. Unless otherwise specified, bolts and nuts shall comply with AWWA C606.

9. Bolts and nuts for submerged service: Type 316 stainless steel in conformance with ASTM F593 and ASTM F594, markings F593F and F594F.

10. Bolts and nuts for buried service: Non-corrosive high-strength, low-alloy steel having the characteristics specified in AWWA C111 (ANSI A21.11), regardless of any other protective coating.

11. Gaskets: Comply with Paragraph 2.05 and AWWA C606.

2.03 FLEXIBLE EXPANSION JOINTS

A. Materials: EPDM body and ductile iron retaining rings with baked enamel finish.

B. Drill to connect to the pipe flanges.

C. Temperature rating: 350 degrees F minimum or equal.

D. Provide hypalon coating for UV protection.

E. Expansion joints for aeration air service: Four-arch.

F. Manufacturer: Mercer Style HT 500 Series.

2.04 LINK SEALS

A. Where shown on the plans, provide link seals and compatible wall sleeves with weep ring for wall penetrations.

B. Use manufacturers recommended service designation unless noted otherwise.

C. Type: Linked rubber sealing elements and pressure plates tightened together with stainless steel bolts.

D. Manufacturers

1. One of the following or equal:

a. Thunderline Corporation

b. Calpico

2.05 GASKETS

A. Designated in Section 15050.

B. Materials

1. EPDM: ethylene-propylene-diene-terpolymer.

2. Neoprene: neoprene.

3. Nitrile: nitrile (Buna N).

4. Compressed gasketing consisting of organic fibers (Kevlar) and neoprene binder; ASTM F104 (F712400), 2500 psi (ASTM F152), 0.2 ML/HR LEAKAGE FUEL A (ASTM F37).

5. TFE bonded EPDM: TFE bonded to EPDM in full-face gasket having concentric-convex molded rings.

2.06 PIPE THREAD

A. Dimensions and size limits: Comply with ANSI Bl.20.1.

2.07 DIELECTRIC ISOLATION

A. General

1. Dielectrically isolate all metallic piping from all other dissimilar metal hangers, brackets, steel reinforcing and all other metal structures.

2. Dielectrically isolate all metallic piping from other piping or other materials constructed from dissimilar metals.

B. Flange Insulators

1. Provide flange dielectric insulation sets with full faced gaskets, full length sleeves, and double insulating washers or as specifically indicated on the drawings.

2. Insulation material for the flange insulation sets: phenolic resin.

3. Provide insulating materials designated by the manufacturer as suitable for use at the operating and test pressures specified for the type of pipe on which the materials are to be installed.

C. Wall Penetrations

1. Prevent metal to metal contact between the pipe and reinforcing steel in the concrete wall.

D. Insulating Unions

1. Comply with Federal Specifications WW-U-532, Class 1 requirements for dimensional, strength, and pressure requirements.

2. Provide insulation barrier which limits galvanic current to 1% of the short circuit current in a corresponding metallic joint.

3. Provide insulating material which is impervious to water.

4. Make each of the union match the type of material to which it connects.

5. Manufacturers, one of the following or equal:

a. EPCO.

b. Capital Manufacturing.

E. Pipe Supports

1. Dielectrically isolate any pipe hangers, supports, brackets and saddles installed on the buried side of dielectric insulators on the protected pipe, from the pipe by insertion of dielectric insulating material between the hanger and the pipe.

2.08 COATINGS

A. Unless otherwise specified, coat flange assemblies and mechanical type couplings for buried installation with System M-1 as specified in Section 09960.

PART 3 - EXECUTION

3.01 PIPE CUTTING, THREADING, AND JOINTING

A. Comply with ANSI B31.1.

3.02 PIPE WELDING

A. Provide ASME-certified welders and use shielded metal arc, gas shielded arc or submerged arc welding methods.

B. Comply with ANSI B31.1 for piping System 8 specified in Section 15050.

C. For piping systems not specified in Paragraph 3.02.B above, comply with AWWA C206.

D. Contractor shall bear responsibility for cost of third party special inspections.

3.03 TAKEDOWN COUPLINGS

A. Provide takedown couplings consisting of screw unions, flanged or grooved end mechanical coupling type joints as specified.

1. Use flanged or grooved end joints shall be employed on pipelines 2½" in diameter and larger.

2. Where piping passes through walls, provide takedown couplings within 3' of the wall, unless specified otherwise.

B. Provide a union or flanged connection within 2' of each threaded end valve.

3.04 FLEXIBILITY

A. For piping 2" in diameter and larger passing from concrete to earth, provide with two pipe couplings or flexible joints as specified within 2' or one pipe diameter of the structure, whichever is greater.

B. Where required for resistance to pressure, restrain mechanical couplings per AWWA M11, Paragraph 13.10, Tables 13-6 and 13-7, and Figure 13-17.

3.05 DIELECTRIC CONNECTIONS FOR COPPER PIPE

A. Where a copper pipe is connected to steel or cast iron pipe, provide an insulating section of rubber or plastic pipe.

B. Insulating section minimum length: 12 pipe diameters.

C. Dielectric unions as specified in Paragraph 2.07 may be used instead of the specified insulating sections.

D. Where copper pipe is supported from hangers, insulate the pipe from the hangers, or use copper-plated hangers.

3.06 INSULATING FLANGES

A. Install at the specified locations and as shown on the Drawings.

B. Clean all components of all dirt, grease, oil and other foreign materials immediately prior to assembly.

C. Align bolt holes in mating flanges at the time bolts and insulating sleeves are inserted to prevent damage to the insulation.

D. After flanged bolts have been tightened, inspect each insulating washer for cracks or other damage.

E. Replace all damaged washers.

F. After assembly, measure resistance between each bolt and flange with an approved ohmmeter. Minimum acceptable resistance: 50,000 ohms.

G. Coat all insulating flanged joints.

END OF SECTION

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SECTION 15250

INSULATION FOR EXPOSED PIPING AND EQUIPMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Insulation for exposed piping and related equipment and appurtenant surfaces. Comply with Section 15050, 3.01.G.

B. Temperature Classes

1. Classified for "medium" operating temperature, range of 100 to 800 degrees F.

C. Insulation Thickness Schedule

1. Make insulation dimensional tolerances comply with the specified standards.

2. Make equipment insulation match thickness of attached piping.

3. The minimum insulation thicknesses, exclusive of jacket, are as follows:

Insulation Thickness In Inches For Nominal Pipe Sizes					
Runouts up to 2"[(b)]	≤1"	1.25" – 2"	2.5" – 4"	5" – 6"	≥8"
1.0	1.0	1.5	1.5	1.5	1.5
[(a)] Runouts to individual terminal units (not exceeding 12 feet in length).					

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals

2. Section 15050 – Piping Systems

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Include the following items:

1. Manufacturer and manufacturer's type designation.

2. Samples, for each insulation material type, of typical jacket and closures for fittings, valves and appurtenances.

3. Descriptive literature and catalog data for materials to be used showing methods of installation.

4. Certification of ratings for water vapor transmission and puncture and stiffness as specified in Paragraph 2.03 A.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide tubular type or flexible blanket type.

B. For insulation for valves, strainers, fittings, expansion joints, flanges and other connections, provide segmented sections, molded, or blanket type coverings of the specified type and thickness of pipe insulation.

C. For equipment insulation, provide flexible blanket type or rigid board type cut to fit the surface.

2.02 MATERIAL

A. Provide cellular glass or fiberglass type.

B. Unicellular Elastomeric Thermal Type

1. Conform to ASTM C534, Type I.

C. Cellular Glass Type

1. Conform to ASTM C552, Type II.

D. Fiberglass Type

1. Conform to FEDSPEC HH-I-558B.

2.03 INSULATION JACKETS

A. Laminated Jackets

1. Material: Aluminum and white kraft paper.

2. Maximum permissible perm rating for water vapor transmission: 0.02 in accordance with Procedure A of ASTM E96.

B. Aluminum Jackets

1. Material: Smooth finish 0.016-inch thick aluminum sheet conforming to ASTM B209, alloy 5005, temper H16, with integral vapor barrier.

2. Sheet metal screws: Aluminum or stainless steel.

3. Secure jackets with 0.020 by 3/4-inch Type 304 stainless steel expansion bands.

2.04 INSULATION COVERS

A. Aluminum Covers

1. Construct of smooth finish 0.016-inch thick aluminum sheet conforming to ASTM B209, alloy 5005, temper H16, with integral vapor barrier.

B. Soft Covers

1. Reusable type with TFE-coated fiberglass covers and liner.

2.05 THERMAL SHIELDS

A. Provide at hanger, support and guide locations on pipe requiring insulation.

B. Configuration: Insulation layer encircling the entire circumference of the pipe and a steel jacket encircling the insulation layer.

C. Make the thermal shield the same thickness as the piping system insulation.

D. Use the standard shield for medium temperature systems.

E. Use stainless steel band clamps, where specified, to ensure against slippage between the pipe wall and the thermal shield.

F. Provide butt connection to pipe insulation.

G. Extend insulation 1" each side of steel jacket for vaportight connection to pipe insulation vapor barrier.

2.06 FLASHING

A. Includes aluminum caps, sealant and reinforcing.

B. Aluminum caps: 20-gage thick, cut to completely cover the insulation.

C. Sealants: as recommended by the insulation manufacturer.

D. Reinforcement

1. For flashing heated up to 370 degrees F, provide nylon fabric.

2. For hotter surfaces, provide wire mesh or as recommended by the insulation manufacturer.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General

1. Apply over clean, dry surfaces.

2. For double layer insulation, where specified or required to achieve the specified surface temperature, provide with staggered section joints.

B. Pipe Supports and Shields

1. Unless otherwise specified, provide thermal pipe hanger shields install during pipe support installation.

2. Where thermal pipe hanger shields are used, apply 3" wide vapor barrier tape or band over the butt joints.

C. Protection

1. Protect insulation and jackets from crushing, denting, and similar damage during construction.

2. Do not penetrate or otherwise damage vapor barriers.

3. If insulation, jacket, and vapor barriers are damaged during construction, then remove damage material and install new material.

D. Piping Insulation

1. Continuously insulate along entire length including all in-line devices such as valves, fittings, flanges, couplings, strainers and other piping appurtenances.

2. Unless otherwise specified, provide with aluminum jackets specified in Paragraph 2.03 B.

3. Butt firmly together and provide jacket laps and joint strips with lap adhesive.

4. Provide jackets with their seams located on the underside of pipe.

5. Except for flexible blanket type, seal insulation ends with end joint strips and held in place by waterproof adhesive.

E. Fittings, Connections, Flanges and Valves:

1. Except where soft covers are specified, provide rigid insulation with rigid aluminum covers specified in Paragraph 2.04 A.

2. Mechanically secure by corrosion-resistant tacks pushed into the overlapping throat joint.

3. Overlap the adjoining pipe insulation and jackets.

4. Provide with their seams located on the underside of fittings and valves.

F. Mechanical Equipment Insulation

1. General

a. Unless otherwise specified, fit insulation to the contours of equipment and secure with 1/2 by 0.015 inch galvanized steel bands.

b. Weld pins or stick clips with washers may be used for flat surfaces and spaced a maximum 18 inches apart.

c. Stagger joints and fill voids with insulating cement.

d. Unless otherwise specified, provide insulation with laminated jackets specified in Paragraph 2.03 A.

e. Cover and cement joints in place with 4-inch-wide strips of the same material as the laminated jackets specified in Paragraph 2.03 A.

f. Equipment to be insulated is indicated on the drawings.

G. Flashing

1. Provide at jacket penetrations and terminations. Provide clearance for flashing between insulation system and piping supports.

2. Sealant

   a. Trowel a heavy tack coat of sealant over the insulation, extending over the jacket edge 1-inch and over the pipe or protrusion 2 inches.

   b. Stretch reinforcement over the tack coat after clipping to fit over pipe and jacket.

   c. Strap clipped reinforcing with a continuous band of reinforcing to prevent curling.

   d. Trowel sealant over the reinforcement to a minimum thickness of 1/8-inch.

3. Provide aluminum caps, formed to fit, over the adjacent jacketing and to completely cover coated insulation. Hold cap in place with a jacket strap.

END OF SECTION

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SECTION 15440

PROCESS DRAINS AND CLEANOUTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Drains and cleanouts for systems in process areas.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section

1. Section 01330 – Submittals
2. Section 15050 – Piping Systems

1.03 SUBMITTALS

A. Comply with Section 01330.

B. Include brochures of plumbing equipment, including catalog data and installation information.

PART 2 - PRODUCTS

2.01 CLEANOUTS

A. General

1. Unless otherwise specified, provide cleanouts which are the same size as the pipe to which they are connected.
2. Provide cleanouts with clamping collars where waterproofing membranes are located in the floor.
3. When cleanouts are located inside buildings, provide with nickel-bronze alloy covers.
4. Provide bronze plug with tapered thread for cleanouts on pressurized systems.
5. For cleanouts on chemical waste or drain lines, provide the same material and type of joint as the pipe.

B. Type I Cleanout

1. Unless otherwise specified, provide Josam Series 57000, J. R. Smith Series 4020, or equal.

C. Type II Cleanout

1. Unless otherwise specified, provide Josam Series 57000-12, J. R. Smith Series 4140, or equal.

2.02 FLOOR DRAINS

A. General

1. Provide with clamping collars where waterproofing membranes are located in the floor.

B. Type I and Type II Floor Drain

1. General Service

a. Unless otherwise specified, for general service areas within the plant provide Josam Series 32100-81-ARE, J. R. Smith Series 2210 (epoxy coated), or equal.

2. Chemical Storage and Handling Areas

a. Unless otherwise specified, for chemical storage and handling areas within the plant provide Josam Series 32100-PVC, or equal.

C. Type III Floor Drains

1. Unless otherwise specified, provide Josam Series 32100-66, J. R. Smith series 2215, or equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General

1. Comply with the California Plumbing Code.

2. Install to avoid obstructions, allow 7.5-foot minimum headroom, and keep openings and passageways clear.

3. Do not make holes in structural members.

4. Repair torn and pierced waterproofing.

B. Dielectric Unions

1. Provide at connections between pipe or fittings of different material.

C. Piping

1. Do not support pipes from plumbing fixtures or equipment. Use reducing fittings to changes pipe size. Do not use reducing bushings.

2. Where galvanized steel pipe is caulked into a cast iron hub, provide a soil pipe adapter on the caulked end of the steel pipe.

3. Unless otherwise specified, provide underground piping outside buildings with a minimum cover of 24 inches. Piping under buildings shall have a minimum clearance from structure of 12 inches.

3.02 CLEANING AND FLUSHING

A. Clean and flush piping and equipment per Section 15050.

END OF SECTION

SECTION 15951

TESTING GRAVITY FLOW PIPELINES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Acceptance testing of gravity flow pipelines, including:

1. Visual inspection of pipes.
2. Leakage testing of pipes.

1.02 REFERENCED SECTIONS

A. The following Section is referenced in this Section

1. Section 01330 – Submittals

1.03 PERFORMANCE REQUIREMENTS

A. Perform leakage testing to verify compliance with the maximum allowable leakage criteria specified in this Section. Refer to tables in this Section for leakage criteria.

B. Repair or replace sections of pipelines that fail to meet the specified requirements and retest until the leakage criteria is satisfied.

1.04 SUBMITTALS

A. Comply with Section 01330.

B. Before testing begins and in adequate time to obtain approval through the submittal process, prepare and submit a test plan for review by the Engineer. Include testing procedures, methods, equipment, and tentative schedule.

C. Submit test reports for each test on each segment of pipeline.

1.05 SEQUENCE AND SCHEDULING

A. Perform testing after placing and compacting Bedding Material around the pipe, or after backfilling the pipe trench, at Contractor's option. Schedule testing so that no more than 1,000 lineal feet of installed gravity flow piping remains untested at any one time.

B. Coordinate testing schedules with Engineer. Perform testing under observation of Engineer.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

A. Provide labor, equipment, tools, test plugs, risers, air compressor, air hose, pressure gauges and other devices necessary for proper testing and inspection of pipelines.

B. Test pressures shall account for ground water elevation.

3.02 TESTING LINE AND GRADE

A. Confirm pipe alignment visually by flashing a light between manholes. Verify if alignment is true and no pipes are misplaced. In case of misalignment or damaged pipe, remove and re-lay or replace pipe segment.

3.03 LEAKAGE TESTING

A. Test Options:

1. Test gravity flow pipes and manholes for leakage.

a. Gravity flow pipelines 24-inches in diameter and smaller may be tested by either hydrostatic means.

B. Compensating for Ground Water Pressure:

1. When Contractor elects to test pipe after backfilling the pipe trench, groundwater pressure must be taken into account to eliminate influence on the leakage test.

2. Determine groundwater elevation as follows:

a. Install a 1/2-inch diameter pipe nipple, approximately 10” long, through the wall of each manhole. Cap the end of the pipe nipple that protrudes into the manhole. Locate pipe nipple at the crown of the new gravity pipeline where the pipeline enters the manhole. Install pipe nipple at the same time the gravity pipeline is constructed.

b. Before performing pipeline leakage acceptance test, remove the cap from the pipe nipple and clear the pipe nipple with air pressure. Connect a clear plastic tube to the nipple, run the tube vertically inside the manhole and allow groundwater to rise in the tube.

c. After groundwater stops rising, measure the height in feet of water over invert of the pipe.

3.04 HYDROSTATIC LEAKAGE TESTS

A. Determine groundwater elevation.

B. Plug wyes, tees, stubouts, laterals and other connections to the sewer. Plug sewer pipeline in the downstream manhole. If necessary to isolate flow, plug incoming pipes in the upstream manhole.

C. When test pressures require installation of a riser pipe, connect riser pipe to pipe in the upstream manhole.

D. Fill sewer pipe and manholes with water to the specified test elevation, compensating for the measured groundwater elevation.

END OF SECTION

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SECTION 15996

TESTING PRESSURE PIPING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Hydrostatic pressure pipeline testing.

1.02 REFERENCED SECTIONS

A. The following Sections are referenced in this Section:

1. Section 01330 – Submittals
2. Section 01999 – Reference Forms
3. Section 15050 – Piping Systems

1.03 SUBMITTALS

A. Provide Submittal per Section 01330.

B. Testing Schedule and Notification of Testing: Submit advance written notice of testing activities a minimum of 48 hours prior to conducting piping tests.

C. Completed Pipe Test Record Forms, found in Section 01999.

1.04 TESTING REQUIREMENTS

A. Furnish personnel, materials, bulkheads, test plugs, restraints, anchors, temporary connections, pumps, pressure gauges and other equipment needed to perform testing.

B. Water for Testing

1. Use potable or recycled water for pressure testing pipelines. Obtain water from the potable or recycled water supplies onsite.
2. Disposal:
   a. Dispose of water used for testing pipelines at a location at the site designated by the Owner.

C. Test only those portions of the pipe that have been installed as part of this Contract.

1. Test new pipe sections prior to making final connection to existing piping.
2. Install test plugs or bulkheads to isolate new piping systems.
3. Unless otherwise indicated, valves may not be used to isolate portions of the piping system for purposes of testing. When testing against a valve is indicated or approved by the Owner, provide a test plate “pancake” to further isolate the new and existing piping.

D. Sequence

1. Buried Pressure Piping: Except as otherwise indicated, conduct piping pressure test after trench has been backfilled to subgrade and compacted. Piping may be tested before or after final paving, at Contractor's option.

2. Encased Piping: Test before encasing pipe in concrete.

E. Failed Tests: Make necessary corrections or remove defective pipe or defective appurtenances. Repeat pressure test until a successful test is achieved.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

A. Test pipelines, appurtenances, valves and fittings in the pipeline system.

B. Where allowable leakage rates are not specifically indicated, no leakage is allowed.

C. Perform testing operations in the presence of the Engineer.

D. Prior to pressure testing, clean pipeline of debris, construction materials, dirt and other foreign material within the piping system.

E. Do not test pipelines until thrust restraint devices have been installed. Where concrete thrust blocks are used, do not begin pressure test until concrete has attained an age of at least 7 days unless otherwise approved by the Owner. Pressure test buried pipe after backfill.

F. After testing has been completed, drain test water from pipelines and leave in clean condition.

3.02 FILLING PIPING SYSTEMS WITH WATER

A. Place temporary bulkheads in the pipe at the ends of the test section, and then slowly fill the pipeline with water at a rate which does not cause surges or exceed the rate at which the air can be released through the air valves.

B. Ascertain that test bulkheads are suitably restrained to resist the thrust of the test pressure without damage to, or movement of, the adjacent pipe.

C. Purge air within the pipeline during the filling operation. Check proper operation of air release valves and air vents during the filling operation to ascertain proper operation and venting of air from the pipeline.

D. Concrete pipe, cement-mortar lined pipe and other pipe made from water absorbing material:

1. After the filling operation is complete, allow the filled pipeline to stand under a slight pressure for at least 24 hours to allow air to escape from any air pockets within the pipeline and the pipe lining to absorb water.

2. Examine bulkheads, valves and connections for leaks during this period. If leaks are found, make corrections before conducting the pressure test.

3.03 PRESSURE TESTING EXPOSED PIPING

A. Test exposed piping as follows:

1. Fill section of piping under test with water and raise the system pressure to the test pressure specified in the Piping Schedule in Section 15050 or the Drawings.
2. Visually inspect exposed pipe joints, joints at fittings, valves, hydrants, and other piping appurtenances for leaks.
3. Correct leakage as necessary to eliminate the leakage.
4. Duration of Pressure Test: 2 hours.
5. Leakage Allowances: Zero leakage.
6. Correct any visible leakage by tightening flanges and screwed joints, replacing gaskets or removing defective materials.
7. Repeat test until no leakage is observed.
8. Record results of pressure test on Pipe Test Record form, included in Section 01999.

3.04 PRESSURE TESTING BURIED PIPING

A. Pressure test buried piping as follows:

1. Fill section of piping under test with water and raise the system pressure to the test pressure specified in the Piping Schedule in Section 15050.
2. Visually inspect exposed pipe joints, joints at fittings, valves, hydrants, and other piping appurtenances for leaks.
3. Correct visible leaks necessary to eliminate the leakage.
4. Duration of Pressure Test: 2 hours.
5. Leakage Measurement:
   a. Begin test once visible leaks have been eliminated.
   b. Maintain test pressure during the test period by adding makeup water to a calibrated test reservoir.
   c. Accurately measure the volume of makeup water introduced into the pipeline to maintain the test pressure to determine the leakage rate for the test.
6. The pipeline pressure test is successful when the makeup water added during the test is equal to or less than the allowable leakage rate (L) defined below.

7. Polyvinyl Chloride (PCV) or Chlorinated Polyvinyl Chloride (CPVC) pipe:

$$L = \frac{ND(P)^{1/2}}{7{,}400}$$

L = Allowable leakage in gallons per hour.
N = Number of joints in the length of pipeline to be tested.
D = Nominal diameter of the piping in inches.
P = Test pressure in pounds per square inch gauge.

END OF SECTION

SECTION 16010

ELECTRICAL

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. The Contractor shall install, ready for use, the electrical and instrumentation system as specified herein and shown on the Contract drawings. This document describes the function and operation of the system and particular components, but does not necessarily describe all necessary devices. All components and devices shall be furnished and installed as necessary/required to provide a complete operable and reliable system for accomplishing the functions and meeting the performance set forth hereinafter.

B. Furnish all required labor, materials, project equipment, tools, construction equipment, safety equipment, transportation, test equipment, incidentals, and services to provide a complete and operational electrical & instrumentation system as shown on the E - & I - Series Drawings, included in these Specifications, or required for fully operating facility. See Appendix "B" for "Device Index" for this project.

C. Examine the specification and Drawings for mechanical equipment and provide all circuit breakers, switches, pushbuttons and appurtenances which are not specified to be with the mechanical equipment. Erect all electrical equipment not definitely stated to be erected by others, furnish and install conduit, wire and cable and make connections required to place all equipment in complete operation.

D. It is recommended that the Electrical Contractor attend the job walk for the site and shall have accomplished the following:

1. Thoroughly examine existing conditions before submitting his bid proposal to perform any work. He shall compare site conditions with data given on the plans or in these Specifications. No allowance shall be made for any additional costs incurred by the Contractor due to his failure to have examined the site or to have failed to report any discrepancies to the Owner prior to bid.

2. It is the Contractor's responsibility to be fully familiar with the existing utility locations, conditions and local requirements and regulations.

3. Verify all measurements and conditions and shall be responsible for the correctness of same. No extra compensation will be allowed because of differences between Work shown on the Drawings and measurements at the site.

E. Any major deviations in location and conduit routing that the Contractor makes without the express written review or direction of the Engineer, shall be considered to have been made at the Contractor's sole responsibility. Such deviations made by the Contractor shall be reflected on the Contractor supplied "Record Drawings." The Owner will reimburse the Engineer and the Owner will then deduct an amount equal to said reimbursement from the Contractor's contract for all engineering, drafting, and clerical expenses associated with updating the Record Drawings due to any major unauthorized changes.

F. The major areas in the scope of work shown on E & I-series Contract drawings, Device Index located in Appendix "B", which includes both the furnishing and installation are:

1. Modifying existing MCC for powering package odor control system.
2. Instrumentation and other miscellaneous devices. This includes all wiring and cables.
3. Modifying existing control panel and autodialer for callout of new alarms.
4. Provide all necessary conduits, junction boxes, grounding system, field interconnection wiring, hardware, fittings, and devices to connect the designated equipment and wiring.
5. Installation of primary devices, equipment and instruments are not completely detailed on Contract Drawing plan sheets. Use Device Indexes and Contract Drawings installation details for installation and mounting requirements.
6. All necessary miscellaneous shut off, sample, and calibration valves to sensors.
7. Trenching, back filling, compaction and resurfacing to match existing surfaces for each underground conduit route.
8. Grounding system and equipment grounding.
9. Concrete pads and supports for electrical and instrumentation equipment
10. Remove and dispose of all excess dirt, paving, concrete, and other materials from site work.
11. Coordination for connection of utility services.

G. Existing site is limited in space. It is the Contractor's responsibility to provide an electrical and instrumentation package to fit in the allocated space.

H. Provide all necessary hardware, conduit, wiring, fittings, and devices to connect the electrical equipment provided under other Sections.

I. All electrical equipment and materials, including installation and testing, shall conform to the applicable codes and standards listed in this and other Sections. All electrical work shall conform with the National Electrical Code (NEC) 2017 issue.

Nothing on the Drawings or in the Specifications shall be construed to permit work or materials not conforming to these codes and standards.

J. It is the Contractor's responsibility for obtaining instrumentation configuration software, manuals and disks necessary for the Contractor to program and configure the instrumentation. All software shall be licensed and turned over to the Owner.

K. The following specifications incorporate specific equipment and devices that are standards of the Owner because of their serviceability, because of the local availability of labor, parts and materials, or because of the ability of the Owner to umbrella the equipment under existing maintenance contracts; however, favorable alternatives proposed in writing will be considered by the Owner.

L. Contractor shall field verify all existing conditions, equipment, wires, conduit, etc. as required to complete the project

1.02 CODES AND STANDARDS

A. All electrical/instrumentation equipment and materials, including installation and testing, shall conform to the following applicable codes and standards:

1.	ANSI	-	American National Standards Institute, Inc.
2.	EIA	-	Electronics Industries Association.
3.	ETL	-	Electrical Testing Laboratories.
4.	FM	-	Factory Mutual.
5.	GO128	-	General Order No. 128, Rules for Construction of Underground Electrical Supply and Communication Systems, Public Utilities Commission of the State of California.
6.	IEEE	-	Institute of Electrical and Electronics Engineers.
7.	ICEA	-	Insulated Power Cable Engineers' Association.
8.	ISA	-	International Society of Automation (ISA) Standards (formerly Instrument Society of America.
9.	NEC	-	National Electrical Code, 2017 Edition.
10.	NEMA	-	National Electrical Manufacturers Association.
11.	NETA	-	Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems, International Electrical Testing Association.
12.	NESC	-	National Electrical Safety Code.
13.	NFPA	-	National Fire Protection Agency & NFPA820
14.	OSHA	-	Occupational Safety and Health Act Standards.
15.	UL	-	Underwriter's Laboratories, Inc.

B. The revisions of these codes and standards in effect on the date of issuance of the Contract Documents shall apply.

C. Codes and standards referenced shall be considered minimum acceptable work.

D. In instances where two or more codes are at variance, the most restrictive requirements shall apply.

E. Nothing on the Drawings or in the Specifications shall be construed to permit work or materials not conforming to the preceding codes and standards.

F. All work shall also be performed in accordance with the Owner, State, County or Owner standards, and local Utility codes.

G. The Contractor shall furnish without extra charge any additional material and labor which may be required for compliance with these codes and standards, even though the work is not explicitly mentioned in the Specifications or shown on the Contract E- Series Drawings.

H. Amperage listed on the single-line Drawings for motors are per NEC Table 430.250 and may not necessarily match that of the equipment supplied. It is the electrical system supplier and Contractor's responsibility to furnish equipment sized for the motors supplied for this project at no additional cost.

1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS

A. Provide electrical system that interfaces to work performed under other Mechanical and Equipment plans.

B. The following is part of Division 16:

1. Section 16605 – Electrical Systems Analysis

1.04 ELECTRICAL CONTRACTOR QUALIFICATIONS

A. It is the intent of this Division that the complete responsibility for management and installation of the electrical and instrumentation required for this project be by a qualified Electrical Contractor. This responsibility includes, but not limited to, supervision and coordination of work performed by all suppliers of Division 16.

B. Uncertified electricians shall not perform electrical work for which certification is required per Labor Code Section 3099. Electricians shall be required to carry proof of certification on their person at all times. Electricians found on the jobsite without proof of certification will be asked to leave, prohibited from working on-site until proof of certification has been provided and may be reported to the Contractors State License Board (CSLB).

C. The Electrical Subcontractor shall meet the following minimum qualifications:

1. Has a current C-10 Electrical Subcontractor's License.

2. Has regularly engaged in similar electrical contracting for the Municipal Water Industry.

3. Has successfully performed work of similar or greater complexity on at least five previous projects under one company name and under the present company name.

4. Has all persons performing work as electricians certified by the California Apprenticeship Council per California Labor Code Section 3099.

5. Has been actively engaged in the type of electrical and instrumentation work specified in this Division for a minimum of two years.

1.05 SYSTEM SUPPLIER QUALIFICATIONS

A. General:

1. It is the intent of this Division that complete responsibility in the supplying of the Main Switchboard/Power Distribution Switchboard/Control Panel, and other equipment required for this project be supplied by one System Supplier. This responsibility includes, but not limited to, all work necessary to select, furnish, program, supervise installation, calibrate, and place into operation all transmitters, instruments, controllers, alarm equipment, monitoring equipment, and accessories as specified herein.

2. The system supplier shall have an on staff project engineer with prior experience on similar sized projects. This project engineer shall coordinate the technical aspects of this project and prepare the submittals and drawings. The system supplier project engineer shall attend all coordination meetings and be on-site when requested by the Owner's Engineer.

B. Pre-Qualified System Suppliers

1. The Suppliers listed below have been determined to meet minimum qualifications specified in this Division and are pre-qualified by the Owner for providing supplier bids as system suppliers on the project.

a. Tesco Controls (Phone 916 395-8800).

b. Primex (formerly MCC Control Systems & Meyer Controls) (Phone 707 449-0341).

c. Technical Systems, Inc. (TSI) (Phone 530 710-3325)

1.06 CONTRACT DOCUMENTS

A. The Contract drawings and specifications are intended to be descriptive of the type of electrical system to be provided; any error, omission, or minor details missing in either shall not relieve the Contractor from the obligations there under to install in correct detail any and all materials necessary for a complete operational system, at no additional cost.

B. The Contract drawings are generally diagrammatic; exact locations of electrical products shall be verified in the field with the Engineer. Except where special details on drawings are used to illustrate the method of installation of a particular

piece or type of equipment or materials, the more restrictive of the two shall take precedence in the event of conflict. Conflicts between the Contract drawings and the specifications shall be brought to the attention of the Engineer.

C. The Contract Electrical elementary, elevation and one-line diagrams are the basis of the electrical system to be provided and are for reference only. It is the Contractor's responsibility to adjust and make minor revisions to the diagrams as necessary for operational system at no additional cost to the Owner. Additional isolators, relays, wiring, terminal blocks, and appurtenances, shall be provided for an operation system at no additional cost to the Owner.

D. Location at facilities of new equipment, inserts, anchors, panels, pull boxes, conduits, stub-ups, and fittings for the electrical system are to be determined by the Contractor and Engineer at time of installation. Contractor shall make minor adjustments to locations of electrical equipment required by existing conditions and coordination with other trades at no additional cost.

E. The Conduit and Wire Routing Schedule, wire fill, and number of conduits are based on the best information available.

1. It is the Contractor's responsibility to modify the conduit schedule based upon Shop Drawings for the actual equipment. Such modifications in conduit sizes and numbers of conductors shall be at no additional cost to the Owner, if such changes are the direct result of the equipment selected by the Contractor.

2. A copy of the Conduit and Wire Routing Schedule and Electrical plans showing conduit routing shall be updated weekly by the Contractor. Progress payments will be withheld if during monthly checks it is found that the Contractor fails to maintain the Conduit Schedule updates.

F. Electrical & instrumentation, conduit & wire lengths shown on Contract Drawings are approximate. The Contractor is responsible for determining actual lengths for bidding and installation purposes. Contractor is to be made aware that equipment may be installed in the lower levels of the building and instrumentation manufacturer's cable length depends on conduit routing.

G. The Contractor shall examine the architectural, mechanical, structural, electrical and instrumentation equipment provided under other Sections of this Contract in order to determine the exact routing and final terminations for all conduits and cables. The exact locations and routing of cables and conduits shall be governed by structural conditions, physical interferences, and the physical location of wire terminations on equipment. Conduits shall be stubbed up as near as possible to equipment.

H. All equipment shall be installed and located so that it can be readily accessed for operation and maintenance. The Engineer reserves the right to require minor changes in location of equipment, without incurring any additional costs.

I. Provide means to furnish equipment and accessories, do the installation, complete connections, submit documentation, perform start-up, and be responsible for the warranty.

J. Where conduits are shown as “home runs” on the Contract drawings or stated to be furnished, but not explicitly shown as part of the scope of work; the Contractor shall provide all fittings, boxes, wiring, etc., as required for completion of the raceway system in compliance with the NEC and the applicable specifications in this Section.

K. No changes from the Contract drawings or specifications shall be made without written approval of the Engineer. Should there be a need to deviate from the Contract documents, submit written details and reasons for all changes to the Engineer for favorable review within 30 days after award of Contract.

L. When existing conduits are to be used, it is the Electrical Contractor’s responsibility to verify conduit size and routing. This includes all potholing or other location methods. Existing conductors and conduits damaged by Contractor during construction shall be repaired or replaced at no cost to Owner.

M. The resolution of conflicting interpretation of the Contract documents shall be as determined by the Engineer.

N. The Contractor shall coordinate with other Suppliers on the project for a complete and operable system.

O. It is the System Supplier's responsibility for obtaining instrumentation transmitter configuration software, manuals, USB drives and disks necessary for the Contractor to program and configure the instrumentation transmitters.

P. The Electrical Contractor shall maintain a separate set of neatly and accurately marked set of Record Documents, consisting of spreadsheets, specifications and full size blue-line Electrical (E-Series) and Instrumentation (I-Series) Contract Drawings.

1. These documents are to be used specifically for recording the as built locations and layout of all electrical and instrumentation equipment, routing of raceways, junction and pull boxes, and other diagram or document changes.

2. These Record documents shall be kept up-to-date during the progress of the job, with all "change orders", submittal modifications, and construction changes shown and stamped with “As-Built” at end of job.

3. These Record documents shall not be used for daily construction use and shall not contain any mark-ups that are unrelated to as-built corrections.

4. The following lists the record documents shall be as-built by Electrical Contractor:

   a. E-Series Drawings.

   b. Panelboard schedules.

   c. Conduit and Wire Routing Schedule.

      1) A copy of the Conduit and Wire Routing Schedule and electrical plans showing conduit routing shall be updated weekly by the Contractor. Progress payments will be withheld if during monthly checks it is found that the Contractor fails to maintain the Conduit Schedule updates.

   d. Lighting Schedule.

   e. Duct banks and their routing with offset measurement and indicate changes in depth. Duct bank elevations shall not be drawn or penciled in by hand. Provide CAD drawings of duct banks.

5. The following lists the record documents that shall be as-built by System Supplier to be maintained by Electrical Contractor:

   a. I-Series Drawings

   b. Instrumentation Index.

6. Record documents shall be kept current weekly with all "change orders," submittal modifications, and construction changes shown. Record Documents shall be subject to the inspection by the Engineer at all times, progress payments or portions thereof may be withheld if Record Documents are not accurate or current.

7. When documents are changed, they shall be marked with erasable colored pencils using the following coloring scheme:

   a. Additions - red

   b. Deletions - green

   c. Comments - blue

   d. Dimensions - black

8. Show the following on the Electrical (E-Series) Record Contract Drawings by dimension from readily obtained base lines:

   a. Exact location, type and function of electrical and instrumentation equipment and devices.

   b. Precise routing and locations of underground conduits, pullboxes, junction boxes, and appurtenances that make-up the raceway system.

   c. Show the dimensions, location and routing of electrical work, which will become permanently concealed.

   d. Show complete routing and sizing of any significant revisions to the systems shown.

9. Prior to acceptance of the work, the Contractor shall deliver to the Engineer one set of record full size drawings neatly marked accurately showing the information required above.

1.07 COORDINATION

A. The Contractor shall coordinate the electrical work with the other trades, code authorities, utilities, and the Engineer; with due regard to their work, towards promotion of a rapid completion of the project. If any cooperative work must be altered due to lack of proper supervision of such, or failure to make proper provisions, then the Contractor shall bear expense of such changes as necessary to be made in the work of others.

B. Manufacturer's directions and instructions shall be followed in all cases where such is not shown on the Contract Drawings or herein specified.

C. The electrical and instrumentation modifications and additions are to be made at facilities that need to remain powered at all times. The Contractor shall schedule all the required work with the Owner, including each shutdown period. Each shutdown shall be implemented to minimize disruption of the existing operations. Shutdowns may be required outside of normal working hours when necessary. The work to be provided under this Contract shall not disrupt any of the existing operations without prior approval.

1. The Contractor shall limit all unscheduled shutdown periods to less than 2 hours (120 minutes) and only with prior approval of the Owner.
2. The Contractor shall coordinate the shutdown and removal of the existing equipment with the Owner.
3. Carry out scheduled shut downs only after the time, date, and sequence of work proposed to be accomplished during shutdown has been favorably reviewed by the Owner. Submit shutdown schedule and plans at least 10 working days in advance of when the scheduled shutdown is to occur.
4. The Owner reserves the right to delay, change, or modify any shutdown at any time, at no additional cost to the Owner, when the risk of such a shutdown would jeopardize the operation of system.
5. Contractor is advised that during change out of existing equipment, Contractor is responsible to keep equipment running for all necessary station operation. The Contractor shall install temporary generators, motor controls, panelboards, power panelboards, wiring, etc. to keep all facility equipment powered and automatic controls functional.

D. The Contractor shall cease work at any particular point, temporarily, and transfer his operations to such portions of work as directed, when in the judgment of the Owner it is necessary to do so.

E. Prior to commencing construction, the General Contractor shall arrange a conference with the General Contractor, Electrical Contractor, System Supplier, Resident Engineer & Owner as well as all equipment and system suppliers vital to the current phase of work. During the meeting, the equipment supplier shall verify types, sizes, locations, installation requirements, controls and diagrams of all equipment furnished. The Equipment and System Suppliers shall, in writing, inform the Engineer that all phases of coordination of this equipment have been covered and if there are any unusual conditions, they shall be enumerated at this time.

F. It is the responsibility of the Contractor to make all equipment approval arrangements and scheduling with the power utility company connected with this project. Schedule within 30 days after award of contract all service installations and connections with the power and telephone utility. Lack of effort by the Contractor to properly schedule Utility service will not be considered valid justification for delays in project completion and no extension in contract time will be given.

G. The Contractor shall coordinate with Owner, witnessing Engineer and System Supplier to test the entire system.

H. No passwords shall be enabled on software or hardware provided for this project. All electronic disk copies provided to Owner shall not have any password protection enabled on them or the software. Software submitted with password protection will be removed by Owner and the Contractor will be back-charged for the cost thereof.

1.08 SUBMITTAL AND DRAWING REQUIREMENTS

A. General:

1. Submit shop documents and drawings for approval in accordance with this subsection and Section 01300.

2. Electrical submittals shall be submitted for favorable review by the Owner or Engineer per this subsection. They shall be complete giving all details of connections, wiring, instruments, enclosures, materials and dimensions. Standard sales literature will not be acceptable.

3. A copy of the appropriate Division Specification Sections, with addendum updates included and with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements.

   a. Check marks (√) shall denote full compliance with a paragraph as a whole. If deviations from the specifications are indicated and, therefore, requested by the Contractor, each deviation shall be underlined and denoted by a unique number in the margin to the right of the identified paragraph. The remaining portions of the

paragraph not underlined will signify compliance on the part of the Contractor with the Specifications.

b. The submittal shall be accompanied by a detailed, written justification for each numbered item explaining variance or non-compliance with specifications.

c. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no review.

4. The Contractor shall coordinate submittals and required meetings with the work, panel fabrication and testing, so that project will not be delayed. This coordination shall include scheduling the different categories of submittal, so that one will not be delayed for lack of coordination with another.

5. No material or equipment shall be allowed at the job site until the submittal for such items has been reviewed by the Engineer and marked "No Exceptions Taken" or "Make Corrections Noted."

6. The equipment specifications have prepared on the basis of the equipment first named in the Specifications. The Supplier shall note that the second named equipment, if given, is considered acceptable and equal equipment, but in some cases additional design, options, or modifications may be required, at no additional cost, to meet Specifications.

7. The decision of the Engineer governs what is acceptable as a substitution. If the Engineer considers it necessary, tests to determine equality of the proposed substitution shall be made, at the Contractor's expense, by an unbiased laboratory that is satisfactory to the Engineer.

8. No submittal documents shall be labeled as proprietary. Labeling documents as proprietary will be sufficient cause for rejection of entire submittal. The Owner reserves the right to copy or duplicate any and all portions of the documents provided for the project including copyrighted documents as desired.

9. Approval of submittals shall not relieve Contractor of their obligation to perform the work in strict accordance with this Contract and the Contract Documents or of their responsibility to provide a complete and reliable system.

B. The electrical submittals shall include but not be limited to data sheets and drawings for each product together with the technical bulletin or brochure. No FAX copies of documents are allowed. Color copies shall be provided when black and white copies do not show adequate clarity. The electrical submittals shall include:

1. Product (item) name used herein and on the Contract Drawings.

2. The manufacturer's model or other designation.

3. Tag name/number per the P&ID drawings, schedules, and indexes.

4. Index Binder Tab Dividers.

5. Detailed electrical one line, elementary control diagrams and interconnection diagrams showing all wiring requirements for each system.

6. Complete documentation with full description of operation.

7. Complete catalog cuts with full description of equipment. General sales literature will not be acceptable. The part or model number with options to be provided shall be clearly identified. Where more than one item or catalog number appears on a catalog cut, the specific item(s) or catalog numbers(s) proposed shall be clearly identified.

8. Location of assembly at which it is installed.

9. Input-output characteristics.

10. Range, size, and graduations as required.

11. Physical size with dimensions and mounting details. System Supplier submit a letter listing all instrumentation pipe sizes, pipe connections, flange types, and ANSI ratings signed by Contractor and System Supplier to certify coordination for proper installation prior to flow elements being purchased.

12. Enclosure fabrication and color.

13. Enclosure layout and elevation drawings to scale.

14. Quantity and quality requirements for electric power.

15. Materials of construction of components.

16. Nameplate schedule.

17. Interconnection diagrams.

18. Failure to provide submittals with heavy duty permanent plastic labeled index tabs may be grounds for immediate rejection without review.

19. Bill of Materials: A complete Bill of Materials list shall be provided at the inside of the front cover. The Contractor shall provide Bill of Material for electrical components formatted as shown in Appendix "A". A separate set of Material Listing forms shall be provided for the MCC, spare parts, and another listing all field equipment. Generic names or part numbers used by a distributor or Systems House are not acceptable; originating manufacturer's name and part number shall be listed.

20. A separate instrument data sheet shall be provided for each instrument per ISA S20 standards or approved equal. Data sheets shall be printed on blue or pink paper. Provide an index with proper identification and cross-referencing of each data sheet.

21. Submit USB electronic copies of all submitted drawing in AutoCAD format.

22. For each resubmittal, provide a copy of submittal comments and a separate letter, on Company letterhead, identifying how each submittal comment has been addressed in the resubmittal.

23. Electronic PDF version of submittals shall be provided with table of contents regardless of hard copy format of submittal. PDF shall be "bookmarked" at each index, subtab, copy of appropriate check-marked Specification Section, bill of materials, copy of submittal comments (for resubmittals), Contractor's response to submittal comments (for resubmittals), drawings, etc. Failure to bookmark PDF may be grounds for immediate rejection without review. Bookmarks shall not be out of order; the English description shall match that listed in the Submittal's Table of Contents.

24. Electronic submissions of submittals may be provided for submittals less than 40 pages and without drawings. Submittals equal to or over 40 pages or those that contain drawings shall be provided in a hardcopy format. Drawings shall be printed at 11 inches by 17 inches. Hardcopy submittals shall be provided in binders as specified herein. The Owner reserves the right to reject submittals that fail to be organized as described herein.

C. All drawings shall be generated with a computer utilizing the AutoCAD 2010 or later drafting package. Standard preprinted drawings simply marked to indicate applicability to the Contract will not be acceptable. Drawings shall be prepared in a professional manner and shall have borders and a title block identifying the project, system, drawing number, drawing title, AutoCAD file name, project engineer, date, revisions, and type of drawing. Drawings shall be no smaller than 11" x 17" and printed with a laser jet printer or plotted in ink on vellum. The lettering shall be legible and no smaller than 0.075 inch in height. Diagrams shall carry a uniform and coordinated set of wire colors, wire numbers, and terminal block numbers. A Drawing Index shall be provided that lists each Drawing title and drawing number. Each Drawing title and number shall be unique. The index shall not include drawings listed as "This Page Intentionally Left Blank". The shop drawings shall include:

1. Electrical one or three line diagrams detailing all devices associated with the power distribution system. The following applicable information or data shall be shown on the one- or three- line diagram: location, size and amperage rating of bus; size and amperage rating of wire or cable; breaker ratings, number of poles, and frame sizes; generator; automatic transfer switch; utility metering; voltage; amperage; number of wires and phases; fault interrupt ratings; ground size and connections; neutral size and connections; power fail and other protective devices; fuse size and type; panelboard; starters; contactor size and overload range; motor full load amperage of submitted motor and horsepower; rating for miscellaneous loads; etc. Submit equipment motor voltage, phase and full load amps provided for this project for verification of accuracy of submitted one line drawings.

2. Elementary diagrams shall be provided for all relay logic, power supplies, PLC I/O and other wiring. All elementary diagrams shall be drawn in EMP/EGP format and standards similar to those shown on the E-series elementary diagrams showing ladder rung numbers and coil and contact cross referencing numbers.

3. Enclosure and Elevation layout diagrams shall be provided to show all deadfront, front panel and backpan devices drawn to scale. Show fabrication methods and details; including material of construction, paint color, support and latching mechanisms, fans and ventilation system, and conduit entrance areas. Provide enclosures with removable metal filters.

4. Interconnection diagrams shall show for each piece of equipment all wiring between all devices, panels, cabinets, terminal boxes, control equipment, motor control centers and any other devices and equipment. An interconnection diagram shall be furnished for each electrical and instrumentation system, even if one was not shown explicitly on the Contract Drawings. Interconnection diagrams shall be prepared for all conduits listed in the Conduit and Wire Routing Schedule. Each interconnection diagram shall show the following as a minimum:

    a. Interconnect drawings shall be prepared for all equipment by the System Supplier.

    b. The diagrams shall be utilized by the electrician during all phases of installation and connection of all conductors to ensure coordination of equipment interconnect.

    c. The diagrams shall show wiring as field labeled at the end of the project when as-builts are submitted.

    d. Each wire labeling code as actually installed shall be shown. The wiring labeling code for each end of the same wire must be identical.

    e. All devices and equipment labeling codes shall be shown.

    f. All Interconnection wires listed in the Conduit and Wire Routing Schedule for each conduit shall be shown only on one interconnect drawing. Interconnection diagrams shall be of the continuous line type with identified lines. Diagrams of the wireless or wire schedule type are not acceptable. Bundled wires shall be shown as a single line with the direction of entry/exit of individual wires clearly shown.

    g. All terminations points on the diagram shall be shown with the actual equipment identification terminal number or letter. This identification of terminations includes terminal blocks, junction boxes, all devices, computer I/O points, etc. “??” in lieu of terminal number is unacceptable.

    h. Diagrams shall include raceway numbers, raceway size, raceway type, cable numbers, wire color code, and wire numbers.

i. Each wire size, and cable size and color code shall be shown. Each conduit with the conduit label and conduit size and wire fill shall be shown. Wire and cable routing through conduits, wireways, manholes, handholes, junction boxes, terminal boxes and other electrical enclosures shall be shown with the appropriate equipment labels. All spare wires, cable, and termination points shall be shown. Cable shields shall be shown.

j. Labeling codes for terminal blocks, terminals, wires, cables, panels, cabinets, instruments, devices, and equipment shall be shown. Place "øA", "øB", and "øC" label next to each breaker to identify phase connected to.

k. Schematic symbols shall be used for field devices, showing electrical contacts. Signal and DC circuit polarities shall be shown.

l. The diagrams shall show all other Contract and Supplier drawing numbers, for reference, that are associated with each device that is interconnected. Attached to each interconnect, a copy of all the support documents used in preparing interconnects shall be submitted. This includes current issues of panel schematics, elementary diagrams, panelboard schedules, conduit schedules, one-line diagrams, connection diagrams, terminal block diagrams, submittals, contract drawings, vendor drawings and all other data used to develop the interconnection diagram as noted in the "Reference Documents" corner of Interconnect Drawings.

m. Interconnects shall include list of all applicable reference drawings, request for clarifications, field instructions and change orders. All deletions and additions of equipment, wire and cables shall be clearly shown.

n. Field wiring shall not start before the Interconnection Drawing has been submitted by the Contractor and approved by the Owner.

o. Do not show the same wires or jumpers, or panel wiring on both the connection and interconnection diagrams. All jumper, shielding, and grounding termination details not shown on the connection diagrams shall be shown on the interconnection diagrams.

p. Interconnection diagrams shall be submitted and approved by Owner for each electrical and instrumentation system. The Contractor shall not pull in any wires into conduits that do not have approved interconnects. If the Contractor pulls in wire without Owner approval of associated Interconnect Drawings, the Contractor will not be reimbursed for labor for re-pulling in wires even if there was an error in wire fill or sizing. Also, if the Contractor pulls in wire without Owner approval of associated Interconnect Drawings, then all progress payments related to field wiring for that particular area of work will be withheld until approved Interconnect Drawings are in use.

q. All interconnection diagrams shall be prepared by a System Supplier under the supervision of or by a State of California Registered Electrical Engineer and shall bear that Engineer's professional stamp and signature for all Interconnection Drawings submitted for approval including as-builts and those used in the field installation.

r. Example format of Interconnection diagram is shown on Contract "E" Series Drawings or may be obtained from the Engineer.

s. Interconnect drawings submitted with wiring of a single conduit run separated onto multiple interconnect drawings will be rejected without review. A single conduit run with wiring shown on separate interconnect drawings will be allowed only after written approval is given by the Engineer for each conduit run prior to submitting the associated interconnect drawings.

t. Only field wiring between MCC, Panelboards, Control Panels, and other electrical and instrumentation devices or equipment shall be shown on interconnection drawings. No internal panel wiring shall be shown on interconnect drawings except jumper or other wiring to be installed in field by Electrical Contractor.

u. Interconnect Drawings along with the corresponding support documents shall be submitted in a separate submittal package. Interconnect drawings submitted with non-interconnect drawing packages will be rejected.

v. Interconnect drawings shall be prepared for all equipment by the System Supplier with the exception of the Telephone System and Security Alarm System who shall produce their own interconnect drawings.

w. Provide a notes section on each interconnect drawing. In the note section, list any variances from the Contract conduit schedule necessary for completing the interconnections. Change orders regarding wire fill, conduit schedule and errors in plans regarding conduits and wires will not be processed until interconnect drawings have been received for such work.

x. The field electrician shall mark-up all interconnection diagrams during installation to show accurate as-built wiring, conduits runs, terminations, etc. If interconnection drawings are not properly as-built, the Electrical Contractor will have cost deducted from the Contract for the Owner to field verify and prepare as-built interconnection drawings amount. The amount of the deduction shall be determined on a time and material basis. The cost of such work shall be $120.00 per hour plus expenses.

y. The System Supplier shall be responsible to collect all information necessary to complete each interconnection drawing. This includes making field trips to collect all terminal connection data for new and existing, MCCs, switchboards, panelboards, instruments, equipment and electrical panels.

z. An index of drawings shall be provided with each Interconnection submittal listing the unique drawing number and the description of the interconnect drawing (e.g. Drawing 4321-IC1004 Pump 1004 Interconnect Drawing).

aa. Provide conduit and interconnect drawing cross reference indexes. Interconnect Conduit Index shall list all conduits listed in the Conduit & Wire Routing schedule and its associated Interconnection Drawing number. An Interconnection Drawing Index shall list all Interconnection drawings and the conduits shown on that specific drawing. These two indexes shall be at the front of all interconnection drawing submittals.

5. Submit full size drawing of all nameplates and tags, as specified herein, to be used on project. The Engineer has the right to adjust nameplate engraving titles during submittals at no additional cost to the Owner. Submittal to include the following:

a. Dimensions of nameplate.

b. Exact lettering and font for each nameplate.

c. Color of nameplate.

d. Color of lettering.

e. Materials of construction.

f. Method and materials for attachment.

g. Drawing showing location of nameplates on each panel and enclosure.

6. Copying contract drawings and providing them as submittals will be considered unresponsive and the submittal will be rejected without review.

D. Each submittal shall be bound in a three ring binder, which is sized such that when all material is inserted the binder is not over 3/4 full. Binder construction shall allow easy removal of any page without complete manual disassembly; spiral ring type binders are not acceptable.

1. Each binder shall be appropriately labeled on the outside spine & front cover with the project name, contract number, equipment supplier's name, specification section(s), and major material contained therein.

2. An index shall be provided at the inside of the front cover. This index shall itemize the contents of each tab and subtab section. Also list the project name, contract number and equipment supplier's name, address, phone number, and contact person on the index page.

3. Field equipment shop documents, panel equipment shop documents, drawings, and bill of materials shall be grouped under separate tabs. Catalog cuts shall be ordered in the same sequence as their corresponding Contract specification subsection. Catalog cuts shall not be scattered throughout the submittal intermingled with other material cut sheets (i.e. do not submit cut sheet for specific size conduit followed by cut sheet for specific size wire,

and then cut sheet for different size conduit and different size wire. Group conduits together, group wires together, etc.

4. All copies shall be clear and legible. Data sheets shall be provided for each instrument, with an index and proper identification and cross-referencing.

5. Exceptions to the Contract specifications or drawings shall be clearly defined by the equipment supplier.

   a. Data shall contain sufficient details so a proper evaluation may be made by the Engineer. Contractor shall provide separate letter (located in the front of the submittal) detailing specific exceptions to the Contract Specifications or Drawings.

   b. Exceptions that are noted in the marked-up Drawings or Specifications, but not listed on the Exceptions/Clarifications letter, will be considered as non-responsive and not accepted as changes to the Contract Documents.

6. Request for information (RFIs) shall not be included in submittals. RFIs supplied with submittals will not be answered. RFIs shall be submitted following proper channels.

7. Resubmittals shall be provided with a copy of the previous submittal comments and a separate letter, on company letterhead, identifying how each submittal comment has been addressed in the resubmittal.

8. Drawings shall be submitted in a separate hole-punched binder that covers the entire 11” x 17” length of the Drawing:

   a. Shop Drawings with less than 20 sheets total in the submittal, may be provided in an 11½-inch by 17½-inch reinforced folder.

   b. All Interconnection Drawings or Shop Drawings of 20 sheets or more shall be provided in separate heavy duty three-ring binder to allow drawings to be easily removed. Binder shall be Cardinal D-Ring Easy Open Ledger Binder with locking D-Rings or approved equal.

   c. Failure to provide drawing submittal in correct binder format may be grounds for immediate rejection without review.

   d. Each drawing title block shall contain the English description name for drawing contents (i.e. Lift Pump No. 1 Interconnect Drawing) and drawing number. All pages and drawings in the submittal shall be numbered sequentially (with no number skipped) in lower right hand corner.

   e. Drawings that are "C" or "D" size shall be folded, with the title block visible and placed in reinforced clear plastic pockets.

E. Shop documents and drawings shall be submitted for all devices and components in the electrical system. The Contractor is notified that this is a “Fast Track” project and all electrical & instrumentation drawings shall be submitted in a timely manner as not to delay completion of the project.

1.09 SUPERVISION

A. The Contractor shall schedule all activities, manage all technical aspects of the project and attend all project meetings associated with this Section.

B. The Contractor shall supervise all work in this Division, including the electrical system general construction work, from the beginning to completion and final acceptance.

C. The Contractor shall supervise and coordinate all work in this Division to insure that each phase of the project, submittal, delivery, installation, and acceptance testing, etc., is completed within the allowable scheduled time frames.

D. The Contractor shall be responsible for obtaining, preparing, completing, and furnishing all paper work for this Section, which shall include transmittals, submittal, forms, documents, manuals, instructions, and procedures.

1.10 INSPECTIONS

A. All work or materials covered by the Contract documents shall be subject to inspection at any and all times by the Owner. If any material does not conform to the Contract documents, or does not have an "No Exceptions Taken" or "Make correction Noted" submittal status; then the Contractor shall, within three days after being notified by the Owner, remove the unacceptable material from the premises; and if said material has been installed, the entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the Contractor.

B. The Contractor shall give the Owner 10 working days' notice of the dates and time for inspection. Date of inspection shall be as agreed upon by both the Contractor and Owner.

C. Work shall not be closed in or covered over before inspection and approval by the Owner. All costs associated with uncovering and making repairs where non-inspected work has been performed shall be borne by the Contractor.

D. The Contractor shall cooperate with the Owner and provide assistance for the inspection of the electrical system under this Contract. The Electrical Contractor shall remove covers, provide access, operate equipment, and perform other reasonable work which, in the opinion of the Engineer, will be necessary to determine the quality and adequacy of the work.

E. Before request for final inspection is made, the Contractor shall submit to the Owner in writing, a statement that the Contractor has made his own thorough inspection of the entire project enumerating punch list items not complete and that the installation and testing is complete and in conformance with the requirements of this Division.

F. The Owner may arrange for a facility inspection by Cal-OSHA Consultation Service at any time. The Contractor shall make the necessary corrections to bring all work in conformance with Cal-OSHA requirements, all at no additional cost to the Owner.

G. Contractor will be Responsible for any Additional Cost for Overtime, Weekend Overtime or Differential Time, Expenses for Inspection of Defective Work that has to be re-inspected.

1.11 JOB CONDITIONS

A. The Contractor shall make all arrangements and pay the costs thereof for temporary services required during construction of the project, such as temporary electrical power and telephone service. Upon completion of the project, remove all temporary services, equipment, material and wiring from each site as the property of the Contractor.

B. The Contractor shall provide adequate protection for all equipment and materials during shipment, storage and construction. Equipment and materials shall be completely covered with two layers of plastic and set on cribbing six inches above grade so that they are protected from weather, wind, dust, water, or construction operations. Equipment shall not be stored outdoors without the approval of the Owner. Where equipment is stored or installed in moist areas, such as unheated buildings, provide an acceptable means to prevent moisture damage, such as a uniformly distributed heat source to prevent condensation.

C. The elevation of the project site is shown on Contract Civil Drawings. All equipment shall be derated, as recommended by the manufacturer or in accordance with ANSI C37.30.

D. The normal outdoor, not in direct sunlight, ambient temperature range of the job site will vary between 0 to 110 degrees Fahrenheit. All equipment shall be rated to operate in these temperature ranges or provisions for adequate heating and cooling shall be installed, at no additional cost to Owner.

E. The jobsite is prone to vandalism and theft. Contractor shall be responsible for securing all materials and equipment against theft and vandalism for the duration of the project.

F. Contractor & Subcontractors shall utilize temporary services during construction of the project. No Contractors shall utilize building power, receptacles, etc. during construction.

1.12 MEASUREMENT AND PAYMENT

A. No measurement will be made. Full compensation for conforming to these requirements, including all the labor, materials, tools, equipment, incidentals and for doing all the work involved in this section necessary for completion of the work,

as shown on the Contract Plans, as specified in the Standard Specifications, these special provisions and as directed by the Engineer, shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed.

1.13 CHANGE ORDER PRICING

A. All change order pricing by Contractor or System Supplier shall be broken out into the following minimum categories:

1. Labor per hour listed per discipline, i.e. Engineer, Drafter, Estimator, Secretarial, etc.
2. Materials and equipment itemized per component and quantity.
3. Rentals, travel, per Diem, etc.
4. Tax.
5. Shipping.
6. Overhead and profit.

B. Lump sum change order pricing is not acceptable.

C. If Contractor or System Supplier refuse to provide a change order with broken out pricing, the Engineer reserves the right to obtain independent estimates from other Contractors or System Suppliers. The Contractor or System Supplier who refused to provide the change order with broken out pricing, will be charged for the preparation of the independent estimates.

PART 2 - MATERIALS

2.01 QUALITY

A. It is the intent of the Contract specifications and drawings to secure the highest quality in all materials and equipment in order to facilitate operation and maintenance of the facility. All equipment and materials shall be new and the products of reputable suppliers having adequate experience in the manufacture of these particular items. For uniformity, only one manufacturer will be accepted for each type of product.

B. All equipment shall be designed for the service intended and shall be of rugged construction, of ample strength for all stresses which may occur during fabrication, transportation, erection, and continuous or intermittent operation. All equipment shall be adequately stayed and braced and anchored and shall be installed in a neat and workmanlike manner. Appearance and safety, as well as utility, shall be given consideration in the design of details. All components and devices installed shall be standard items of industrial grade, unless otherwise noted, and shall be of sturdy and durable construction suitable for long, trouble free service. Light duty, fragile and competitive grade devices of doubtful durability shall not be used.

C. Products that are specified by manufacturer, trade name or catalog number established a standard of quality and do not prohibit the use of equal products of other manufacturers provided they are favorably reviewed by the Engineer prior to installation.

D. Underwriters Laboratories (UL) listing is required for all substituted equipment when such a listing is available for the first named equipment.

E. When required by the Contract specifications or requested by the Engineer, the Contractor shall submit equipment or material samples for test or evaluation. The samples shall be furnished with information as to their source and prepared in such quantities and sizes as may be required for proper examination and tests, with all freight and charges prepaid. All samples shall be submitted before shipment of the equipment or material to the job site and in ample time to permit the making of proper tests, analyses, examinations, rejections, and resubmissions before incorporated into the work.

F. All equipment shall be designed and constructed so that in the event of a power interruption, the equipment specified hereunder shall resume normal operation without manual resetting or operator interaction when power is restored.

G. Signal transmission from remote or field electric and electronic devices shall be 4-20 mA, sourced by a 24 VDC loop supply from the panel that is to receive the signal. Nonstandard transmission methods such as impulse duration, pulse rate, and voltage regulated will not be permitted except where specifically noted.

H. Outputs of equipment that are not of the standard signals as outlined, shall have the output immediately raised and/or converted to compatible standard signals for remote transmission.

I. It is the System Supplier's responsibility to visit jobsite to collect and document existing conditions and equipment device part numbers in order for all similar called out new equipment to match existing.

2.02 NAMEPLATES AND TAGS

A. EQUIPMENT EXTERIOR NAMEPLATES: Nameplate material shall be rigid laminated black phenolic with beveled edges and white lettering, except for caution, warning, and danger nameplates the color shall be red with white lettering. The size of the nameplate shall be as shown on the Drawings. No letters are allowed smaller than 3/16". All phenolic nameplates located outdoors shall be UV resistant. Securely fasten nameplates in place using two 316 stainless steel screws if the nameplate is not an integral part of the device. Epoxy cement or glued on nameplates will not be acceptable.

1. Each major piece of electrical equipment shall have a manufacturer's nameplate showing the Contract specified name and number designation, the manufacturer's name, model designation, part number, serial number, and pertinent ratings such as voltage, amperage, # of phases, range, calibration, etc.

2. For each device with a specific identity (pushbutton, indicator, field control station, disconnect switches, etc.) mounted on the exterior or deadfront of a piece of equipment, provide a nameplate with the inscription as shown in the Contract Documents. Where no inscription is indicated in the Contract Documents, furnish nameplates with an appropriate inscription providing the name and number of device.

3. For all receptacles and switches, provide a faceplate engraved or stamped with the panelboard and circuit number it is fed from. Also, include on faceplate or on a separate nameplate for each light switch identification use such as "OUTSIDE BUILDING LIGHTS", "PERIMETER LIGHTS", "MCC ROOM", etc.

4. All safety and disconnect switches shall have nameplates with ½" high letters and be engraved with designations as shown on one-line drawings.

5. Underground Pull Box and Vault Cover Identification: Engrave or bead weld pull box covers with minimum 1/4"thickness and 1/2" letters and covers shall be engraved with designations as shown on Contract drawings or as directed by Owner.

6. All subpanels shall be identified with an engraved phenolic label of the power source location feeding it (i.e. MCC-100, Panelboard LP-1, etc.).

7. Specific equipment fed from more than one feeder shall be properly identified ("Fed from Pedestal and the standby generator").

B. EQUIPMENT INTERIOR NAMEPLATES: Nameplate material shall be white plastic with black machine printed lettering as produced by a KROY or similar machine; except caution, warning, and danger nameplates shall have red lettering.

1. The size of the nameplate tape shall be no smaller than ½" in height with 3/8" lettering unless otherwise approved by the Engineer. Securely fasten nameplates in place on a clean surface using the adhesion of the tape. Add additional clear adhesive to hold the nameplate securely in place when necessary.

2. For each device with a specific identity (relay, module, power supply, fuse, terminal block, etc.) mounted in the interior of a piece of equipment provide a nameplate located above the device with the inscription as shown in the Contract Documents. Where no inscription is indicated in the Contract documents, furnish nameplates with an appropriate inscription providing the name and number of device used on the Submittal Drawings. Stamp the nameplates with the inscriptions as approved by the Engineer in the submittal.

3. Nameplates shall not be attached to wireway covers or to removable devices.

4. For all receptacles, provide nameplate tape identifying the panelboard and circuit number it is fed from.

C. EQUIPMENT TAGS: The Contractor shall attach a tag to the equipment (including instruments) with the same inscriptions as specified above in paragraph A. The tag shall be made from 316 stainless steel material and the size of the nameplate shall be no smaller than 3/8"h x 2"w with 3/16" machine printed or engraved lettering unless otherwise approved by the Engineer. The tag shall be attached to the equipment with 316 stainless steel 0.048 inch diameter wire of the type normally used for this purpose (catalog cut sheet shall be submitted). Stainless steel wire shall be crimp connected. Twisting ends together is not acceptable.

D. Engrave or machine print the tags with inscriptions as approved by the Engineer in the nameplate submittal.

E. Provide temporary labels for all instruments and devices immediately when installed. Temporary labels shall be provided with ½" letters minimum and labeled with P&ID tag number.

2.03 WIRE

A. This Section applies to all wires or conductors used internal for all electrical equipment or external for field wiring. All wires shall be properly fused or protected by a breaker at the amperage rating allowed by the NEC.

B. Material: Wire shall be new, plainly marked with UL label, gauge, voltage, type of insulation, and manufacturer's name. All wire shall conform to the following:

1. Conductors shall be copper, with a minimum of 97% conductivity.
2. Wire shall be Class B stranded. Solid wire conductor prohibited.
3. ASTM B8, soft drawn copper, maximum 12 months old.
4. Insulation of all conductors and cables shall be rated 600 volt.
5. Insulation type for conductors smaller than #6 AWG shall be moisture and heat resistant thermoplastic NEC Type THHN/THWN, rated 90 °C in dry locations and 75 °C in wet locations, or approved equal. Conductors #6 AWG and larger shall be XHHW insulation rated 90 °C in dry locations and 75 °C in wet locations.
6. Field wire minimum AWG sizes
   a. #12 for wires used for individual conductor circuits 480 volt and above. #12 for wires used for individual conductor circuits 100 volt and above, except for PLC I/O which may be #14 AWG.
   b. #14 for wires used for individual conductor circuits below 100 volt.
7. Non-field or panel wire minimum AWG sizes if properly protected by fuse or breaker:
   a. #14 for wires used for individual conductor circuits 100 volt and above.
   b. #18 for wires used for individual conductor circuits below 100 volt and above if properly protected by fuse or breaker.
8. Instrument Wiring
   a. Field: Instrument cables shall have 600V tray cable rated insulation and 100% individual shielded twisted pair #16 conductors with drain wire. Single twisted shielded pair (T.S.P.R.) Cables shall be Belden, Manhattan, or approved equal.
   b. Non-Field: Instrument cables shall have 300V rated insulation and 100% individual shielded twisted pair #18 conductors with drain wire. Single twisted shielded pair (T.S.P.R.) cables shall be Belden, Manhattan, or approved equal.
   c. General: Instrument cables shall have 600V rated insulation and 100% individual shielded twisted pair #16 conductors with drain wire. Single twisted shielded pair (T.S.PR.) cables shall be Belden, or approved equal.

C. Wire Marking

1. Wire Identification: All wire terminations including field interconnect as well as wiring interior MCC cubicles, switchboard, panels, equipment, junction panels and boxes shall be identified with machine printed labels. Hand lettered labels are not acceptable and shall be replaced at the

Contractor's expense. The wire identification code for all field interconnect and panel interior wiring, shall be similar to the designations shown on the Contract example drawings.

2. Wire Labels: The labels shall be machine printed with indelible ink, heat-shrink type, capable of accepting a minimum of 23 machine printed characters per sleeve, label by Brady "Bradysleeve" or equal. Labeling shall be neatly installed for visibility and shall be clearly legible. Each wire and conductor shall be labeled with wire label, as shown on approved loop, elementary and interconnect Drawings. Labels shall not be wrap-around or Snap-On type.

3. Where there is insufficient space for labels on locally interconnected neutral wires such as jumpers between adjacent auxiliary relay coil neutral terminals, these labels may be omitted. "Locally" is defined as wires no longer than 8".

4. Wire labels for lighting and receptacles shall be installed and consist of the panelboard and circuit number (i.e., Panelboard "LP100", circuit breaker #3 would have wire label line "LP100-L3" and neutral "LP100-N3").

5. All spare wires shall be labeled with equipment number followed by X1, X2, etc. (i.e. P11001-X1 for first spare wire).

6. All control and signal wiring terminations shall have the correct wire label applied prior to making connection.

D. Special Purpose Wiring

1. Manufacturer Supplied Cables (MNFR CBL): Cables and wiring for special systems shall be provided by the manufacturer with the equipment and installed per the manufacturer's recommendations.

E. Color Code

1. Color code of all wire shall conform with the following table.

WIRES COLOR CODE TABLE

Description	Phase/Code Letter	Field Wire or Tape Color	Non-Field Wire Color
480 V, 3 Phase	A	Brown	Brown
	B	Orange	Orange
	C	Yellow	Yellow
	N	Grey	Grey
240 V or	A	Black	–
208 V, 3P	B	Red (Orange if high leg)	–
	C	Blue	–
240 / 120 V, 1 P	L1	Black	Black
	L2	Red	–

Description	Phase/Code Letter	Field Wire or Tape Color	Non-Field Wire Color
24 V Positive 24 V Negative	24P 24N	Pink Black/White Stripe	Pink Black/White Stripe
AC Control DC Control		Violet Light Blue	Red (Yellow for Foreign Circuits) Light Blue
Neutral Ground	N G	White Green	White Green
Shielded Pair	+ –	Black White	Black White

2. No other colors shall be used without prior approval of the Owner.
3. The same color shall be connected to the same phase throughout the panel.
4. All wires shall be properly fused or protected by a breaker at the amperage rating allowed by the NEC.
5. Neutral used for AC Control shall be white.
6. Phase color insulation shall be provided for complete length of #8 wire or smaller, colored phase tape is not allowed on #8 and smaller wire.

2.04 COMPONENTS

A. Fuses

1. Fuses used in circuits 200 VAC and above shall be time-delay type FNQ or approved equal, 13/32” x 1-1/2”, and have an interrupting rating of 42,000 AIC at 500 VAC. Fuse holders shall be of the barrier type and rated 600 VAC.
2. Fuses used in 120 VAC shall be time-delay type MDL or approved equal, 1/4” x 1-1/4”, and have a rating of 250 VAC. Fuse-holders shall be of the terminal block type.
3. Fuses used in signal and 24 VDC circuits shall be fast acting type GMA or approved equal, 5 mm x 20 mm/1/4” x 1-1/4”, and have a rating of 250 VAC. Fuse-holders shall be of the terminal block type.
4. Fuses shall be sized in conformance with the NEC.
5. Fuse Blocks shall be Allen-Bradley

B. Switches and Pushbuttons

1. Switches and pushbuttons for general purpose applications shall be water and oil tight as defined by NEMA 4X, corrosion resistant as defined by NEMA ICS 6-110.58, U.L. listed, standard 30 mm diameter, with round

plastic clamp ring. Switches shall be Allen-Bradley 800H, or approved equal.

2. Switches and pushbuttons shall have contacts rated 10 amperes continuous and 600 VAC.

3. Manufacturer's standard size legend plates shall be provided and engraved to specify each switch and pushbutton function. The legend plate color shall be black.

4. Selector switch handles and pushbutton caps shall be black.

5. Selector switches for hand-off-auto (HOA) applications shall have the hand position to the left, off in center, and auto in the right position.

6. Potentiometer be 10kohm, manual single turn potentiometer.

7. On/Off selector switches shall have the "ON" position to the right.

8. Lockout stop shall be a pushbutton with red cap and pad locking assembly for pushbutton.

C. Relays and Timers

1. GENERAL: Relays and timers shall be provided with N.O. or N.C. contacts as shown on the Contract drawings. All spare contacts shown shall be provided. Contacts shall be rated 10 amps minimum at 120 VAC, 60 Hz unless otherwise stated. Supply power or coil voltage shall be 120 VAC unless shown otherwise on the Contract drawings. Relays and timers shall be designed for continuous duty. All relays shall be U.L. listed. The following is a summary of abbreviations associated with relays and timers:

CR	–	Control relay
TR	–	Timing relay
TDOE	–	Time delay on energization
TDOD	–	Time delay on de-energization

2. Control relays (CR) shall be plug-in type with indicating lights and clear see-through sealed or enclosed housing to exclude dust. Sockets for plug-in relays shall be standard industrial blade type with barrier pressure screw terminals. Provide Allen-Bradley, IDEC or approved equal. Two form-C contacts (minimum) shall be provided on each relay.

3. Time delay relays (TR) on energization or de-energization shall be solid state plug-in relays with a timer adjustable over the range 1 second to 3 minutes unless other ranges are indicated or required. Provide LED timer energized indicator lamp. Sockets for plug-in timers shall be standard industrial type with barriered pressure screw terminals. Time delay relays shall be IDEC RTE, SSAC TD, or approved equal.

D. Indicating Lights

1. Indicating Lights for general purpose applications shall be water and oil tight as defined by NEMA 4X, corrosion resistant as defined by NEMA ICS

6-110.58, U.L. listed, High intensity multi-chip LEDs, full voltage (unless shown otherwise), standard 30 mm diameter, with round plastic lens. Indication lights shall be Allen-Bradley 800H, or approved equal.

2. Manufacturer's standard size legend plates shall be provided and engraved to specify each light's function. The legend plate color shall be black.

3. Indicating lights designated "PTT" shall be provided with a push-to-test switch and wiring.

E. Circuit Breakers

1. Circuit breakers shall be of the indicating type, providing ON, OFF and TRIPPED positions of the operating handle. Circuit breakers shall be quick-make, quick-break, with a thermal-magnetic (TM) action or Motor Circuit Protectors (MCP) as shown on One-Line Diagrams. Circuit breakers feeding Soft Starters or VFDs shall have true adjustable long, short and instantaneous trip units.

2. Main Circuit breakers shall be the bolted on type. The use of tandem or dual circuit breakers in a normal single-pole space to provide the number of poles or spaces specified are not acceptable. All multiple-pole circuit breakers shall be designed so that an overload on one pole automatically causes all poles to open. Main Circuit breakers and motor circuit protectors shall be manufactured by Eaton, G.E., ITE, or approved equal.

3. Each 480 volt or 240V circuit breaker shall have a minimum interrupting capacity of 35,000 amperes. Each 120 volt breaker shall be rated for a minimum 10,000 amperes interrupting capacity. Breakers shall be sized as shown on Drawings and as necessary for the supplied equipment.

4. Fused disconnects shall not be used in place of breakers.

5. Breakers shall be sized and have a minimum interrupting capacity as shown on Drawings and as required for the supplied equipment.

6. All breakers shall be supplied with the correct sized copper only lugs for wire sizes as listed in "Conduit & Wire Routing Schedule". Provide larger frame breaker or lug adapters as necessary when connecting to the listed oversized wire or as required for the horsepower of the supplied equipment.

F. Terminal Blocks:

1. General

a. Terminal blocks to be screw type, 6mm spacing, 600 volt, minimum rating of 30 amps, and mounted on DIN rail. DIN rail shall be same type as used for the relays. Install an extra DIN rail on each type of terminal strip with 20% spare terminals for future additions.

b. Provide terminal blocks with "follower" plates that compress the wires and have wire guide tangs for ease of maintenance. Terminal blocks that compress the wires with direct screw compression are

unacceptable. All power, control and instrument wires entering and leaving a compartment shall terminate on terminal blocks with wire numbers on terminals and on both ends of the wires.

c. Terminal Tags and Markers: Each terminal strip shall have a unique identifying alphanumeric code at one end. Numbers shall be assigned to all blocks except grounding blocks. Fuse blocks shall be assigned unique tag numbers such as FU1, FU2. No two fuses shall be assigned the same tag number. Terminal blocks are to be labeled to match the wire landed.

d. Terminal blocks shall be physically separated into groups by the level of signal and voltage served. Power and control wiring above 100 volts shall have a separate group of terminal blocks from terminal blocks for wiring below 100 volts, intermixing of these two types of wiring on the same group of terminal blocks is not allowed.

e. Provide a ground terminal or connection point for each grounding conductor.

f. Provide a separate terminal block for every two neutral terminations or as coordinated with the interconnect diagrams.

g. All Terminal blocks fuse blocks, barriers, etc. shall be Allen Bradley or approved equal.

2. Power Termination Blocks shall be rated for 600V main power connection. The power termination blocks shall be rated to accept Copper or Aluminum cable rated as shown on Contract one-line diagrams. The power termination block shall be capable of being mounted anywhere in a termination box. Each termination block shall be provided with lug shield to prevent contact with power connections. The power termination blocks shall be Connectron or approved equal.

2.05 CONTROL PANEL

A. Modify existing control panel and autodialer for callout on new alarms. Provide other devices for a complete and operational system.

1. All wiring from the control unit terminals (including spares) shall be wired to interface terminal blocks. Direct field wiring to autodialer and other control panel devices is not allowed.

2.06 CONDUIT, RACEWAYS, AND WIREWAYS

A. General: Conduit, raceways, wireways, wiring methods, materials and installation shall meet all requirements of the NEC, be UL labeled for the application, and meet the minimum following specifications:

1. All wiring shall be installed in conduits, raceways, or wireways when interconnecting equipment and devices.

2. The Contractor shall use special conduit, raceways, wireways, construction methods, and materials as shown on the Contract drawings; which shall take precedence over any general methods and materials specified in this Section.

3. The minimum size conduit shall be ¾-inch unless indicated otherwise on the Drawings or for special connections to equipment.

4. Conduit stubs for future use shall be capped with coupling, nipple, plug, and cap and each end identified with conduit labels.

5. Conduits to be abandoned that protrude above graded shall be cut flush and filled with grout

6. Conduits shall not be filled to more than 50% of their total cross – sectional area.

7. Conduits entering enclosures shall be fitted with insulated grounding bushing; O-Z "HBLG", Appleton "GIB", or approved equal. All grounding bushings shall be tied to the grounding system with properly sized bonding conductors per the NEC code.

8. Conduit drains shall be installed with GRS-PVC condulets-T with 316 Stainless Steel Universal Conduit Drain, Appleton ECDB38 or approved equal. Install in conduit locations where condensation may form.

B. Conduit Marking

1. All conduits listed in the “Conduit and Wire Routing Schedule” shall have conduit tags at both ends of each conduit segment. This includes all conduits in pullboxes and vaults.

2. Tag material shall be aluminum or brass with machine stamped lettering. The size of the tag shall be 2” diameter. No letters are allowed smaller than 7/16”. Tags shall be heat and UV resistant, stain proof, electrically non-conductive and non-corroding. Securely fasten tags in place using 316 stainless steel 0.048 inch diameter wire of the type normally used for this purpose (catalog cut sheet shall be submitted). Stainless steel wire shall be crimp connected. Twisting ends together is not acceptable. Engrave the tags, on both sides, with the conduit number as listed in the Conduit and Wire Routing Schedule on the Contract “E”-series Drawings. Labeling shall be neatly installed for visibility and shall be clearly legible. Conduit tags shall be Brady Custom B-1, or approved equal.

3. Prior to encasement, concealment, backfilling of conduits, temporary conduit labels shall be provided at each end of conduit. Temporary conduit labels shall have ½-inch (minimum) lettering at all transition points. After encasement and concealment temporary conduit labels shall be placed at each exposed end.

C. Galvanized Rigid Steel Conduit (GRS)

1. Rigid steel conduit, couplings, bends and nipples shall be in accordance with ANSI C80.1 and UL-6.
2. Hotdip galvanized inside and outside after fabrication and then coated with a zinc bichromate finish.
3. Minimum trade size – three-quarters inch (¾”) unless otherwise shown on Contract Drawings.
4. Conduits entering enclosures shall be fitted with insulated grounding bushing; O-Z "HBLG", Appleton "GIB", or approved equal. All grounding bushings shall be tied to the grounding system with properly sized bonding conductors per the NEC code.
5. Galvanized rigid steel factory elbows for indoor 90 degree transitions.
6. EMT or IMC is not considered an equivalent to GRS.
7. GRS conduit is allowed only when specifically called out in the “Conduit and Wire Routing Schedule”.

D. Galvanized Rigid Steel Conduit – PVC Coated (GRS-PVC)

1. Standard weight, galvanized conduit with a 40-mil thick polyvinylchloride coating bonded to both the outside and urethane interior coating. Conduit shall be hot-dip galvanized conforming to NEMA RN 1. GRS-PVC conduit to be Robroy Plasti-bond Red, Perma-Cote, or approved equal.
2. Provide PVC coated galvanized rigid steel factory elbows for 90 degree transitions.
3. Fittings shall be hot dipped galvanized steel or galvanized cast ferrous metal with a PVC 40 mils thick coating. Provide threaded-type fittings, couplings, and connectors; set-screw type, threadless and compression-type are not acceptable. Fittings shall be Robroy Liquitite coated fittings or approved equal.
4. All junction boxes shall be galvanized with exterior surfaces PVC coated to 40 mils thickness except where 316 stainless steel boxes are called out.
5. Conduits entering enclosures shall be fitted with insulated grounding bushing; O-Z "HBLG", Appleton "GIB", or approved equal. All grounding bushings shall be tied to the grounding system with properly sized bonding conductors per the NEC code.
6. Support channel and pipe straps shall be PVC coated. Exposed metal/nuts, all-thread rod shall be 316 stainless steel.
7. PVC coating patching material shall be as provided by the manufacturer.
8. PVC coated Aluminum conduit is not acceptable.

E. PVC Conduit (PVC-40 OR PVC-80)

1. Shall be high impact polyvinylchloride suitable for use underground, direct burial and for use with 90 C wires, and shall conform to UL 651. PVC conduits shall be UL listed and labeled for “direct” burial.

2. A copper bonding conductor shall be pulled in each raceway and bonded to equipment at each end with approved lugs.

3. Bends, elbows, and risers shall be made with PVC coated galvanized rigid steel (GRS-PVC) conduit using threaded adapters. Bond each metallic portion to each other and to equipment connected at each end of conduit run.

4. Risers shall be made with PVC coated galvanized rigid steel (GRS-PVC) conduit using threaded adapters. Bond each metallic portion to each other and to equipment connected at each end of conduit run.

5. PVC fittings shall have watertight solvent-weld-type conduit connections.

6. PVC conduit shall be stored on a flat surface and shielded from the sun.

7. PVC conduit shall not be used above grade.

F. Liquid Tight Flexible Metal Conduit (FLEX)

1. Minimum trade size one-half inch (1/2").

2. All flex conduits shall be metallic with water tight outer jackets.

3. Connectors:

   a. NON-NEMA 12 AREA: PVC coated metallic with insulated bushings.

   b. NEMA 12 AREA: Metallic with insulated bushings.

4. Final connections to vibrating equipment such as motors and fans shall be made with flexible conduits.

5. Flexible conduit lengths shall not be greater than 36 inches.

6. Flexible metallic conduit shall not be considered as a ground conductor, install a separate wire for equipment bonding.

7. Flexible conduit shall only be installed in exposed or accessible locations.

8. Flexible conduits shall be used for conduit coupling to all vibrating and shifting equipment.

G. Pull Rope

1. Provide 1/2 inch wide, polyester pull tape rated 1250 pounds tensile strength in each empty conduit more than 10 feet in length. Pull tape is synonymous with pull rope. Pull tape shall be printed with sequential footage. Pull tape to be installed underground spare conduits. Pull tape shall be Neptco Muletape WP1250P or approved equal.

H. Warning Tape

1. Detectable plastic tape shall be colored for particular underground service, 3-inch minimum width, utilize tape made of material resistant to corrosive soil. Tape shall have aluminum backing to facilitate locating it underground using a non-ferrous locator. Use red tape for "Electric" service and orange tape for "Communication" service. Use tape with printed wording listing type of service. Manufacturers and types: Seton, Blackburn, Griffolyn Co., Terra-Tape, Brady, or equivalent.

2.07 WIRING DEVICES

A. Boxes

1. Device boxes shall be of zinc-galvanized steel type with shape and size best suited for the particular application, rated for the location installed, and shall be supported directly to structure by means of screws, anchors, or bolts.

2. Box dimensions shall be in accordance with size, quantity of conductors, and conduit clearances per NEC articles 314 requirements.

3. Non-Weatherproof Boxes - Surface boxes shall be cast ferrous, deep FD type with threaded hubs.

4. Weatherproof (WP) Boxes - PVC-coated cast ferrous boxes may be used in place of 316 stainless steel boxes, except where boxes contain devices on cover. Boxes shall be deep, FD type with threaded hubs or 316 stainless steel with watertight Myers hubs. Single gang boxes shall have cast hubs.

B. Switches

1. General purpose switches shall be manufactured in accordance with UL 20. Switches shall be one pole rated, 20 amps, at 277 VAC. Bodies shall be of ivory phenolic compound supported by mounting strap having plaster ears. Switches shall have copper alloy contact arm with silver cadmium oxide contacts. Switches shall have slotted terminal screws and a separate green grounding screw. Furnish Hubbell 1221, Leviton 1221, or approved equal.

C. Receptacles

1. General purpose receptacles shall be duplex and rated 20 amps, 120 VAC, 2 pole, 3 wire grounding, NEMA 5-20R configuration, specification grade, and side wired to screw terminals. Face color shall be white or ivory. General purpose receptacles shall be Leviton 5362, Bryant, Hubbell, or approved equal.

2. GFI (ground fault circuit interrupting) receptacles shall be used in all boxes shown as weatherproof. GFI receptacles shall be duplex, 20A, 120V, with "test" and "reset" buttons with shallow design for mounting and standard screw terminals for direct wiring. Receptacles shall be designed, manufactured, and tested to prevent nuisance tripping from voltage spikes, RFI, EMI, or electronic component failures. Chaining multiple receptacles

from one GFI unit is not acceptable. GFI receptacles shall be Leviton 6899, Arrow-Hart or approved equal.

3. Twist lock receptacles shall be rated 20 amps, 120 VAC, 2 pole, 3 wire grounding, NEMA L5-20R configuration, UL listed, certified to Type 4X, back wired to screw terminals. Receptacles with safety shroud shall be NEMA 4X rated and have cover with lockout/tagout provisions. Provide matching plug and box adapters for a complete and operable system. Twist-lock receptacle shall be Hubbell Watertight Safety-Shroud Twist-Lock series with matching plug, receptacle, inlet, box adapters, or approved equal.

D. Device Plates and Covers

1. General purpose device plates and covers shall be 316 stainless steel. Plates or covers shall be attached with 316 stainless steel screws. Circuit breaker number and panelboard name shall be stamped on each cover.

2. PVC coated device boxes shall have PVC-coated gasketed covers.

3. Weatherproof switch, outlet, and receptacle boxes shall be fitted with gasketed covers rated for wet locations in accordance with NEC 404.4.

4. Weatherproof switch, outlet, and receptacle boxes shall be fitted with cast aluminum gasketed cover rated for wet locations. Each receptacle access cover shall have a gasketed spring door to maintain the weatherproof integrity with plug inserted in accordance with NEC 406.9 for unattended locations. Final decision of type of access cover for specific location shall be per Engineer. Screws and hinge springs shall be 316 stainless steel. Receptacles located outside shall have tumbler key lock.

5. Weatherproof access covers shall be Hubbell, Crouse-Hinds, or TayMac Safety Outlet Enclosures, or approved equal.

6. Receptacle & light switch plates shall be stamped or engraved as specified in section Nameplates and Tags.

2.08 FIELD DEVICES

A. Differential Pressure Switch

1. Differential Pressure switch shall be Form C, rated minimum of 10 amps @ 120VAC. Differential Pressure switch shall consist of a pressure sensing mechanism and the switch itself enclosed in an explosion-proof housing with ranges as listed in the Device Index. Differential Pressure switch shall be of the diaphragm type. Differential Pressure switch shall be equipped with two independent setpoint adjustments (trip & reset setpoints) settable from exterior of unit. Differential Pressure switch shall have external set point screw for adjusting setpoint. Differential Pressure switch shall be UL listed. The pressure switch shall be Dwyer Instruments 1950G series; Square “D” or approved equal.

2.09 GROUNDING SYSTEM

A. Ground clamps shall be bolt-on type as manufactured by ILSCO type AGC, O-Z Gedney Type GRC, Burndy Type GAR or GP, or approved equal.

B. All ground rod, pipe, and steel plate and buried bond connections shall be made by welding process equal to Cadweld.

C. Ground buses shall be provided in all electrical enclosures. Each ground bus shall be sized as shown on the Contract drawings or specified herein. The ground bus shall be adequately sized for the connection of all grounding conductors required per NEC. Screw type lugs shall be provided on all ground busses for connection of grounding conductors.

D. Each ground bus shall be copper. Screw type fasteners shall be provided on all ground busses for connection of grounding conductors. Ground bus shall be a Challenger GB series, ILSCO D-167 series, or approved equal.

E. Attachment of the grounding conductor to equipment or enclosures shall be by connectors specifically provided for grounding. Mounting, support, or bracing bolts shall not be used as an attachment point for ground conductors.

F. All raceway systems, supports, enclosures, panels, and equipment housings shall be permanently and effectively grounded.

G. One side of the secondary on all transformers shall be grounded.

H. The system neutral (grounded conductor) shall be connected to the system's grounding conductor at only a single point in the system. This connection shall be made by a removable bonding jumper sized in accordance with the applicable provisions of the National Electrical Code if the size is not shown on the Drawings. The grounding of the system neutral shall be in the enclosure that houses the service entrance main over-current protection.

I. The system neutral conductor and all equipment and devices required to be grounded by the National Electrical Code shall be grounded in a manner that satisfies the requirements of the National Code.

J. Grounding conductors shall be sized as shown on the Plans or in accordance with NEC Table 250.122, whichever is larger.

K. Grounding and bonding wires shall be installed on all conduits with grounding bushings, expansion joints and for continuity of raceways transitions. Bonding wires at endpoints shall be connected to enclosure ground bus or equipment grounding lug.

L. Conduit grounding bushings shall be installed on all metallic conduits. Conduit grounding bushings shall be set screw locking type electra-galvanized malleable

iron with insulation collar and shall be provided with a feed through compression lug for securing the ground bonding wire. Ground bonding wire shall be bare wire and shall be sized per NEC.

M. All receptacles shall have their grounding contact connected to a grounding conductor.

N. Branch circuit grounding conductors for receptacles, or other electrical loads shall be arranged such that the removal of a lighting fixture, receptacle, or other load does not interrupt the ground continuity to any other part of the circuit.

O. Negative side of all VDC power supplies shall be grounded.

P. All metal panel doors shall be installed with ground straps, including all MCC bucket doors.

Q. Ground all swinging gates and fences using UL approved ground clamps specifically designed for the grounding purpose. Strap metal is not acceptable for grounding.

PART 3 - MATERIALS

3.01 ELECTRICAL WORKMANSHIP

A. All work in this Section shall conform to the codes and standards outlined herein.

B. The Electrical Contractor shall employ personnel that are skilled and experienced in the installation and connection of all elements, equipment, devices, instruments, accessories, and assemblies. All installation labor shall be performed by qualified personnel who have had experience on similar projects. Provide first class workmanship for all installations.

C. Ensure that all equipment and materials fit properly in their installations.

D. Perform any required work to correct improper installations at no additional expense to the Owner.

E. The Engineer reserves the right to halt any work that is found to be substandard or being installed by unqualified personnel.

3.02 ELECTRICAL CONSTRUCTION METHODS, GENERAL

A. All wiring shall be neatly bundled and laced with plastic tie-wraps, anchored in place by round-head 316 stainless screw attached retainer. Where space is available, such as in electrical cabinets, all wiring shall be run in slotted plastic wireways or channels with dust covers. Wireways or channels shall be sized such that the wire fill does not exceed 50%. Wires carrying 100 volts and above shall be physically separated from lower voltage wiring by using separate bundles or wireways with sufficient distance to minimize the introduction of noise, crossing only at 90 degree angles. Tie-wraps shall be T & B TY-RAP's, or approved equal.

B. Where wiring crosses hinged surfaces, provide a "U" shaped hinge loop protected by plastic spiral wrap. The hinge loop shall be of sufficient length to permit opening and closing the door without stressing any of the terminations or connections.

C. All devices shall be permanently labeled and secured in accordance with subsections labeled "NAMEPLATES AND TAGS".

D. All field wires and panel wires have wire markers as specified in the "WIRE" subsection.

E. All components associated with a particular compartment's or enclosure's function shall be mounted in that compartment or enclosure.

F. Spacing and clearance of components shall be in accordance with UL, and NEC standards.

G. Wires shall not be spliced except where shown. Devices with pigtails, except lighting fixtures, shall be connected at terminal blocks. Equipment delivered with spliced wires shall be rejected and the Contractor required to replace all such wiring, at no additional cost to the Owner.

H. No wires shall be spliced without prior approval by the Engineer.

I. Where splices are allowed or approved by the Engineer they shall conform with the following:

1. Splices of #10 and smaller, including fixture taps, shall be made with see-thru nylon self-insulated twist on wire joints; T & B "Piggys", Ideal "Wing Nut" or approved equal.

2. Splices of #8 and larger shall be double crimped splices, or approved equal, insulated with heat shrink tubing, or approved equal.

3. Splices in underground pullboxes shall be insulated and moisture sealed with 3M "Scotchcast" cast resin splice kits and shall have a date marking for shelf life. Do not use splice kits with a date marking for shelf life that has expired.

4. Wire splicing devices shall be sized according to manufacturer's recommendations.

5. Tape on splices shall not be allowed.

6. Splices for motor leads shall be made with T&B MSC series splice kit, or approved equal.

J. Tapes shall conform to the requirements of UL 510 and be rated: 105 degrees C, 600V, flame retardant, hot and cold weather resistant. Vinyl plastic electrical tape shall be 7 mil black. Phase tape shall be 7 mil vinyl plastic, color coded as specified. Electrical insulation putty shall be rubber based, elastic putty in tape form. Varnished cambric shall not be used.

K. Connections to terminals shall be as follows:

1. Use connector or socket type terminals furnished with component.

2. Connections to binding post screw, stud or bolt use:

a. For #10 and smaller wire, T & B "Sta-Kon", Buchanan "Termend" or approved equal, self-insulated locking forked tongue lug.

b. For #8 to #4/0 wire, T & B "Locktite", Burndy QA or approved equal lug of shape best suited.

3. Use ratchet type crimping tool which does not release until proper crimp pressure has been applied.

4. Connections to terminals shall be as follows:

a. Use connector or socket type terminals furnished with component.

b. Connections to binding post screw, stud, or bolt use:

1) For #10 and smaller wire, T & B "Sta-Kon", Buchanan "Termend", or approved equal, self-insulated locking forked tongue lug.

2) For #8 to #4/0 wire, T & B "Locktite", Burndy QA, or approved equal, lug of shape best suited.

c. Use ratchet type crimping tool which does not release until proper crimp pressure has been applied.

d. Connections for all terminals shall be made with insulation stripped per manufacturer's instructions.

L. Equipment shall be wired and piped by the manufacturer or supplier. Major field modifications or changes are not allowed without the written “change order” authority by the Engineer. When field changes are made, the components, materials, wiring, labeling, and construction methods shall be identical to that of the original supplied equipment. Contractor’s cost to replace or rework the equipment to match original manufacturer or supplier methods shall be done at no additional cost to the Owner.

M. Mating fittings, bulkhead fittings, plugs, lugs, connectors, etc. required to field interface to the equipment and panels shall be provided by the supplier when the equipment is delivered.

N. All electrical and instrumentation factory as-built drawings associated with the equipment shall be provided with the equipment when it is delivered to the job site. Drawings for each piece of equipment shall be placed in clear plastic packets of sufficient strength that will not tear or stretch from drawing removal and insertion.

3.03 ELECTRICAL EQUIPMENT FABRICATION, GENERAL

A. Panel cutouts for devices (i.e. indicating lights, switches) shall be cut, punched, or drilled and smoothly finished with rounded edges. Exposed metal from cutouts that are made after the final paint finish has been applied shall be touched up with a matching paint prior to installing device. Do not paint nameplates, labels, tags, switches, receptacles, conductors, etc.

B. All doors shall be fully gasketed, with non-shrinkable water and flame resistant material.

C. Bolts and screws for mounting devices on doors shall be as specified by the manufacturer, otherwise they shall have a 316 stainless steel flush head which blends into the device or door surface. No bolt or screw holding nuts shall be used on the external surface of the door.

D. No fastening devices shall project through the outer surfaces of equipment.

E. Each component within the equipment shall be securely mounted on an interior subpanel or backpan and arranged for easy servicing, such that all adjustments and component removal can be accomplished without removing or disturbing other components. Mounting bolts and screws shall be front located for easy access and removal without special tools. Access behind the sub panel or backpan shall not be required for removing any component.

F. HARNESS: Where space is available, all wiring shall be run in slotted plastic wire ways or channels with dust covers. If space is not available for wireways, then all wiring shall be neatly bundled and laced with plastic tie-wraps, anchored in place by 316 stainless steel screw attached retainer. Wire ways or channels shall be sized such that the wire fill does not exceed 50%. Tie-wraps shall be T&B TY-RAP, or approved equal.

G. HINGE LOOPS: Where wiring crosses hinged surfaces, provide a "U" shaped hinge loop protected by clear nylon spiral wrap. The hinge loop shall be of sufficient length to permit opening and closing the door without stressing any of the terminations or connections. Spiral wrap shall be Graybar T25N, or approved equal.

H. RETAINERS: Wire ways, retainers, and other devices shall be screw mounted with round-head 316 stainless steel screws or mechanically mounted by push-in or snap-in attachments. Glue or sticky back attachment of any type or style shall not be used. Retainers shall be Panduit High Bond Adhesive back mounts SGABM series, or approved equal.

I. ROUTING: Wires shall be routed in slotted plastic wire-ways with snap covers.

1. Wires carrying 120 VAC shall be separated as much as possible from other low voltage wires and signal cables, and shall be routed only in ducts for 120 VAC. If the power wiring has to cross the signal wiring, the crossing shall be as close to a right angle as possible.

2. Ducts for 24 VDC wiring shall be used for all other wires and cables. Routing of 120 VAC in combined ducts is not allowed without prior written approval of the Owner.

3. Wires and cable shall be routed along the shortest route between termination points, excepting routes which would result in routing 120 VAC and other wires and cables in the same duct. Wires and cables shall have sufficient length to allow slack and to avoid any strain or tension in the wire or cable.

4. Wires and cables shall be placed in the ducts in a straight, neat and organized fashion and shall not be kinked, tangled or twisted together. Additional wire ducting shall be provided for use by the electrical subcontractor for routing field wires to their landing points in the each electrical and instrumentation panel.

5. Wiring not routed in duct work shall be neatly bundled, treed, and laced with plastic ties. Wiring across door hinges shall be carefully made up and

supported to avoid straining and chafing of the conductors or from putting any strain on their terminals.

J. TERMINATIONS: Single wire and cable conductors shall be terminated according to the requirements of the terminal device. All terminations must be made at terminals or terminal blocks. Use of spring or buttsplice connectors are not allowed.

1. Provide 2" minimum separation between wireway and terminal blocks. Installation of wireways too close to terminal blocks will be required to be completely reworked to the satisfaction of the Owner.

2. For captive screw pressure plate type terminals, the insulation shall be removed from the last 0.25 inches of the conductor. The conductors shall be inserted under the pressure plate to full length of the bare portion of the conductor and the pressure plate tightened without excess force. No more than two conductors shall be installed in a single terminal. All strands of the conductor shall be captured under the pressure plate.

3. Terminal blocks and same equipment type termination wiring shall have all wiring terminated with appropriate sized ferrules with insulation collars. Ferrule crimping (full ratcheting) tool with proper sized jigs shall be used per manufacturer's recommendations.

4. For screw terminals, appropriately sized locking forked spade lugs shall be used. Lugs shall be crimp on type that form gas tight connections. All crimping shall be done using a calibrated crimping tool made specifically for the lug type and size being crimped.

5. On shielded cables, the drain wire shall be covered with insulating tubing along its full bare length between the cable jacket and the terminal lug or terminal pressure plate.

6. For screwless terminals, wire shall be stripped back and inserted per the manufacturer's instructions. When stripping insulation from conductors, do not score or otherwise damage conductor.

7. Heat shrink shall be placed on ends of shielded cable to cover foil.

8. Additional condulets with terminal blocks shall be supplied for wire termination to devices with leads instead of terminals. (i.e., solenoid valves, level probe, etc.).

9. Terminate all status, control, and analog & discrete I/O wiring on terminal blocks, including spares. Provide additional relay, DIN rails, terminal blocks and side panels as required.

K. A ground bus shall be provided in each enclosure or cabinet. It shall have provisions for connecting a minimum of ten grounding conductors. Screw type lugs shall be provided for connection of grounding conductors. All grounding conductors shall be sized as shown on plans or in accordance with NEC Table 250.122, whichever is larger.

L. Minimum wire bending space at terminals and minimum width of wiring gutters shall comply with NEC Tables 373.6(A) & (B).

M. Wire sizes shall not be installed smaller than those shown in NEC Article 310 for each circuit amperage rating.

N. Future device and component mounting space shall be provided on the door, backpan, and subpanel where detailed on the Drawings. Where no detail is shown, provide a minimum of 15 percent usable future space.

O. Doors shall swing freely a minimum of 90º and close with proper alignment.

P. Provide larger motor termination boxes as required to accommodate conduit and wires.

3.04 DELIVERY

A. Contractor shall inspect each electrical and instrumentation item delivered to the jobsite.

B. Contractor shall unpack each item for inspection within two (2) days of arrival.

C. Complete written inventory shall be produced by Contractor and submitted to Owner within (2) days after arrival on jobsite for record keeping prior to any payment for the item.

D. All panels and enclosures be delivered with as-built drawings in clear plastic packets within each panel and enclosure.

3.05 DAMAGED PRODUCTS

A. Damage products will not be accepted. All damaged products shall be replaced with new products at no additional cost to the Owner.

3.06 FASTENERS & LUGS

A. Fasteners for securing equipment shall be 316 stainless steel. The fastener size shall match equipment mounting holes. Layout to maintain headroom, neat mechanical appearance, and to support equipment loads required.

B. All wire & cable lugs shall be copper; aluminum or aluminum alloy lugs shall not be used. The Electrical Contractor shall supply all lugs to match the quantity & size of wire listed in the conduit & wire routing schedule.

C. Anchor Methods:

1. Hollow Masonry: Sleeve type anchors.

2. Solid Masonry: Sleeve type anchors or epoxy anchors bolts.

3. Metal Surfaces: Machine screws, bolts, or welded studs.

4. Concrete Surfaces: Wedge or expansion 316 stainless steel anchors.

5. Structural Steel: Right angle, parallel and edge type rigid metal clamps. Do not weld or drill structural steel.

D. Equipment Mounting:

1. The Electrical Contractor shall be responsible for furnishing and setting all anchor bolts required to install his equipment.

2. Electrical equipment shall be unistrut "standoff" mounted a minimum of ½ - inch from the wall in a manner so that the rear of the equipment is freely exposed to air circulation. Unistrut material shall be 316 stainless steel in NEMA 4X areas and galvanized in non-NEMA 4X areas unless called out specifically in details.

3. All equipment enclosures shall be of the NEMA classification noted on the electrical plan Drawings for the area in which the device will be mounted.

4. Reinforced concrete pad with 316 stainless steel anchor bolts shall be provided for each electrical freestanding equipment.

E. Dissimilar metals such as aluminum, stainless steel, steel, galvanized steel between enclosures, devices, etc. and mounting surfaces shall be isolated from each other using insulated tape or nonmetal spacers. Tape and spacers used shall be specifically manufactured for this application.

3.07 INSTALLATION, GENERAL

A. System

1. Install all products per manufacturer's recommendations and the Drawings.

2. Contract Drawings are intended to show the basic functional requirements of the electrical system and instrumentation system and do not relieve the Contractor from the responsibility to provide a complete and functioning system.

3. Keep a copy of the manufacturer's installation instructions on the jobsite available for review at all times prior to and during the installation of the associated equipment.

B. Provide all necessary hardware, conduit, terminal blocks, wiring, fittings, and devices to connect the electrical equipment provided under other Sections. The following shall be done by the Contractor at no additional cost to the Owner:

1. Provide additional devices, wiring, terminal block, conduits, relays, signal converters, isolators, boosters, and other miscellaneous devices as required to complete interfaces of the electrical and instrumentation system.

2. Changing normally open contacts to normally closed contacts or vice versa.

3. Adding additional relays to provide more contacts as necessary.

4. Installing additional terminal blocks to land wires.

5. Provide larger circuit breakers, conduit and wire as required for the horsepower of the supplied equipment when the supplied equipment is larger than that specified, at no additional cost to the Owner or lug adapters as necessary when connecting to the wires listed in the Conduit and Wire routing schedule.

C. All programmable devices, shall be programmed, set-up and tested by the Contractor prior to start of witness testing. This includes UPS, PLCs, VFD and instrumentation. Programming and set-up parameters shall be adjusted or changed as directed by the Owner or Engineer during start-up and throughout the warranty period, at no additional cost to the Owner. Coordinate with the Owner and setup all alarm, process, time delays and operation setpoints.

D. Coordinate with the Owner and setup all alarm, process, and operation setpoints.

E. Panels and Enclosures

1. Install panels and enclosures at the location shown on the Plans or approved by the Engineer.

2. Install level and plumb.

3. Clearance about electrical equipment shall meet the minimum requirements of NEC 110.26.

4. Box supports shall be located and oriented as directed in field by Owner.

5. Seal all enclosure openings, including bottom edge of all pad mounted enclosures to prevent entrance of insects, rodents, dirt, debris, etc.

6. All conduits entering outdoor panels and enclosures shall use watertight hubs. These hubs shall be located on sides or bottom only. Top entry of outdoor panels or enclosures is not allowed unless specifically shown on plans.

7. Additional condulets with terminal blocks shall be supplied for wire termination to devices with leads instead of terminals. (i.e. solenoid valves, level probe, etc.)

8. Terminate all status, control, and analog I/O wiring on terminal blocks, including spares. Provide additional relay, DIN rails, terminal blocks and side panels as required.

9. All panels and enclosures be delivered with as-built drawings in clear plastic packets within each panel and enclosure.

10. Provide larger motor termination boxes as required to accommodate conduit and wires.

F. Conduits and Ducts

1. Care shall be exercised to avoid interference with the work of other trades. This work shall be planned and coordinated with the other trades to prevent such interference. Pipes shall have precedence over conduits for space requirements. Exposed conduits shall be neatly arranged with runs perpendicular or level and parallel to walls. Bends shall be concentric.

2. Exposed conduits runs shall not be run directly on the ground. Secure conduits to 316 stainless steel unistrut.

3. Install conduit free from dents and bruises.

4. All conduits shall be labeled with conduit tags on all ends; at junction boxes, pull boxes, enclosures, stub-outs, or other terminations. All spare conduits shall be labeled.

5. A maximum of three equivalent 90 degree elbows are allowed in any continuous runs. Install pull boxes where required to limit bends in conduit runs to not more than 270 degrees or where pulling tension would exceed the maximum allowable for the cable.

6. Route all above grade outdoor conduits or conduits in rated areas parallel or perpendicular to structure lines and/or piping.

7. Conduits installed outdoor or in NEMA 4X rated areas above grade shall be braced in place with 316 stainless steel Unistrut stanchions or PVC coated clamps with backplates.

8. Conduit entrances: Seal each conduit entrance from below grade into the panels, and other electrical enclosures with plugging compound sealant to prevent the entrance of insects and rodents.

9. Special “Soft–Jaw” type pipe clamps shall be used to prevent damage to PVC-coated conduits while field threading, cutting to length, and coupling sections.

10. Conduits shall be painted to match the color of surface attached to as directed by Owner.

11. Prior to encasement, concealment, backfilling of conduits, temporary conduit labels shall be provided at each end of conduit. Temporary conduit labels shall have ½-inch (minimum) lettering at all transition points. After encasement and concealment temporary conduit labels shall be placed at each exposed end.

12. All spares shall be mandrel and have pull ropes installed. Provide caps on conduit ends to prevent entrance of dirt or insects.

13. Conduits shall be painted to match the color of surface attached to as directed by Owner.

14. All existing conduits that are reused shall have a mandrel or conduit piston pulled through the entire conduit run to prove the length contains no blockages or obstructions. Mandrelling shall be witness by the Owner.

15. Install new conduit tags for reused conduits at all transition boxes and endpoints. Conduit & Wire Routing Schedule shall be updated as these modifications take place.

16. Seal conduits entering any electrical instrument. Install conduit drain boxes and plug conduit interior to form an effective barrier to keep out water traveling into equipment or instrumentation from conduit installed higher than equipment or instrumentation.

17. Warning Tapes:

    a. Bury detectable warning tapes approximately 12 inches above all underground conduit runs of two or more outside of building. Align parallel to and within 3 inches of the centerline of the conduit or duct bank.

G. Conduit and Wire Routing Schedule

1. Conduit material, wire size, and quantity listed in schedule take precedence over Division 16 Specifications.

2. All of the entries for each line in the conduit schedule apply to each conduit when multiple quantity of conduits multiple quantity of conduits (quantity of which are indicated by number entered in conduit no. column in schedule) are listed in the schedule.

3. Wire sizes listed are in AWG or Kcmil and are copper conductors.

4. Extra wire was intentionally placed in the "Conduit & Wire Routing Schedule" which shall be labeled on both ends with a unique wire label.

5. Contractor to supply and install all conduits and wiring as shown on Utility Engineered Design drawings. Utility primary and secondary conduit and wiring shown in "Conduit and Wire Routing Schedule" is for bid purposes only. A credit or add-on will be provided by Contractor based on the actual work performed by Contractor for the Utility service.

6. All control and signal wiring terminations shall have the correct wire label applied prior to making connection.

7. Conduit entries listed as "GRS-PVC" in the Conduit & Wire Routing Schedule are to be "Galvanized Rigid Conduits with PVC coating" the entire length.

8. Vertical offsets and sloping of conduits are not detailed on plans, the Electrical Contractor shall include in his bid the price for the complete conduit run utilizing the civil & mechanical plans to measure vertical & slope distances.

9. Exposed conduits runs shall not be run directly on the ground or roof. Secure conduits to 316 stainless steel unistrut.

10. Duct-taping conduits together is not acceptable. Conduits, installed into concrete pads, shall be installed with a minimum of 2" distance between conduits to allow installation of bushings.

11. Seals

    a. Seal around all conduits, wires, and cables penetrating between panels, walls, ceilings, and floors in all buildings with a fire stop material. Seal shall be made at both ends of the conduit with a fire stop putty. Seal shall have a minimum two hour rating. Fire stop sealing shall be International Protective Coatings Flamesafe, or approved equal.

    b. Seal around conduits entering outside to inside structures and around bottom of free standing enclosures to maintain watertight integrity of structure.

    c. Place conduit seal inside each underground conduit riser into panels and enclosures to prevent entrance of insects and rodents.

    d. Seal conduits entering any electrical instrument and install conduit drains as necessary to prevent corrosion from water condensation.

    e. Conduit entrances: Seal each conduit entrance from below grade into the MCC and other electrical enclosures with plugging compound sealant to prevent the entrance of insects and rodents. Conduits between the enclosures shall be sealed with plugging compound sealant on each end. Plugging compound sealant shall be PRC-DeSoto (formerly Courtaulds) Aerospace Semco PR-868 or approved equal.

H. Excavation and Back Filling

1. The Electrical Contractor shall provide the excavation for equipment foundations, and trenches for conduits or buried cables.

2. Underground conduits outside of structures shall have a minimum cover of 24 inches except for utility conduits depth shall be as required by the governing utility requirements. Back filling shall be done only after conduits have been inspected.

3. Trenches for all underground utility lines shall be excavated to the required depths.

4. Repave any area that was paved prior to excavation. Backfill and surface all areas as shown on the Drawings or where not shown to the original condition that was present prior to the excavation.

5. Contractor shall uncover any uninspected covered conduit trenches, at no additional cost to Owner, to verify proper installation.

6. Excavation and back fill conduit trenches shall conform to the requirements of the Earthwork Section of these Specifications, unless modified on plans, and to other entities as required. Backfill shall consist of 3/4 inch class 2 aggregate base material, unless otherwise noted.

7. At all times during the installation of the electrical distribution system, the Contractor shall provide barricades, fences, guard rails, etc., to safeguard all personnel, including small children, from excavated trenches.

I. Wiring, Grounding, and Shielding

1. It is important to observe good grounding and shielding practices in the generally noisy environment in this application. The shield of shielded cables shall be terminated to ground at one end only (source end), the shield at the other end (receive end) shall be encased in an insulated material to isolate it from ground.

2. Special cables shall be provided when required by manufacturer or necessary to correct noise or distortion interference at no additional cost to Owner.

3. Field wiring shall not begin until interconnection drawings have been submitted by the Contractor and approved by the Engineer.

J. Cutting and Patching: The Contractor shall do all cutting and patching required to install his work. Any cutting which may impair the structure shall require prior approval by the Engineer. Cutting and patching shall be done only by skilled labor of the respective trades. All surfaces shall be restored to their original condition after cutting and patching. Paint patched surfaces to match the original color.

K. Housekeeping Pads:

1. Concrete housekeeping pads are required for all free standing electrical equipment. Housekeeping pads shall be 3-1/2" inches above surrounding finished floor or grade unless otherwise shown and shall be 4 inches (minimum) larger in width on all sides of equipment. The depth of housekeeping pads shall be 18 inches (minimum).

2. Housekeeping pads shall be installed for future units as shown on the Contract Drawings.

3. Housekeeping pad shall be Class "A" concrete with rebar crossway network. The minimum size rebar allowed is #3. Concrete shall be precisely leveled so that equipment set in place will not require shimming.

L. Cleaning and Touch Up

1. Prior to startup and at completion of the work prior to final acceptance, all parts of the installation, including all equipment, exposed conduit, devices, and fittings shall be cleaned and given touch up by Contractor as follows:

a. Remove all grease and metal cuttings.

b. Any discoloration or other damage to parts of the building, the finish, or the furnishings, shall be repaired.

c. Thoroughly clean any of his exposed work requiring same.

d. Vacuum and clean the inside of all MCC and electrical and instrumentation enclosures. Removing debris with an air blower is not permitted.

e. Clean all above and below ground pull boxes, junction boxes, and vaults from all foreign debris prior to final acceptance.

f. Paint all scratched or blemished surfaces with the necessary coats of quick drying paint to match adjacent color, texture, and thickness. This shall include all prime painted electrical equipment, including enclosures, panels, poles, boxes, devices, etc.

g. Remove all decals and lettering from both sides of support plates.

h. Repair damage to factory finishes with repair products recommended by Manufacturer.

i. Repair damage to PVC or paint finishes with matching touchup coating recommended by Manufacturer.

3.08 ELECTRICAL TESTING

A. General Requirements

1. It is the intent of these tests to assure that all equipment is operational within industry and manufacturer's tolerances and is installed in accordance with design plans and specifications.

2. All equipment setup and assembled by the Contractor shall be in accordance with the design plans and Drawings and the manufacturer's recommendations and instructions and shall operate to the Engineer's satisfaction.

   a. Follow all manufacturer's instructions for handling, receiving, installation, and pre-check requirements prior to energization.

   b. After energization, follow manufacturer's instructions for programming, set-up and calibration of equipment.

   c. The Contractor shall be responsible for, and shall correct by repair or replacement, at his own expense, equipment which, in the opinion of the Engineer, has been caused by faulty mechanical or electrical assembly by the Contractor.

   d. Necessary tests to demonstrate that the electrical and mechanical operation of the equipment is satisfactory and meets the requirements of these Specifications shall be made by the Contractor at no additional cost to the Owner.

3. The testing shall not be started until the manufacturer has completed fabrication, wiring, setup, and programming; performed satisfactory checks

and adjustments; testing sheets approved by Owner; and can demonstrate the system is complete and operational.

4. The first Pre-Energization tests shall be performed to determine the suitability for energization and shall be completed with all power turned off and complete prior to the start of any of the Post-Energization Tests. The Electrical Contractor shall have qualified personnel on the job site for all Pre-Energization and Post-Energization tests.

5. Testing Sheets and Procedures:

   a. The supplier shall submit for approval, the proposed field testing sheets at least two weeks prior to the start of the tests. Each testing sheet shall have a title giving the type of test and entry spaces for the name of the person who performed the test, name of the person who witnessed the test, and the date.

   b. Separate test procedures in separate binders shall be submitted for approval for the Field Tests. Testing shall not commence until the test procedures have been reviewed and approved by the Owner. Tests forms shall be similar to those shown on Appendix "A".

6. All tests shall be witnessed by the Engineer and/or Owner personnel. The test forms shall be completed by the testing person for field checkout, testing, and calibration of all equipment and instruments.

   a. All filled in test forms shall be given to the Engineer and/or Owner the day of the test. Fill in two sets of test forms if Contractor wants to keep a copy.

   b. All tests shall be documented in writing by the supplier and signed by the Engineer as satisfactory completed. The supplier shall keep a detailed log of all tests that failed or did not meet specifications, including date of occurrence and correction.

   c. Completed forms with proper signatures and dates shall be included and become a component of the Operations and Maintenance Manual for each of the respective systems.

   d. The Contractor shall notify the Owner and the Engineer of the Supplier's readiness to begin all field tests in writing (a minimum of ten working days prior to start), and shall schedule system checkout on dates agreed to by the Owner and the Engineer in order that the testing be scheduled and witnessed.

   e. The Contractor shall fill in & submit for approval the "Scheduled Test Request Form" located in Appendix "A" for each requested inspection, field test.

B. FAILURE TO MEET TEST:

1. Any system material or workmanship which is found defective on the basis of acceptance tests shall be reported to the Engineer. The Contractor shall

replace the defective material or equipment and have tests repeated until test proves satisfactory to the Engineer without additional cost to the Owner.

2. If the results of any of tests are unacceptable to the Engineer, the Contractor shall make corrections and perform the tests again until they are acceptable to the Engineer; these additional tests shall be done at no additional cost to the Owner.

3. If testing, installation or configuration work performed is deemed inadequate by Owner or Engineer, then the Contractor shall provide a qualified technician to meet these requirements. No extension of Contract time will be allowed.

C. SAFETY

1. Testing shall conform to the respective manufacturer's recommendations. All manufacturer's safety precautions shall be followed.

2. The procedures stated herein are guidelines for the intended tests, the Contractor shall be responsible to modify these tests to fit the particular application and ensure personnel safety. Absolutely no tests shall be performed that endanger personal safety.

3. The Contractor shall have two or more personnel present at all tests.

4. Two non-licensed portable radios are to be made available by the Contractor for the testing organization to conduct tests.

5. California Electrical Safety Orders (ESO) and Occupational Safety and Health Act (OSHA): The Contractor is cautioned that testing and equipment shall comply with ESO and OSHA as to safety, clearances, padlocks and barriers around electrical equipment energized during testing.

6. Field inspections and pre-energization tests shall be completed prior to applying power to equipment.

D. Electrical Field Tests

1. The Contractor shall engage and pay for the services of an approved qualified testing company for the purpose of performing inspections and tests as herein specified. The testing company shall provide all material, equipment, labor and technical supervision to perform such tests and inspections. The Electrical Contractor shall be present on site for all field tests.

2. Prior to start of any field testing:

   a. The Field Test Procedures, Interconnection Drawings and Preliminary Operation and Maintenance Manuals shall have been submitted by the Contractor and approved by the Engineer.

   b. Correct machine printed wire labels shall be in place on all wires associated with that equipment.

c. Vacuum and clean the inside of all MCC and electrical and instrumentation enclosures. Removing debris with an air blower is not permitted.

d. The Electrical Contractor shall complete and submit "Schedule Test Request Form" as illustrated in Appendix "A" for each electrical field test.

3. The Electrical Contractor shall be at the jobsite to assist with all Electrical Field Tests.

4. Pre-Energization Tests: These tests shall be completed prior to applying power to any equipment.

a. Inspections:

1) Visual and mechanical inspections:

a) Inspect for physical damage, proper anchorage and grounding.

b) Compare equipment nameplate data with design plans and starter schedule.

c) Compare overload setting with motor full load current for proper size.

2) Performed NETA acceptance testing for each piece of equipment.

3) The Testing Company shall compile, by visual inspection a record of all motor nameplate data, the following minimum data shall be neatly tabulated in spreadsheet form and submitted to Owner:

a) Manufacturer

b) Part and model number

c) Equipment driven

d) Motor horsepower

e) Nameplate amperes, volts and phase

f) Service factor

g) Temperature ratings

h) Overload catalog number

i) Overload current range and setting

j) Circuit breaker rating

k) Circuit breaker trip setting, for magnetic only circuit breakers.

4) The Contractor shall fill in, for each piece of equipment, Test Form TF4 located in Appendix "A".

b. Torque Connections:

1) All electrical, mechanical and structural threaded connections inside equipment shall be tightened in the field

after all wiring connections have been completed. Every worker tightening screwed or bolted connections shall be required to have and utilize a torque screwdriver/wrench at all times. Torque connections to the value recommended by the equipment manufacturer. If they are not available, use NEC Annex I for torque values as guidelines.

c. Wire Insulation & Continuity Tests:

1) All devices that are not rated to withstand the 500V megger potential shall be disconnected prior to the megger tests.

2) Megger insulation resistances of all 600 volt insulated conductors using a 500 volt megger for 10 seconds. Make tests with circuits installed in conduit and isolated from source and load. Each field conductor shall be meggered conductor to conductor and conductor to ground. These tests shall be made on cable after installation with all splices made up and terminators installed but not connected to the equipment.

3) Each megger reading shall not be less than 10 Meg-ohms resistive. Corrective action shall be taken if values are recorded less than 10 Meg-ohms. Values of different phases of conductors in the same conduit run showing substantially different Meg-ohm values, even if showing above 10 Meg-ohms shall be replaced.

4) Each instrumentation conductor twisted shielded pair shall have the conductor and shield continuity measured with an ohmmeter. Conductors with high ohm values, that do not match similar lengths of conductors the same size, shall be replaced at no additional cost to the Owner.

5) The Contractor shall fill in test forms Power and Control Conductor Test Form TF1 and Instrumentation Conductor Test Form TF2 located in Appendix “A”.

d. Grounding System Tests:

1) Visual and Mechanical Inspection:

a) Verify ground system is in compliance with Drawings and Specifications.

2) Test Values:

a) The resistance between the main grounding electrode and equipment ground shall be no greater than five ohms per IEEE Standard 142.

b) Investigate point-to-point resistance values that exceed 0.5 ohms.

c) The Contractor shall fill in Grounding System Test Form TF3 located in Section 16010 Appendix “A”.

d) Plots of ground resistance shall be made and submitted to the Engineer for approval.

e. Breaker Test:

1) All breakers shall be checked for proper mounting, conductor size, and feeder designation. Operate circuit breaker to ensure smooth operation. Inspect case for cracks or other defects. Check tightness of connection with torque wrench in accordance with manufacturer's recommendations.

2) All MCPs and breakers 100 amps and above shall be tested. Time current characteristic tests shall be performed bypassing three hundred percent (300%) rated current through each pole separately. Trip amps and time shall be measured. Instantaneous pickup current shall be determined by run up or pulse method. Clearing times should be within four (4) cycles or less. All trip times shall fall within NETA Table values. Instantaneous pickup current levels should be within 20% of manufacturer's published values.

3) Contact and Insulation Resistance: Contact resistance shall be measured and be compared to adjacent poles and similar breaker. Deviations of more than 50% shall be reported to Engineer. Insulation resistance shall be measured and shall not be less than 50 megohms.

4) At end of test the all breakers trip settings shall be set by Contractor to values listed in protective device coordination study to properly protect equipment.

5) The Contractor shall fill in mcc Device Test Form TF8 and Breaker Test Form TF9 located in Appendix "A".

5. Post Energization Tests

a. Panels and Enclosure Tests:

1) During these tests, test all local and remote control operations and interlocks.

2) Electrical Tests:

a) Perform operational tests by initiating control devices to affect proper operation.

b) The Contractor shall fill in Operational Device Checks and Tests Form TF6.

b. Phase Rotation Tests:

1) Check connections to all equipment for proper phase relationship. During this test, disconnect all devices which could be damaged by the application of voltage or reversed phase sequence. Three phase equipment shall be tested for

the phase sequence “ABC” front to back, left to right, and top to bottom.

2) All three phase motors shall be tested for proper phase rotation. Revise wire color codes to indicate correct phase color if wires are swapped.

3) The Contractor shall fill in Phase Rotation Test Form TF7 located in Appendix “A”.

c. Motor Testing:

1) Record the amperage draw on all phases of each motor operating under full load. Ensure that these values do not exceed the motor nameplate full load amperage.

2) Record the voltage between all phases of each motor operating under full load. If the voltage balance is not within plus or minus 5 percent of nominal, request the Utility power company or other responsible party to correct the problem.

3) Record the Ohm’s on phase to phase with low Ohms tester.

4) The Contractor shall compile, by visual inspection of equipment installed for each motor, the following data in neatly tabulated form and be placed in the O&M manual:

a) Equipment driven.

b) Motor horsepower.

c) Nameplate amperes.

d) Service factor.

e) Temperature rating.

f) Overload catalog number.

g) Overload current range and setting.

h) Circuit breaker rating.

i) Circuit breaker trip setting, for magnetic only circuit breakers.

5) The Contractor shall fill in Motor Test Form TF10, located in Appendix “A.”

6) Additional motor testing requirements per Division 11.

d. Instrumentation Tests

1) The Contractor shall provide a minimum of two (2) hours of field acceptance testing for each instrument. If any instrument has not been fully tested during its allotted time, the Contractor shall provide additional hours for finishing testing of the instrument, to be paid by the Contractor.

2) The overall accuracy of each instrument loop shall be checked to ensure that it is within acceptable tolerance.

a) As a minimum, all the tests indicated/specified on the test form TF14 in Appendix "A" shall be performed

by the Contractor for each of the instruments listed in Appendix "B" Device Index.

3) Test equipment used for testing shall be of suitable quality so as not to mask performance deficiencies. All test equipment shall be traceable to National Bureau of Standards and have been calibrated within six months of test date.

4) Testing shall be accomplished using simulated inputs only with prior written approval of the Owner.

5) Calibration stickers shall be supplied for all equipment and instruments. Calibration stickers shall list the following information:

a) Tag number.

b) Calibrated by who (name), firm, city and telephone number.

c) Date calibrated.

d) Calibration range.

e) Comments.

e. Control System Tests: The following tests shall be performed for all MCCs and for the control panels, including all non-Division 16 Control Panels

1) Component Tests:

a) Measure insulation resistance of starter phase to phase and phase to ground with the starter contacts closed and the protective device open. Test voltage and minimum acceptable values shall conform to NETA Section 3 "Test Values." Measure insulation resistance of each control circuit with respect to ground.

b) Motor overload units shall be tested by injecting primary current through overload unit and monitoring trip time.

c) Test the motor circuit protectors and thermal breakers as specified herein.

2) Control Tests:

a) Remove motor overload heaters from each motor starter or disconnect pump/motor coupling. In case the motor overload heaters are fed by current transformers, the motor conductors shall be removed and insulated away from the load lugs of the motor starter.

b) Verify the pump control circuits are wired and operate as shown on the elementary diagrams. Check

the indicator lights, alarm lights, local & remote selector switches, alarm contacts, power fail relays, overloads, etc., for proper operation.

c) Reinstall all heaters and all wiring removed for this test.

f. Trial Operations: The entire electrical installation shall be either tested or trial operated to verify Contract compliance. That is, controls, heaters, fans, light switches, convenience receptacles, lights, etc. shall be trial operated. Contractor shall conduct trial operations in the presence of the Engineer and Operations and Maintenance personnel.

E. Operational Testing:

1. After all the previous tests in this subsection 3.07 and 3.08 are complete, the Contractor shall conduct operational testing.

2. The Contractor shall demonstrate operation of each part of the control and instrumentation system to the satisfaction of the Owner and/or Engineer. Tests shall be repeated by the Contractor at no additional cost to the Owner and at the discretion of the Owner and/or Engineer to resolve whether the system has been demonstrated that it will operate under all modes of operations and varying conditions.

3. For the operational testing the new equipment shall be activated to automatically run for 5 days, 24 hours per day, Monday through Friday. During this five day period the Owner will run the different combinations of the monitoring options. If equipment failure occurs during the 5 days of operational testing, the Contractor shall repair or replace the defective equipment and shall begin another 5 day operational test, Monday through Friday. This shall be continued until the new equipment functions acceptably for 5 consecutive days.

4. The Electrical Contractor, testing firm and System Supplier shall re-visit the jobsite as often as necessary until all field tests, start-up and operation tests are completed and approved.

3.09 OPERATION AND MAINTENANCE MANUALS

A. Operation and maintenance manuals covering instruction and maintenance on each type of equipment shall be furnished prior to completion of the project.

B. These instructions shall provide the following as a minimum:

1. Each set bound in a three ring binder and organized as specified herein. Binder shall be sized such that when all material is inserted the binder is not over 3/4 full.

2. "As Constructed" set of submittal shop documents, data sheets and drawings (with all field-changes included) for all items in the electrical system.

3. A complete list of items supplied, including serial numbers, ranges, options, and other pertinent data necessary for ordering replacement parts.

4. Full technical specifications on each item.

5. Instrument data sheets for all instruments supplied on the project, clearly identifying the instrument tagname, range, part number, serial number, size, etc.

6. Detailed service, maintenance and operation instructions for each item supplied. Schematic diagrams of all electronic devices shall be included. A complete parts lists with stock numbers shall be provided on the components that make up the assembly.

7. Special maintenance requirements particular to this system shall be clearly defined, along with special calibration and test procedures.

8. Safety precautions and procedures.

9. Record of the following:

    a. Each motor nameplate data including manufacturer, full part number, size, voltage, amps, service factor, bearings, etc.

    b. Each breaker and overload heater element including manufacturer, full part number, size, setting etc.

    c. Spread sheet listing all setpoints and programmable parameters entered for this project for VFD, UPS, HIM, etc.

10. No photo copies are allowed of standard published manuals available from manufacturers such as for the PLC. All of the manuals shall be originals, not copies.

11. Software program & documentation including complete as-installed PLC ladder logic, and PLC configuration printouts.

12. Software program & documentation of complete as-installed programming, and configuration printouts.

13. Include all completed and signed test data and forms from field testing.

14. Warranty certificate with start dates, duration and contact information.

15. Troubleshooting instructions.

16. Record of all settings or parameters for all programmable devices.

C. At the end of the project these manuals shall be updated to show "as-built or as-installed" conditions.

D. Provide to the Owner four (4) sets of USB drives on lanyards and two sets of DVDs (DVDs shall contain all documents in both PDF format and unlocked AutoCAD - DWG format, version 2010 or later) including:

1. As-built Contract electrical and instrumentation drawings prepared for this project.
2. As-built set of all required Drawings for the project.
3. As-built sets of other computer generated documents prepared for this project, including the Bill of Materials.
4. Electronic PDF version of O&M manual. Version format shall follow the hard copy submittal of the O&M, including index, equipment record sheet, warranty information, theory of operation, maintenance instruction, etc. PDF shall be "bookmarked" at each index, subtab, transmittal letter, equipment record sheet, warranty information, theory of operation, maintenance instruction, etc. Failure to bookmark PDF may be grounds for immediate rejection without review. Bookmarks shall be descriptive of actual document, tab, etc. Bookmarks shall not be out of order; the English description shall match that listed in the Submittal's Table of Contents.
5. These files shall be the property of the Owner, for its use on this and future projects.
6. Label drives with site name using clear plastic with black machine printed lettering as produced by a KROY or similar machine. The size of the nameplate tape shall be with 3/8-inch lettering unless otherwise approved by the Engineer. Securely fasten nameplates in place on the USB drive using the adhesion of the tape.

3.10 TRAINING

A. All training sessions shall be held on dates and times agreeable to Owner. A total of 5 or fewer Owner personnel shall be trained.

B. After "Operation Testing" has started the Contractor shall provide a period of not less than 8 hours training for instruction of operation and maintenance personnel in the use of all the new electrical and instrumentation systems. The Contractor shall make necessary arrangements with manufacturer's representative. Provide product literature and application guides for user's reference during instruction.

C. Acceptable Operation and Maintenance Manuals shall be on site and available when training sessions are implemented.

D. Training to include instruction on the use, operation, calibration, programming, and maintenance of the field devices listed in Appendix "B."

E. See the following sections for additional training requirements:

1. Section 16605 – Electrical System Analysis.

3.11 SPARE PARTS

A. The Contractor shall supply all spare parts prior to start of field tests. All parts shall be sealed in plastic bags and delivered to each site in a heavy duty plastic storage bag. Bag shall be clearly labeled on the outside with part name and number and the corresponding equipment tagname.

B. The Contractor shall make available any replacement parts that are not manufacturer's normal stock items for immediate service and repair of all the instrumentation equipment throughout the warranty period.

C. The following spare parts shall be provided to the Owner as part of this Contract for each site:

1. Five (5) fuses for each type of fuse.
2. Five (5) lamps for each type of light.
3. Two (2) relays for each type of control, power fail and time delay relay.

D. See other Division 16 sections for additional spare parts to be provided.

3.12 WARRANTY

A. The Contractor shall warrant all electrical and instrumentation equipment including software programming for a period of one (1) year from date of final acceptance. Standard published warranties of equipment which exceed the preceding specified length of time shall be honored by the manufacturer or supplier.

B. The Contractor shall provide all labor and material to troubleshoot, replace, or repair any hardware or software that fails or operates improperly during the warranty period, at no additional cost to the Owner.

C. The System Supplier shall have a staff of experienced personnel available to provide service on 2 working days' notice during the warranty period. Such personnel shall be capable of fully testing and diagnosing the hardware and software and implementing corrective measures.

D. If the System Supplier "fails to respond" in 2 working days, the Owner at its option will proceed to have the warranty work completed by other resources; the total cost (direct and indirect) for these other resources shall be reimbursed in full by the Contractor.

1. "Fail to respond" shall be defined as: The Contractor has not shown a good faith effort and has not expended adequate resources to correct the problem.
2. The use of other resources, as stated above, shall not change or relieve the Contractor from fulfilling the remainder of the warranty requirements.

E. Prior to "final acceptance", the Contractor shall furnish to the Engineer a listing of warranty information for all manufacturers of materials, instruments, and equipment used on the project. The listing shall include the following:

1. Manufacturer's name, service contact person, phone number, and address.
2. Material and equipment description, equipment number, part number, serial number, and model number.
3. Manufacturer's warranty expiration date.

F. The Contractor shall provide all labor and material to troubleshoot, program, replace, or repair any hardware or software that fails or operates unpredictably during the warranty period, at no additional cost to the Owner.

G. Each time the Supplier's repair person responds to a system malfunction during the warranty period, he or she must contact the designated Owner maintenance supervisor for scheduling of the work, access to the jobsite, and permission to make repairs. Operation of facilities necessary to test equipment shall only be performed by or under the direction Owner staff. Owner reserves the right at its sole discretion to deny operations requested by the Supplier. A written description of all warranty work performed shall be documented on a field service report to be given to Owner prior to the repair person leaving job site. This field service report shall detail and clearly state problem, corrective actions taken, additional work that needs to be done, data, repair person name and company.

3.13 FINAL ACCEPTANCE

A. Final acceptance will be given by the Owner after the equipment has passed the "operational testing" trial period, each deficiency has been corrected, final documentation has been provided, and all the requirements of design documents have been fulfilled.

B. At the end of the project, following the completion of the field tests, and prior to final acceptance, the Supplier shall:

1. Remove all temporary services, equipment, material, and wiring from the site.
2. Verify Service equipment has been legibly marked in field with the maximum available fault current per NEC 110.24 (A). Field marking shall include date the fault current calculation was performed and be weather & UV rated. Service equipment shall not be hand labeled.
3. Two sets of all keys for locks supplied on this project. Submit each key with matching duplicate. Wire all keys for each lock securely together. Tag and plainly mark with lock number or equipment identification, and indicate physical location, such as panel or switch number.
4. Verify that as-installed drawings, in reinforced clear plastic pockets, have been placed in all new or modified panels.

5. Resubmit all Electrical System Analysis studies with all calculations rerun, data and graphs updated to reflect as-left conditions. Provide new Arc Flash labels to reflect as-constructed equipment and as-left circuit breaker settings.

6. Provide the following to the Owner:

   a. Listing of warranty information.

   b. Two (2) Electrical Systems Analysis DVDs of as-built set of studies, reports, settings, etc. and source files per Section 16605.

   c. Each "operation and maintenance" manual shall be modified or supplemented by the Supplier to reflect all field changes and as-built conditions.

   d. Two (2) disk copies of all final documentation to reflect as-built conditions.

   e. Four (4) USB drives and two (2) DVDs with copies of all final documentation to reflect as-built conditions.

APPENDIX "A"

ELECTRICAL & INSTRUMENTATION FORMS

Index of Forms:

Bill of Material

Schedule Test Request Form

TF1 Power and Control Conductor Test Form

TF2 Instrumentation Conductor Test Form

TF3 Grounding System Test Form

TF4 Visual and Mechanical Inspection Form

TF6 Operational Device Checks and Tests Form

TF7 Phase Rotation Test Form

TF8 MCC Device Test Form

TF9 Breaker Device Test Form

TF10 Motor Test Form

TF14 Instrumentation Data Sheet and Calibration Record Test Form

BILL OF MATERIAL

PROJECT: _____ DATE / /

LOCATION: _____ PAGE _____

SPECIFICATION SECTION	QTY	DESCRIPTION	MFG.	PART NUMBER	TAG No.

SCHEDULED TEST REQUEST FORM

COMPANY PERFORMING TEST: _____
TESTING PERSONNEL : _____ _____
PHONE NUMBER OF COMPANY: _____
TEST PROCEDURE SUBMITTAL: _____ APPROVED : ___/___/___
SCHEDULED TEST DATE : _____ DATE : ___/___/___

TIME	DESCRIPTION OF TEST
8:00	
9:00	
10:00	
11:00	
12:00	
13:00	
14:00	
15:00	
16:00	

NOTES:

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

POWER AND CONTROL CONDUCTOR TEST FORM

TEST FORM (TF1)

EQUIPMENT
NAME : _____ LOCATION : _____

CALIBRATION EQUIPMENT DATE: _____
DESCRIPTION _____

CONDUCTOR NUMBER	INSULATION TESTS					
	PHASE TO GROUND			PHASE TO PHASE		
	A	B	C	AB	BC	CA

NOTES:
Record insulation test values in meg-ohms.

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

INSTRUMENTATION CONDUCTOR TEST FORM

TEST FORM (TF2)

EQUIPMENT
NAME : _____ LOCATION : _____

CALIBRATION EQUIPMENT DATE: _____
DESCRIPTION : _____

CONDUCTOR PAIR NUMBER	CONTINUITY TESTS		INSULATION TESTS		
	CONDUCTOR TO CONDUCTOR	CONDUCTOR TO SHIELD	CONDUCTOR TO CONDUCTOR	CONDUCTORS TO GROUND*	SHIELD TO GROUND

NOTES:
Record continuity test values in ohms.
record insulation test values in meg-ohms.

* With both conductors tied together

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

GROUNDING SYSTEM TEST FORM

TEST FORM (TF3)

CALIBRATION EQUIPMENT DESCRIPTION : DATE: _____

FALL IN POTENTIAL TEST

MAIN GROUND LOCATION	APPLIED VOLTAGE V	MEASURED POINT 1 VOLTAGE	MEASURED POINT 2 VOLTAGE	MEASURED POINT 3 VOLTAGE	CALCULATED RESISTANCE OHMS

TWO POINTS TESTS

EQUIPMENT NAME	EQUIPMENT #	CIRCUIT #	APPLIED CURRENT	MEASURED VOLTAGE	CALCULATED RESISTANCE OHMS

NOTES:

TESTED BY : _____ DATE : ____/____/____

WITNESSED BY: _____

VISUAL AND MECHANICAL INSPECTION FORM

TEST FORM (TF4)

EQUIPMENT

NAME : _____ LOCATION : _____

NAMEPLATE DATA

MFGR. :	_____	SERIES # :	_____
MODEL # :	_____	U.L. # :	_____
VOLTAGE :	_____	PHASE :	_____
AMPERAGE :	_____	SERVICE :	_____
BUS TYPE :	_____	BUS BRACING:	_____
VERT. BUS :	_____	HORZ. BUS :	_____
GND. BUS :	_____	NEU. BUS :	_____
ENCLOSURE :	_____		_____
	_____		_____

INSPECTION CHECK LIST

ENTER: A-ACCEPTABLE R-NEEDS REPAIR OR REPLACEMENT NA-NOT APPLICABLE

TIGHTEN ALL BOLTS AND SCREWS	_____
TIGHTEN ALL WIRING AND BUS CONNECTIONS	_____
VERIFY ALL BREAKERS AND FUSES HAVE PROPER RATING	_____
CHECK BUS BRACING AND CLEARANCE	_____
CHECK MAIN GROUNDING CONNECTION AND SIZE	_____
INSPECT GROUND BUS BONDING	_____
CHECK EQUIPMENT GROUNDS	_____
CHECK CONDUIT GROUNDS AND BUSHINGS	_____
INSPECT NEUTRAL BUS AND CONNECTIONS	_____
CHECK HEATERS AND THERMOSTATS	_____
CHECK VENTILATION AND FILTERS	_____
CHECK FOR BROKEN OR DAMAGED DEVICES	_____
CHECK DOOR AND PANEL ALIGNMENT	_____
INSPECT ANCHORAGE	_____
CHECK FOR PROPER CLEARANCES AND WORKING SPACE	_____
REMOVE ALL DIRT AND DUST ACCUMULATION	_____
INSPECT ALL PAINT SURFACES	_____
CHECK FOR PROPER WIRE COLOR CODES	_____
INSPECT ALL WIRING FOR WIRE LABELS	_____
CHECK FOR PROPER WIRE TERMINATIONS	_____
CHECK FOR PROPER WIRE SIZES	_____
INSPECT ALL DEVICES FOR NAMEPLATES	_____
CHECK IF DRAWINGS MATCH EQUIPMENT	_____
CHECK ACCURACY OF OPERATION & MAINTENANCE	_____
	_____

TESTED BY : _____ DATE : ____/____/____

WITNESSED BY: _____

OPERATIONAL DEVICE CHECKS AND TESTS FORM

TEST FORM (TF6)

NAME : _____ LOCATION : _____

CUB. #	EQUIPMENT NAME	EQUIP #	LOCAL SITE DEVICE CHECKS AND TESTS							REMOTE SITE DEVICE CHECKS & TESTS		
			SELECTOR SWITCH	INDICATOR LIGHTS	PUSHBUTTON & LOS	METERING & INDICATORS	OVERLOAD RESET	INTERLOCKS & CONTROL	ALARM & STATUS	SELECTOR SWITCH	INDICATOR LIGHTS	PUSHBUTTON & LOS

TESTED BY : _____ DATE : ____/____/____

WITNESSED BY : _____

NOTES:

PHASE ROTATION TEST FORM

TEST FORM (TF7)

EQUIPMENT NAME	EQUIPMENT #	CIRCUIT #	PHYSICAL PHASE LOCATION	PHASE COLOR CODE	MEASURED PHASE ROTATION

NOTES:
Use phase tester to verify all circuits and equipment have a clockwise A-B-C phase rotation.
Physical phase locations: Left to Right - LR or Top to Bottom - TB
Phase color codes: Brown, Orange, & Yellow -BOY
Black, Red, & Blue -BkRBe

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

MCC DEVICE TEST FORM

TEST FORM (TF8)

MCC # : _____ CUBICLE : _____

EQUIP NAME: _____ EQUIP # : _____

MOTOR DATA	CONTACTOR DATA
H.P. : _____	MFGR. : _____ PART # : _____
F.L.A. : _____	NEMA SIZE : _____ COIL VOLT : _____

CALIBRATION EQUIPMENT DATE: _____

DESCRIPTION : _____ _____

OVERLOAD TESTS

MFGR. : _____ HEATER # : _____ RANGE : _____

PART # : _____ FINAL OVERLOAD SETTING: _____

TEST AMPS	MEASURE TRIP TIME @ TEST AMPS			MFGR LISTED TRIP TIME	AMBIENT COMPENSATION
	PHASE A	PHASE B	PHASE C		

BREAKER TESTS

MRGR. : _____ PART # : _____ FRAME # : _____

CONTACT RESISTANCE TESTS - OHMS			INSULATION RESISTANCE TESTS-MEGOHMS		
PHASE A	PHASE B	PHASE C	A-GND	B-GND	C-GND

MFGR TRIP TIME @300% MIN:_____ BREAKER RATING / RANGE: _____

MFGR TRIP TIME @300% MAX:_____ FINAL BREAKER SETTING: _____

MFGR INST. PICKUP AMPS: _____

TIME-CURRENT TEST					
TRIP TIME IN SECONDS @ 300% AMPS			INSTANTANEOUS TRIP TEST - AMPS		
PHASE A	PHASE B	PHASE C	PHASE A	PHASE B	PHASE C

NOTES:

TESTED BY : _____ DATE : ____/____/____

WITNESSED BY: _____

BREAKER DEVICE TEST FORM

TEST FORM (TF9)

FEEDER : _____ LOCATION : _____
EQUIP NAME: _____ EQUIP # : _____
EQUIP H.P. : _____ EQUIP KVA : _____

MFGR. : _____ PART # : _____ FRAME # : _____
VOLTAGE : _____ INTERRUPT : _____ CHARACTER: _____
RATING CURVE

CALIBRATION EQUIPMENT DATE: _____
DESCRIPTION : _____ _____

CONTACT RESISTANCE TESTS - OHMS			INSULATION RESISTANCE TESTS - MEGOHMS		
PHASE A	PHASE B	PHASE C	A-GND	B-GND	C-GND

MFGR TRIP TIME @300% MIN : _____ BREAKER RATING / RANGE: _____
MFGR TRIP TIME @300% MAX: _____ FINAL BREAKER SETTING : _____
MFGR INST. PICKUP APMS:

TEST-CURRENT TESTS TRIP TIME IN SECONDS @ 300% AMPS			INSTANTANEOUS TRIP TEST - AMPS		
PHASE A	PHASE B	PHASE C	PHASE A	PHASE B	PHASE C

ADDITIONAL TESTS AND SETTING AS APPLICABLE

	PICKUP		DELAY-TIME		
FUNCTION	RANGE	SETTING	RANGE	SETTING	
LONG TIME					
SHORT TIME					
GROUND FLT.					

NOTES:

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

MOTOR TEST FORM

TEST FORM (TF10)

EQUIPMENT
NUMBER : _____ NAME : _____

CALIBRATION EQUIPMENT DATE: _____
DESCRIPTION : _____ _____

NAMEPLATE DATA - FIELD RECORDED

MANUFACTURER		MODEL #		SERIAL #		FRAME #	
H.P.	R.P.M	F.L.A	VOLTS	PHASE	FREQ.	P.F.	S.F.
CODE	N.E.M.A.	INSUL.	ENCLOSR.	DUTY	DESIGN		

CALIBRATION EQUIPMENT
DESCRIPTION : __ _____ DATE: _____

INSULATION TESTS PHASE TO GROUND MEG-OHMS			MOTOR FRAME GROUNDING SYSTEM TEST			MOTOR HEATER MEAS. AMPS	MOTOR THERMAL TRIP TEST
A	B	C	APPLIED VOLTS	MEAS. AMPS	CALC. OHMS		

MOTOR TESTS - MEASURED VALUES

AMPERAGE			VOLTAGE			POWER FACTOR	WATTAGE
A	B	C	AB	BC	CA		

NOTES:
VOLTAGE, AMPERAGE, POWER FACTOR, & WATTAGE SHALL BE RECORDED WITH A TRUE RMS METER.

TESTED BY : _____ DATE : ____/____/____
WITNESSED BY: _____

INSTRUMENTATION DATA SHEET AND CALIBRATION RECORD TEST FORM (TF14)

Component Description	Manufacturer	Location
	Name	Site
Component Tag Name	Model	Equip
	Serial #	

	Range	Unit
Indicator Range		
Input Range		
Output Range		

Test Equipent	
Description:	
Calibration Date:	

General Notes

1) Attach Calibration Curves for dp Flowmeters

2) Include mounting elevations for level Instruments

3) All entries within solid box to be typed in prior to start of test

Designed Calibration			Measured Calibration		
Input Signal	Output	Eng. Value	Input	Output	Comments

Notes _____

Tested by (Print Name) _____ Witnessed by (Print Name) _____

Signature _____ Signature _____

Date / / Date / /

APPENDIX "B"

DEVICE INDEX

16010 DEVICE INDEX

P&ID DWG	E DWG	M DWG	TAG	NO.	DESCRIPTION	TYPE	SPECS	MINIMUM NEMA RATING	SIZE	VOLT	SP / RANGE	UNITS	DWG REF DET MOUNTING	NOTES AND ACCESSORIES	16010 TEST FORM
I02	-	-	PI	711	Pressure Indicator	Gauge	11302	-	-	-	5"	W.C.	Dwg E4, Det "C"		-
I02	E05	-	PIT	711	Pressure Indicating Xmtr	Gauge	11302	-	-	24VDC	5"	W.C.	Dwg E4, Det "C"		-
I02	E05	-	DPSH	711	Differential Press. Switch	Gauge	16010-2.08.A	4X	-	120Vac	2.5"	W.C.	Dwg E4, Det "C"		-
I02	E05	-	PNL	710	Control Panel	SS	11302	4X	-	480Vac	-	-	Per Mnfr		TF-7
I03	E05	-	PNL	720	Control Panel	SS	11302	4X	-	120 Vac	-	-	Per Mnfr		TF-7
I02	-	-	TSH	711	Temperature Switch	N.C.	11302	-	-	120Vac	-	-	Motor		TF-7

END OF SECTION

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SECTION 16605

ELECTRICAL SYSTEM ANALYSIS

PART 1 - GENERAL

1.01 SUBMITTALS

A. Provide the following submittals, per Section 16010, for the entire electrical power system including the 208/120V distribution system:

1. Short Circuit Study.
2. Protective Device Coordination Study.
3. Arc Flash Study.

B. Electrical System Studies shall be prepared, stamped and signed by a professional Electrical Engineer registered in the State of California and in accordance with IEEE 242, IEEE 399 ANSI/IEEE C37.13 and IEEE 519.

C. Exceptions / Clarifications

1. Itemize all exceptions and clarifications to the Contract Documents in a letter (located in the front of the submittal) on company letterhead.
2. Exceptions that are noted in the study, but not listed on the Exceptions/Clarifications letter, will be considered as non-responsive and not accepted as changes to the Contract Documents.
3. All exceptions taken from the Drawings and Specifications shall be documented with justifications. When noting the exception, list which Drawings or which Specification Subsection number the exception is taken.
4. Clarification requests shall list which Drawing or Specification Subsection number the clarification is required for.

D. Provide two (2) DVDs at the completion of the project. One DVD will contain the as-built set of studies, reports, settings, etc. The other DVD will contain the original source format of input data used for the PC based computer software, including all SKM files used to create the studies. Provide all setup information used for the computer based study and report.

E. For each resubmittal, provide a copy of submittal comments and a separate letter, on Company letterhead, identifying how each submittal comment has been addressed in the resubmittal.

F. When submittals are provided in PDF format, utilize the "Bookmark" feature of the Adobe Acrobat and clearly bookmark locations in the report to locations identified in the Report's Table of Contents. Bookmarks shall not be out of order; the English description shall match that listed in the Report's Table of Contents.

1.02 SEQUENCING AND SCHEDULING

A. It is the responsibility of those performing the electrical system analysis to collect and field verify all data. This includes verifying existing electrical distribution and obtaining all data from the Utility Company, and vendors necessary for completing the requested studies. Utilize proposed load data for the Studies obtained from submittals, Utility Company, Generator manufacturers, field verifications, etc.

B. A complete Protective Device Coordination Study shall be submitted within 60 days after approval of Short Circuit Study.

C. At the completion of the project, all studies shall be resubmitted with all calculations rerun, data and graphs updated to reflect as-left conditions. Provide new Arc Flash labels to reflect as-constructed equipment and as-left circuit breaker settings.

D. When previous electrical system analysis studies are available and provided to the Contractor, it is the Contractor's responsibility to verify the accuracy of the data used and to update it to match existing conditions. Contractor is not to assume that a previous electrical system analysis is available for their use.

PART 2 - MATERIALS

2.01 GENERAL

A. Equipment and component titles and numbers used in the Studies shall be identical to the equipment and component titles and numbers shown on the Drawings.

B. Perform Studies using PC based computer software. State program name and version (e.g. version 2.1) in report.

C. Perform complete fault calculations for Utility and generator sources. Equipment shall not be grouped as a single large load; they shall be treated as individual loads. When generators are incorporated into the system, develop two separate networks: one with utility only (no generator attached) and one with generator only (no utility attached)

D. Complete protective device coordination study listing all device settings shall be utilized during start-up of electrical equipment.

E. Provide unique page numbers for every sheet in all Studies. Unique page numbers to be manually placed by Study Company after printout if study report doesn't assign page numbers.

F. One line diagrams

1. Shall be readable on 11" x 17" paper. One line diagrams shall be redrawn in AutoCAD on multiple sheets if necessary or as requested by Owner.
2. Buses and branches shall have descriptive names matching one line diagram or existing system (i.e. not Bus-0084).
3. Automatic transfer switches (ATSs), Main Switchboards (MSBs), shall not have multiple node buses.
4. Primary and secondary for transformers, Variable Frequency Drives (VFDs), etc. shall be changed to node buses.

G. Multiple scenarios for the short circuit and arc flash reports shall be provided.

1. Maximum available fault current from utility transformer:
   a. One Study with all motor contribution.
   b. One Study with no motor contribution.
2. Minimum available fault current from utility transformer:
   a. One Study with all motor contribution.
   b. One Study with no motor contribution.

3. Nominal available fault current from utility transformer: (if only nominal fault current is provided by the Utility and not maximum/minimum available fault current)
    a. One Study with all motor contribution.
    b. One Study with no motor contribution.
4. Generator (when shown)
    a. One Study with all motor contribution.
    b. One Study with no motor contribution.
5. Do not combine networks when multiple sites are modeled.
6. All studies shall be repeated with the arc flash reduction switch enabled (where applicable).

2.02 SHORT CIRCUIT STUDY

A. Include the following in the short circuit study:
1. Cable impedances based on copper conductors.
2. Bus impedances based on copper bus bars.
3. Transformer impedances based on tolerances specified in ANSI C57.12.00.
4. Source date (i.e. cable lengths, sizes, and quantity, for all runs in study, listing of bus loads, etc.).
5. Utility data:
    a. Size of Utility transformer.
    b. Impedance of Utility transformer.
    c. Primary voltage of Utility transformer.
    d. Fault information on primary side of Utility transformer:
        1) Three phase bolted fault.
        2) X/R ratio (positive sequence).
        3) Line to ground fault.
        4) X/R ratio (zero sequence).
    e. Protective relays (type & settings).
6. Voltage drop and current flow at each node and load in system.

B. Calculate Short Circuit interrupting duties for an assumed three-phase bolted fault and line-to-ground fault at each of the following locations:
1. Power transformer's primary
2. Main Switchgear.
3. Main Switchboard.
4. All Motor Control Centers (MCCs).

5. All panelboards.
6. All 480V, 3-phase motor and equipment loads.
7. All 3-phase transformer secondaries.
8. All 240/208V equipment.

C. Verify:

1. Equipment and protective devices are applied within their ratings.
2. Adequacy of switchboard, panelboard and MCC bus bars to withstand Short Circuit stresses.
3. Adequacy of transformer windings to withstand Short Circuit stresses and over-current.
4. Cable sizes for ability to withstand normal and fault load currents.

D. Provide the following in the Short Circuit study report:

1. Calculation methods and assumptions.
2. Input data.
3. Short circuit data.
   a. Impedances.
   b. X to R ratios.
   c. Asymmetry factors.
   d. Motor contributions.
   e. Short Circuit kVA.
   f. Symmetrical and asymmetrical line-to-line and line-to-ground fault currents.
   g. Device evaluation including rating of equipment.
   h. Bus evaluation including rating of equipment.
   i. Source data, from Electric Utility Company. Include copy of correspondence with Utility Company indicating values used.
   j. Source data from Generator Supplier (where applicable). Include copy of Generator provided values used.
4. Tabulations of calculated quantities.
5. Results, conclusions, and recommendations.
6. One line diagrams of distribution system.
7. Impedance diagram showing the resistances and reactances for all cables of the distribution system.

2.03 PROTECTIVE DEVICE COORDINATION STUDY

A. Provide Protective Device Coordination drawings for each section of distribution system that includes the following:

1. Graphically diagram displaying coordination time-current curves on conventional log-log curve sheets. Each time-current curve shall have a unique identifier label. This identifier shall be used in the tabulated settings spreadsheet and on the associated one-line diagram.

2. Time-current curves shall include the following curves (minimum):

   a. Utility relays (phase & ground) and high voltage switchgear relays (phase and ground).

   b. All upstream protective devices and breakers.

   c. All mechanical overloads.

   d. All MCP breaker and associated motor or equipment load. Duplicates of the same sized protective device and motor size may be omitted (i.e., when there are 3 pumps for same application).

   e. All transformers and associated primary and secondary protection.

   f. Unique identifier for each protective device.

   g. Provide separate TCC for phase and ground curves.

   h. TCC for Ground curves shall include the transformer magnetizing inrush currents for all transformers downstream of the circuit breaker. Ground shall clear the inrush currents.

3. One-line diagram that applies to specific portion of distribution system associated with time-current curves. One-line diagram shall include the following:

   a. Location of each device.

   b. Power and voltage ratings, primary and secondary transformers amperages.

   c. All significant circuit elements such as transformers, cables, breakers, fuses, relays, etc. with their corresponding amperage ratings.

   d. Tag of each branch and node (shall be the same tags used in short circuit study).

   e. Mechanical overload and contactor.

   f. English description, equipment name, HP, and full load amp rating of motors and other 3 phase loads.

   g. Terminate device characteristic curves at a point reflecting maximum fault current to which device is exposed as calculated in short circuit study.

4. Time current curves shall be provided for all protective devices with adjustable settings.

B. Characteristics plotted on time current curves shall include:

1. Protective current relays.
2. Fuses including manufacturer's minimum melts, total clearing, tolerance, and damage bands.
3. Circuit breaker trip devices, including manufacturer's tolerance bands.
4. Transformer full-load currents at 100% and 600%.
5. Motor and equipment full load currents. Motors fed from VFDs and Soft Starters shall have their starting curves adjusted according to inrush currents on the TCC. Motors on TCC shall show the DC offset for VFD and Soft Starter fed pumps.
6. Transformer magnetizing inrush currents.
7. Transformer damage curves.
8. ANSI transformer withstand parameters.
9. Fault currents.
10. Ground fault protective device settings.
11. Other electronic protective devices.

C. Provide the following recommended settings in spreadsheet format in the Protective Device Coordination study report:

1. Relay settings including CT values.
2. Circuit Breakers adjustments:
   a. Long Delay Pickup and Time.
   b. Short Time Pickup and Time.
   c. Instantaneous Pickup and Time.
   d. Ground Pickup and Time.
3. Programmable settings for all electronic devices. Settings for non-current relay settings shall also be provided.
4. Settings shall be given both in amps and seconds as well as the corresponding physical setting (i.e. 30A and setting B on MCP) for device.
5. Identify protective device associated with each curve by manufacturer type, function and part number.

2.04 ARC FLASH HAZARD STUDY

A. General:

1. Arc flash boundary and incident energy shall be calculated using a PC computer program at all significant locations in the electrical network,

including switchgears, switchboards, MCCs, transformers, and other major equipment where work could be performed on energized equipment.

2. Arc flash computation shall include both line and load side of main breaker calculations, where necessary.

3. Document method of calculation.

4. Do not include the motor contribution of motors fed by VFDs in the arc flash hazard study.

B. Safe working distances shall be specified for calculated fault locations based upon the calculated arc flash boundary considering an incident energy of 1.2 cal/cm2.

C. Study shall include the following:

1. All significant locations in 480 volt, 240 volt and 208 volt systems fed from transformers equal to or greater than 125 kVA.

2. Incident energy and flash protection boundary calculations in spreadsheet format in the Arc Flash Hazard study report.

3. Provide the following incident energy and flash protection boundary calculations in spreadsheet format in the Arc Flash Hazard study report (values shall be calculated for all electrical equipment in the power distribution system):

   a. Arcing fault magnitude

   b. Device clearing time

   c. Duration of arc

   d. Boundary for:

      1) Arc flash limited shock approach

      2) Limited shock approach

      3) Restricted shock approach

   e. Working distance

   f. Incident energy at 18 inches (in cal/sq.-cm)

   g. Recommendations for arc flash energy reduction for each location having more than 8 cal/sq.-cm. Provide preliminary cost estimate for implementing recommendations.

   h. Provide separate spreadsheets for all scenarios listed in subsection 2.01.G. Do not combine the spreadsheet values nor only provide the worst case scenario. Clearly list on each spreadsheet the English description of the Scenario presented.

4. Provide recommendations for the Personal Protective Equipment (PPE) that the Owner should maintain on site for the level of hazard.

5. Provide recommendations for safety label design that should be posted on electrical equipment.

2.05 STUDY REPORTS

A. Written reports submitted for approval shall contain:

1. Scope of Studies performed.
2. Explanation of bus and branch numbering system.
3. Report calculations, tabulations and spreadsheets.
4. Selected equipment deficiencies.
5. Results of Studies.
6. Comments, recommendations or suggestions regarding:
   a. Changes and additions to equipment rating and/or characteristics.
   b. Circuit protective devices improperly rated for overload or fault conditions.
   c. Arc Flash protective equipment and safety labels.
7. Tabulation spreadsheet for all protective device settings with the following column entries (minimum):

Device Code	Description	MFR	Type	Plug Trip	Frame	KAIC	Long Time		Short Time		Inst	Ground	
							Amps	Time	Amps	Time	Amps	Amps	Time

8. Stamped, signed and dated by Electrical Engineer registered in the State of California who performed the analysis.

B. Reports are to be updated to reflect as-built conditions and placed in O&M manual, per Section 16010 requirements.

PART 3 - EXECUTION

3.01 GENERAL

A. Make minor modifications to equipment settings as required to accomplish conformance with the Short Circuit and Arc Flash Studies.

B. Notify Engineer in writing of any required major equipment modifications.

3.02 FIELD TESTS

A. Provide field testing of protective equipment.

B. Adjust relay and protective device settings according to values established by Coordination Study.

3.03 ARC FLASH WARNING LABELS

A. All Arc Flash warning labels shall meet NEC requirements, OSHA standards and NFPA recommendations.

B. Provide and install 4 in. x 6 in. thermal transfer type labels of high adhesion polyester for each work location analyzed and as required by the NEC for flash protection on power distribution equipment.

C. Each label shall have an orange header with the wording, "WARNING, ARC FLASH HAZARD," and shall include the following machine printed information:

1. Location Designation
2. Nominal system voltage
3. Arc Flash boundary
4. Available incident energy and working distance (in inches)
5. Minimum arc rating of clothing
6. Site specific level of PPE
7. Engineering report number, revision number and issue date
8. Company preparing report and contact phone number

D. Labels shall not be hand labeled.

E. For all areas, Contractor shall post the following:

1. Working distances
2. Shock hazard voltage

3. Shock Approach Boundaries:

   a. Limited

   b. Restricted

F. Provide Arc Flash labels for the each of the following pieces of equipment (including existing):

1. 480V and applicable 208V panelboards
2. MCCs
3. Switchboard
4. Switchgears
5. Control Panels
6. All electrical equipment with an incident energy level greater than 1.2 Cal/cm2.
7. Where Switchgear, Switchboard, MCC, Panelboard, Distribution Panel, etc. feed multiple circuit breakers from the enclosure, provide separate line and load side Arc Flash Labels for the Main Circuit Breaker.
8. Provide separate labels at each circuit breaker that has arc flash reduction switches indicating the appropriate values when the switch is enabled.

G. Labels shall be submitted for approval. No labels shall be installed without prior approval by Owner or Owner representative.

3.04 ARC FLASH TRAINING

A. The Supplier shall train Owner personnel of the potential arc flash hazards associated with working on energized equipment (minimum of 4 hours). Maintenance procedures shall be in accordance with the requirements of NFPA 70E, Standard for Electrical Safety Requirements for Employee Workplaces and shall be provided in the equipment manuals.

END OF SECTION

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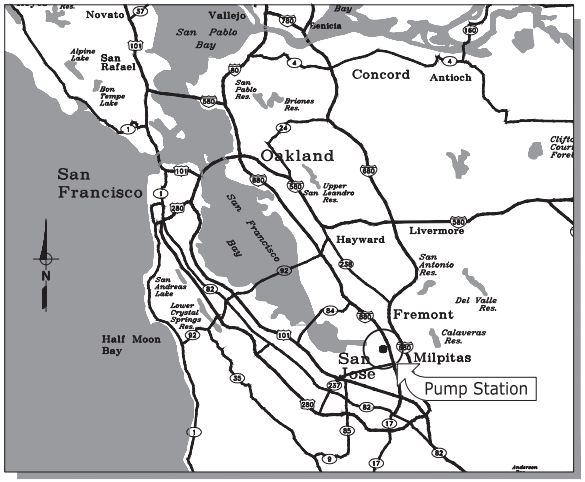
CITY OF MILPITAS
MAIN SEWAGE PUMP STATION
ODOR EMISSIONS CONTROL FACILITY

1425 NORTH McCARTHY BLVD. MILPITAS, CA

CONFORMED TO ADDENDA

MAY 2021

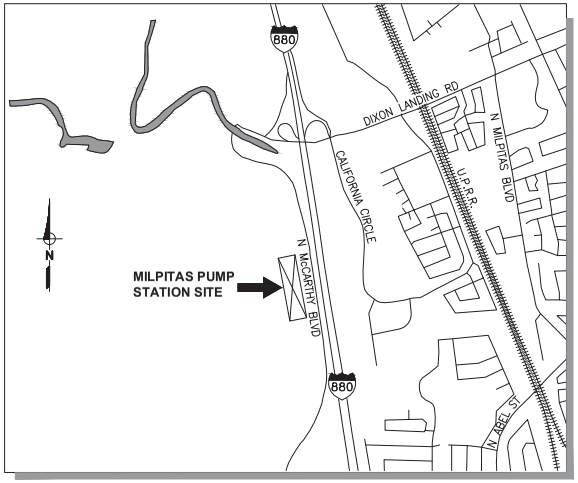


VICINITY MAP

NOT TO SCALE

SUBMITTED: Whitney Sandelin 5/26/2021
WHITNEY L. SANDELIN, PROJECT MANAGER — DATE

SUBMITTED: 5/26/2021
GREG K. CHUNG, PRINCIPAL-IN-CHARGE — DATE



LOCATION MAP

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER — WHITNEY L. SANDELIN — No. 86703 Exp. 3-31-23 — CIVIL — STATE OF CALIFORNIA — 5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

THIS LINE IS 1 INCH
AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE : AS SHOWN
DRAWN BY : SMB
DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES
2020 Research Park Drive
Suite 100
Davis, California 95618
(530) 756-5905
FAX (530) 756-5991

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

COVER SHEET

JOB NUMBER 270-50-18-14
DRAWING NUMBER G01
SHEET NUMBER 1 OF 30
REVISION

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DWG No.	SHEET No.	DESCRIPTION
GENERAL		
1	G01	COVER SHEET
2	G02	INDEX OF DRAWINGS AND GENERAL NOTES
3	G03	LEGEND, ABBREVIATIONS AND CONTROL DATA
4	G04	OVERALL SITE PLAN AND POTHOLE DATA
CIVIL		
5	C01	CIVIL DETAILS 1
6	C02	SITE DEMOLITION
7	C03	PAVING AND GRADING PLAN
8	C04	UTILITY PLAN
9	C05	UTILITY PROFILES
STRUCTURAL		
10	GS-1	STRUCTURAL GENERAL NOTES 1
11	GS-2	STRUCTURAL GENERAL NOTES 2, ABBREVIATIONS, AND LEGEND
12	S-1	STRUCTURAL ODOR CONTROL PAD PLAN AND SECTION
MECHANICAL		
13	M01	MECHANICAL DETAILS 1
14	M02	MECHANICAL DETAILS 2
15	M03	MECHANICAL DETAILS 3
16	M04	MECHANICAL DETAILS 4
17	M05	MECHANICAL DETAILS 5
18	M10	WET WELL EXHAUST PIPING
19	M20	BIOTRICKLING FILTER PLAN
20	M21	BIOTRICKLING FILTER TEMPORARY START-UP CONFIGURATION
21	M22	BIOTRICKLING FILTER SECTIONS 1
22	M23	BIOTRICKLING FILTER SECTIONS 2
ELECTRICAL & INSTRUMENTATION		
23	E01	ELECTRICAL SYMBOLS & ABBREVIATIONS
24	E02	EXISTING MCC-B ONE LINE DIAGRAM
25	E03	EXISTING MCC-B ELEVATION
26	E04	TYPICAL ELECTRICAL DETAILS
27	E05	ELECTRICAL OVERALL SITE PLAN
28	I01	INSTRUMENT SYMBOLS AND ABBREVIATIONS
29	I02	BIOTREATMENT FANS P&ID
30	I03	BIOFILTER P&ID

GENERAL NOTES

1. THE DRAWINGS SHOW APPROXIMATE LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND UTILITIES. BEFORE ORDERING MATERIALS OR BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL POT-HOLE AND VERIFY THE LOCATION/DEPTH OF EXISTING UNDERGROUND UTILITIES AND REPORT ANY POTENTIAL CONFLICTS TO THE CONSTRUCTION MANAGER.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. CONTRACTOR TO FIELD CHECK ALL EXISTING STRUCTURES FOR VERIFICATION OF DIMENSIONS WHERE EQUIPMENT IS TO BE INSTALLED.
4. CONTRACTOR SHALL REFER TO ALL RELATED DRAWINGS AND TO MANUFACTURER'S DRAWINGS FOR COMPLETE DETAILS OF A GIVEN FACILITY.
5. EXISTING ELEVATIONS SHOWN ON DRAWINGS WERE BASED ON SURVEY DATA COLLECTED ON 1/30/2019. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS SHOWN ON DRAWINGS.
6. SEE ALL DISCIPLINE DRAWINGS FOR ADDITIONAL SYMBOLS AND NOTES.
7. NOT ALL EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN IN DRAWINGS. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
8. CONTRACTOR SHALL PROTECT ALL EXISTING APPURTENANCES THAT REMAIN INCLUDING THOSE LOCATED WITHIN PAVED AREAS, WHETHER OR NOT SHOWN ON THE DRAWINGS, UNTIL READJUSTED. SUCH ITEMS INCLUDE BUT ARE NOT LIMITED TO VALVE CANS, ELECTRICAL MANHOLES, PULL BOXES, CATHODIC PROTECTION TEST STATIONS, MANHOLE AND CLEANOUT CASTINGS, AND SURVEY MONUMENTS.
9. CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO AND UTILIZE SERVICES OF UNDERGROUND SERVICE ALERT (USA) FOR LOCATION AND MARKINGS OF UNDERGROUND UTILITIES, PER SECTION 01010. USA CAN BE CONTACTED AT 811 OR (800)227-2600.
10. ALL AREAS DISTURBED OUTSIDE THE WORK AREA SHALL BE RESTORED TO THE PRE-DISTURBED CONDITION.
11. TYPICAL DETAILS SHALL BE USED FOR ALL PERMANENT WORK, EVEN THOUGH THEY ARE NOT CALLED OUT AT ALL LOCATIONS WHERE THEY APPLY. REFER TO TYPICAL DETAILS SHEETS.
12. REFER TO SECTION 01010 FOR WORK RESTRICTIONS INCLUDING SEQUENCING REQUIREMENTS AND REQUIREMENTS TO MAINTAIN DESIGNATED FACILITIES AND UTILITIES IN SERVICE DURING CONSTRUCTION.
13. SITE PREPARATION AND DEMOLITION REQUIREMENTS FOR THE PROJECT ARE INCLUDED IN THE TECHNICAL SPECIFICATIONS.
14. COORDINATES OF AND DIMENSIONS TO STRUCTURES SHOWN ON THE DRAWINGS ARE TO THE OUTSIDE OF WALL UNLESS OTHERWISE NOTED.

REGISTERED PROFESSIONAL ENGINEER
WILLIAM L. SANDELL
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES
2020 Research Park Drive
Suite 100
Davis, California 95618
(530) 756-5905
FAX (530) 756-5991

CITY OF MILPITAS
CALIFORNIA
JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

INDEX OF DRAWINGS AND GENERAL NOTES

JOB NUMBER 270-50-18-14
DRAWING NUMBER **G02**
SHEET NUMBER 2 OF 30
REVISION

N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-G02.dwg 5/26/2021 12:48 PM sbarber

GENERAL AND CIVIL SYMBOLS

- NATURAL GROUND OR GRADE
- GRANULAR MATERIAL SUCH AS ROCK OR GRAVEL
- GRAVEL LEVEL SURFACING
- EXISTING FENCE
- NEW FENCE
- EXISTING GRADE CONTOURS
- NEW GRADE CONTOURS
- EXISTING FACILITY
- NEW FACILITY
- FUTURE FACILITY
- CENTERLINE
- DEMOLISH
- EXISTING SPOT ELEVATION
- FINISH GRADE SPOT ELEVATION
- TEMPORARY SURVEY MONUMENT
- PERMANENT SURVEY MONUMENT
- EXISTING PIPELINE
- NEW PIPELINE
- NEW PIPELINE UNDER CONCRETE OR AC
- SLOPE
- DIRECTION OF FLOW
- ROCK SLOPE PROTECTION
- CONCRETE
- CHECKER PLATED DECK
- GRATING
- AC PAVING
- AB SURFACING
- RIGHT-OF-WAY
- WATER
- EXISTING OVERHEAD ELECTRIC
- STORM DRAIN
- SANITARY SEWER

MECHANICAL SYMBOLS

SINGLE LINE DOUBLE LINE

- FLANGED JOINT
- PLAIN OR GROOVED END MECHANICAL COUPLING
- PUSH ON, MECHANICAL OR BALL & SOCKET JOINT
- WELDED JOINT
- SLEEVE TYPE MECHANICAL COUPLING
- RESTRAINED SLEEVE TYPE MECHANICAL COUPLING
- FLANGED COUPLING ADAPTER
- RESTRAINED FLANGED COUPLING ADAPTER
- GROOVED END ADAPTER FLANGE
- UNION
- ELASTOMER & FABRIC XPANSION JOINT
- EXPANSION JOINT (SEE SPECS FOR TYPE)
- FLEXIBLE METAL HOSE
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- LATERAL UP
- LATERAL DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- MECHANICAL JOINT

VALVES AND APPURTENANCES

- THREE WAY VALVE
- GATE VALVE (NORMALLY OPEN)
- GATE VALVE (NORMALLY CLOSED)
- PLUG VALVE (NORMALLY OPEN)
- PLUG VALVE (NORMALLY CLOSED)
- BALL VALVE (NORMALLY OPEN)
- BALL VALVE (NORMALLY CLOSED)
- BUTTERFLY VALVE
- GLOBE VALVE
- DIAPHRAGM VALVE
- ANGLE VALVE
- FLOAT VALVE
- PINCH VALVE
- NEEDLE VALVE
- DOUBLE LEAF CHECK VALVE
- CHECK VALVE
- BALL CHECK VALVE
- PUMP DISCHARGE VALVE
- GAUGE OR ROOT VALVE
- KNIFE GATE VALVE
- FLAP GATE
- HOSE VALVE
- BALANCING COCK
- CIRCUIT SETTER
- THERMOSTATICALLY CONTROLLED VALVE
- PRESSURE & VACUUM RELIEF VALVE
- VACUUM RELIEF VALVE
- PRESSURE RELIEF VALVE
- STRAINER
- IN-LINE, SPRING LOADED RELIEF VALVE
- PRESSURE REGULATING VALVE
- BACK PRESSURE REGULATING VALVE
- SOLENOID VALVE
- DIAPHRAGM OPERATED VALVE
- PRESSURE BALANCE OPERATED VALVE
- MOTOR OPERATED VALVE
- PISTON OPERATED VALVE
- CHLORINE INSTITUTE CONTAINER VALVE
- MUD VALVE
- WHARF HYDRANT
- FIRE HYDRANT
- UTILITY STATION
- HOSE BIB VALVE

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
ALT	ALTERNATIVE
APPROX	APPROXIMATE
ARV	AIR RELIEF VALVE
ASPH	ASPHALT
BD	BUILDING DRAIN
BF	BLIND FLANGE
BO	BLOW OFF ASSEMBLY
BOW	BOTTOM OF WALL
BV, BFV	BUTTERFLY VALVE
BW	BOTH WAYS
CAV	COMBINATION AIR VALVE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CIP	CAST IRON PIPE
℄, CL	CENTER LINE
CLR	CLEAR
CLSM	CONTROL LOW STRENGTH MATERIAL
CO	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CMU	CONCRETE MASONRY UNIT
CTS	CATHODIC PROTECTION TEST STATION
CV	CHECK VALVE
CY	CUBIC YARDS
DI	DRAIN INLET
DIA, ø	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRAIN
DWG	DRAWING
DWY	DRIVEWAY
E	EAST, ELECTRIC
EA	EACH
EF	EACH FACE
EJF	EXPANSION JOINT FILLER
EL	ELEVATION
ELEC	ELECTRIC
EP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EW	EACH WAY
ELB	ELBOW
EX, (E)	EXISTING
EXP	EXPANSION
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FCA	FLANGED COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FL	FLOW LINE
FLG	FLANGE
FM	FORCE MAIN
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED PLASTIC
F/C	FACE OF CURB
FT, '	FEET, FOOT
G	GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GS	GROUND SURFACE
GSP	GROUND SURFACE PROFILE
GV	GATE VALVE
HC	HANDICAPPED
HP	HIGH POINT IN PVMT, HIGH POINT IN PIPE, HIGH PRESSURE
HORZ	HORIZONTAL
IE	INVERT ELEVATION
IN, "	INCH
INV	INVERT
IPS	IRON PIPE SIZE
IRR	IRRIGATION
JT	JOINT TRENCH
LAT	LATERAL
LF	LINEAL FEET
LGT	LIGHT
LP	LOW POINT IN PIPE
LPM	LITERS PER MINUTE
MAX	MAXIMUM
MIN	MINIMUM
MH	MANHOLE
MJ	MECHANICAL JOINT
MON	MONUMENT, MONITORING
MOV	MOTOR OPERATED VALVE
N	NORTH
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO., #	NUMBER
NR	NORTH REGIONAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PL	PROPERTY LINE
PSV	PRESSURE RELIEF VALVE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSUE	PUBLIC SERVICE & UTILITY EASEMENT
PT	POINT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REDR	REDUCER, REDUCING
REQD	REQUIRED
REIN	REINFORCING
REV	REVISION
RR	RAILROAD
RW	RECYCLED WATER
R/W	RIGHT OF WAY
RWTF	REGIONAL WATER TREATMENT FACILITY
S	SEWER, SOUTH, SLOPE
SA	SAMPLE
SB	SODIUM BISULFITE SOLUTION
SAN	SANITARY
SCH	SCHEDULE
SCP	STEEL CYLINDER PIPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SPD	SUMP PUMP DISCHARGE
SPRR	SIERRA PACIFIC RAILROAD
SQ	SQUARE
SS	SANITARY SEWER
SSB	STAINLESS STEEL BOLT
SSMH	SANITARY SEWER MANHOLE
SST	STAINLESS STEEL
STA	STATION
ST	STREET
STD	STANDARD
STL	STEEL
SVC	SERVICE
SW	SIDEWALK
T	TELEPHONE
T&B	TOP & BOTTOM
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL OR TOP OF STRUCTURAL FRAME
TOW	TOP OF WALL
TS	TUBULAR STEEL
TYP	TYPICAL
UG	UNDERGROUND
VAR	VARIOUS
VCP	VITRIFIED CLAY PIPE
VTR	VENT THROUGH ROOF
W	WATER, WEST
WL	WASTE LINE
W/	WITH
W/O	WITH OUT
WS	WATER SURFACE
WWF	WELDED WIRE FABRIC
WV	WATER VALVE

PIPING SYSTEM ABBREVIATIONS

D	DRAIN
FA	FOUL AIR
NIR	NUTRIENT IRRIGATION
RWL	RECLAIMED WATER LINE

SECTION & DETAIL DESIGNATIONS

SECTION CUT ON DWG 21

- A — SECTION LETTER
- 23 — DRAWING WHERE SECTION APPEARS

ON DWG 23 THIS SECTION IS IDENTIFIED AS:

- A — SECTION LETTER
- 21 — DRAWING FROM WHICH SECTION WAS TAKEN

DETAILS ARE CROSS REFERENCED IN A SIMILAR MANNER, EXCEPT THAT DETAILS ARE IDENTIFIED BY NUMBER RATHER THAN LETTER.

BASIS OF BEARINGS

THE BEARING S9°04'29"E IS THE BEARING BETWEEN POINTS 11 AND 33 PROVIDED BY WEST YOST, AND IS BASED ON CCS 83 (2011), ZONE 3, AS SHOWN ON SHEET 5 OF THE THE "CITY OF MILPITAS ENGINEERING DIVISION MAIN SEWAGE PUMP STATION CIP PROJECT #6103" TITLED G-302 SURVEY CONTROL DIAGRAM. DISTANCES SHOWN ARE GRID DISTANCES IN U.S. SURVEY FEET. DIVIDE GRID DISTANCE BY 0.99995 TO OBTAIN GROUND DISTANCES. ELEVATIONS SHOWN ARE BASED ON NGVD29 IN US SURVEY FEET.

POINT TABLE

CP #	NORTHING	EASTING	ELEVATION	DESCRIPTION
11	1988457.85	6148838.85	9.78	FOUND MAG NAIL
*33	1987594.28	6148976.78	8.27	FOUND MON-833
1001	1988477.13	6148743.31	9.90	SET 60D NAIL & FEATHERS
1002	1988490.22	6148673.17	10.75	SET NAIL AND SHINER
1003	1988554.31	6148651.51	10.92	SET MAG NAIL
1004	1988592.12	6148718.56	9.69	SET 60D NAIL & FEATHERS

* CP #33 IS LOCATED ON NORTH McCARTHY BLVD, APPROXIMATELY 120 FEET SOUTH OF CP#11

REGISTERED PROFESSIONAL ENGINEER — NICHOLAS L. SANDELL — No. 86703 — Exp. 3-31-23 — CIVIL — STATE OF CALIFORNIA — 5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

THIS LINE IS 1 INCH AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE : AS SHOWN
DRAWN BY : SMB
DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES
2020 Research Park Drive
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CITY OF MILPITAS — CALIFORNIA — JANUARY 25, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

LEGEND, ABBREVIATIONS AND CONTROL DATA

JOB NUMBER 270-50-18-14
DRAWING NUMBER G03
SHEET NUMBER 3 OF 30
REVISION

N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-G03.dwg 5/26/2021 12:48 PM sbarber

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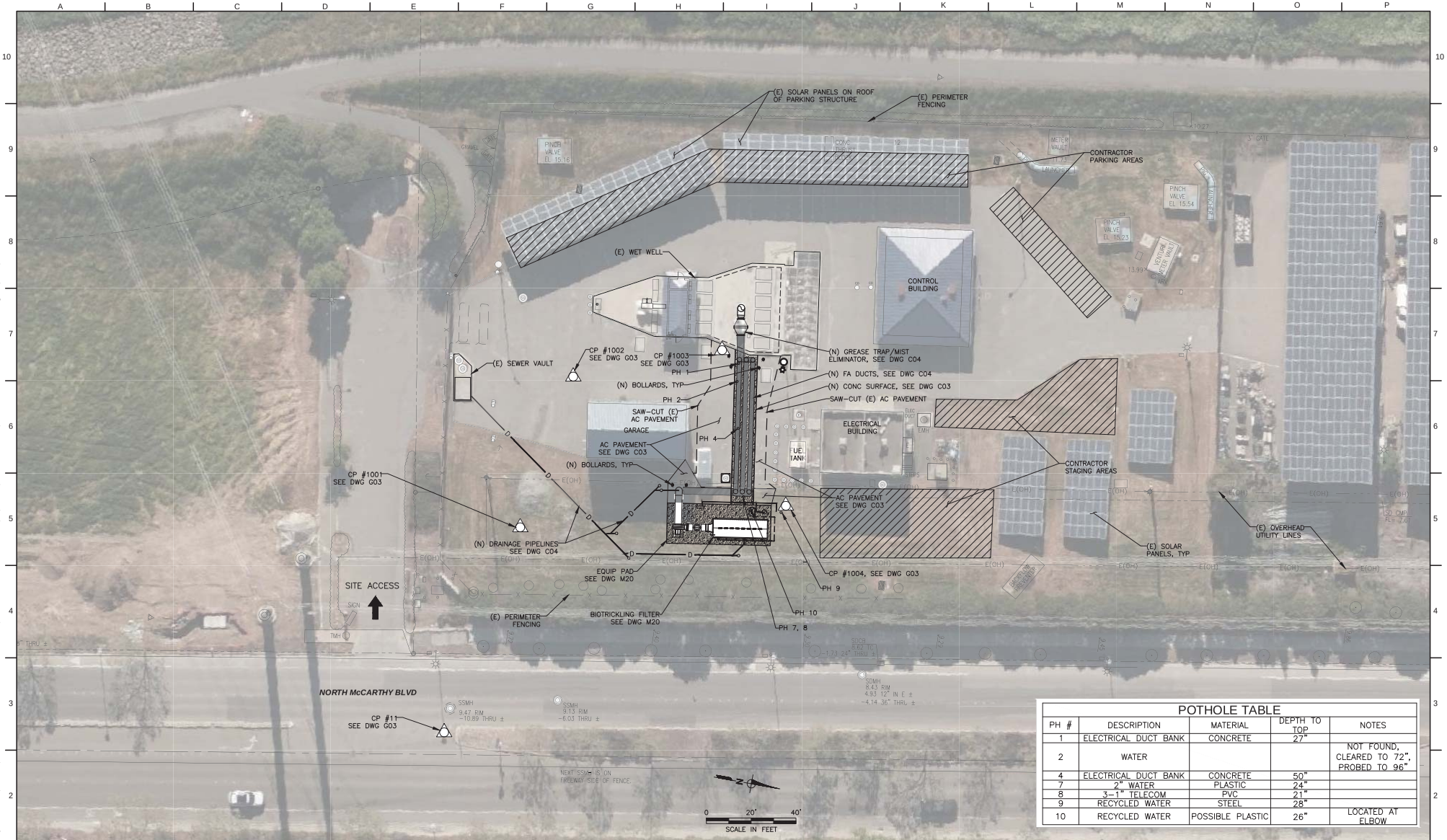

POTHOLE TABLE

PH #	DESCRIPTION	MATERIAL	DEPTH TO TOP	NOTES
1	ELECTRICAL DUCT BANK	CONCRETE	27"	
2	WATER			NOT FOUND, CLEARED TO 72", PROBED TO 96"
4	ELECTRICAL DUCT BANK	CONCRETE	50"	
7	2" WATER	PLASTIC	24"	
8	3-1" TELECOM	PVC	21"	
9	RECYCLED WATER	STEEL	28"	
10	RECYCLED WATER	POSSIBLE PLASTIC	26"	LOCATED AT ELBOW

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SANDELIN
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

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FAX (530) 756-5991

CITY OF MILPITAS
CALIFORNIA
JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

OVERALL SITE PLAN AND POTHOLE DATA

JOB NUMBER 270-50-18-14
DRAWING NUMBER G04
SHEET NUMBER 4 OF 30
REVISION

N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-G04.dwg 3/25/2021 9:19 AM sbarber

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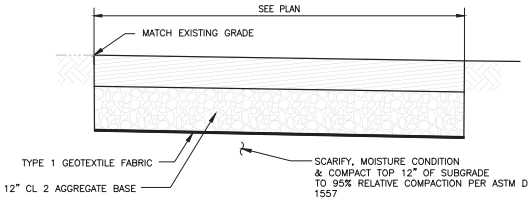
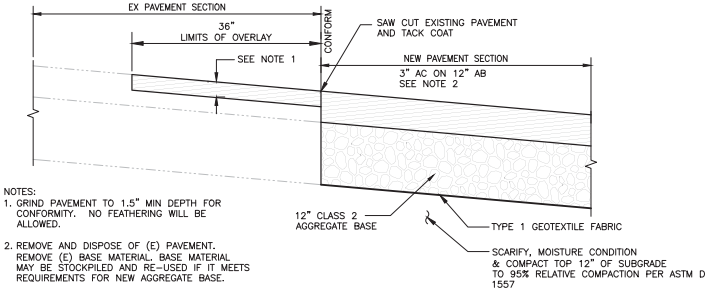


ASPHALT PAVEMENT

DETAIL 1/VAR

NOT TO SCALE



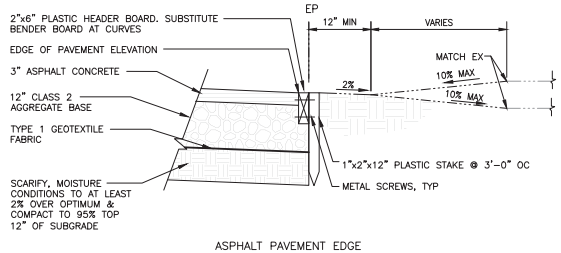
NOTES:

1. GRIND PAVEMENT TO 1.5" MIN DEPTH FOR CONFORMITY. NO FEATHERING WILL BE ALLOWED.
2. REMOVE AND DISPOSE OF (E) PAVEMENT. REMOVE (E) BASE MATERIAL. BASE MATERIAL MAY BE STOCKPILED AND RE-USED IF IT MEETS REQUIREMENTS FOR NEW AGGREGATE BASE.

NEW TO EXISTING PAVEMENT CONFORM

DETAIL 2/VAR

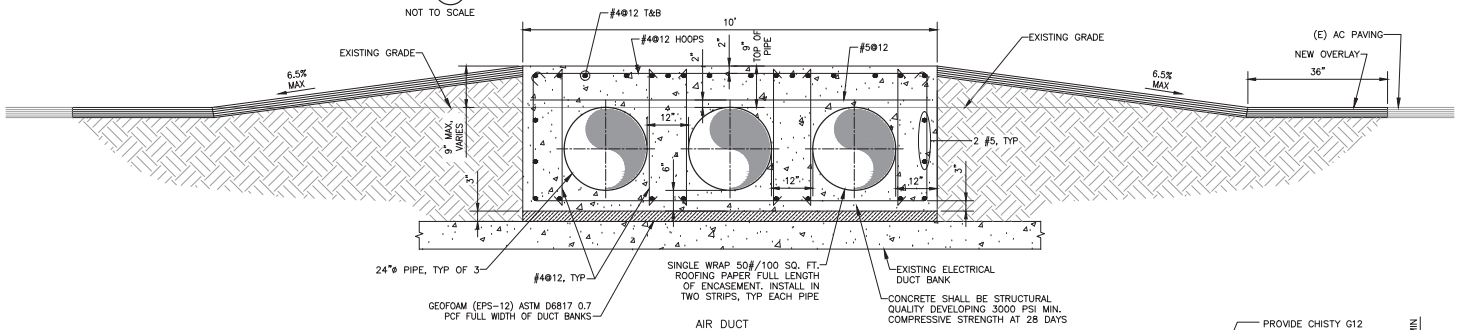
NOT TO SCALE



ASPHALT PAVEMENT EDGE

DETAIL 3/VAR

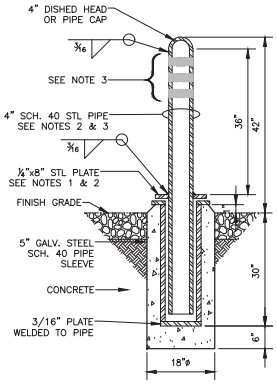
NOT TO SCALE



AIR DUCT

SECTION AA/C04

NOT TO SCALE



REMOVABLE BOLLARD

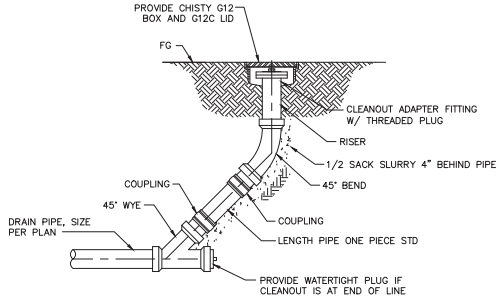
TRAFFIC BOLLARD NOTES:

1. APPLY ZINC PRIMER AFTER WELDING AS NEEDED.
2. POST TO BE PAINTED YELLOW AFTER FABRICATION.
3. APPLY 3 STRIPES, 2" WIDE CAUTION TAPE (REFLECTORIZED). START 2" FROM TOP AND SPACE 2" APART.
4. POST SHALL BE HOT DIPPED GALVANIZED.

TRAFFIC BOLLARD

DETAIL 4/C03

NOT TO SCALE



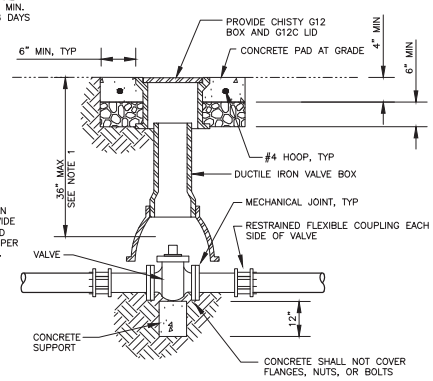
TYPICAL DRAIN CLEANOUT

DETAIL 5/C05

NOT TO SCALE

BURIED VALVE NOTES:

1. FOR VALVES WITH MORE THAN 36 INCHES OF COVER, PROVIDE 1-1/4" DIAMETER STEEL ROD STEM EXTENSION ASSEMBLY PER CITY STANDARD DRAWING NO. 702



TYPICAL BURIED VALVE

DETAIL 6/C05

NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER — WILLIAM L. NEWMAN — No. C39830 Exp. 12-31-21 — CIVIL — STATE OF CALIFORNIA — 8/28/2021

QA/QC REVIEW: DJA

DATE: 8/28/2020

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PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES

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(530) 756-5905
FAX (530) 756-5991

CITY OF MILPITAS — CALIFORNIA — JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

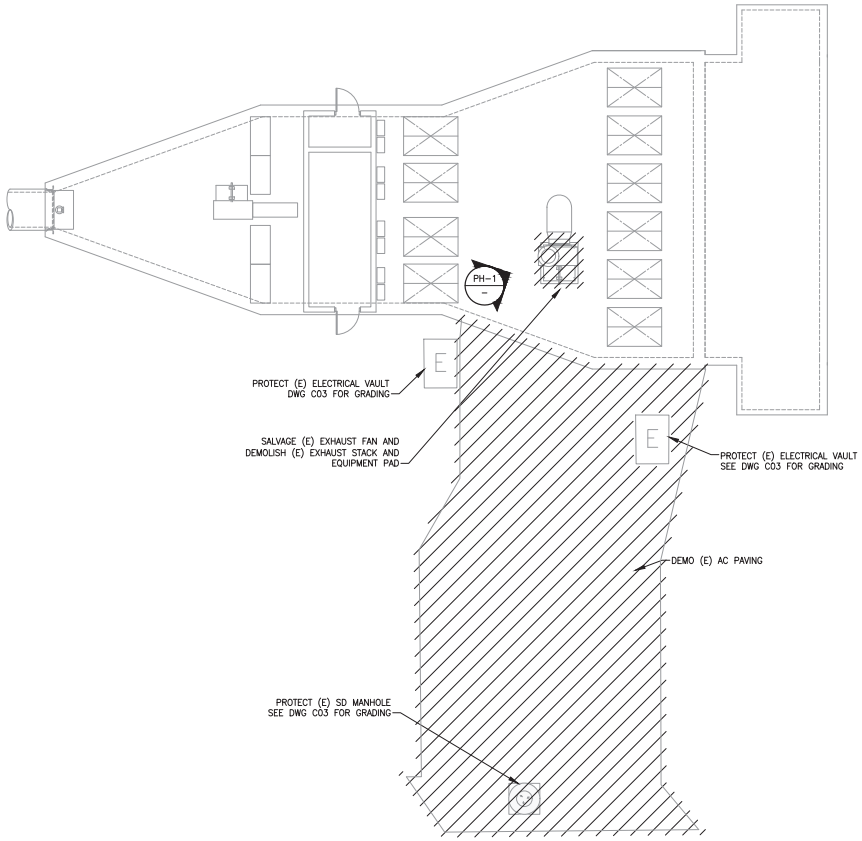
CIVIL DETAILS 1

JOB NUMBER 270-50-18-14

DRAWING NUMBER **C01**

SHEET NUMBER 5 OF 30

REVISION



EXISTING WET WELL

PLAN

SCALE: 1/8"=1'-0"

PHOTO DEMOLITION DETAIL PH-1 / –

REGISTERED PROFESSIONAL ENGINEER
WILLIAM L. NEWMAN
No. C90830
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
5/28/2021

QA/QC REVIEW: DJA

DATE: 8/28/2020

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PROJ. MGR. : WLS

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CITY OF MILPITAS
CALIFORNIA
JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

SITE DEMOLITION

JOB NUMBER 270-50-18-14

DRAWING NUMBER **C02**

SHEET NUMBER 6 OF 30

REVISION

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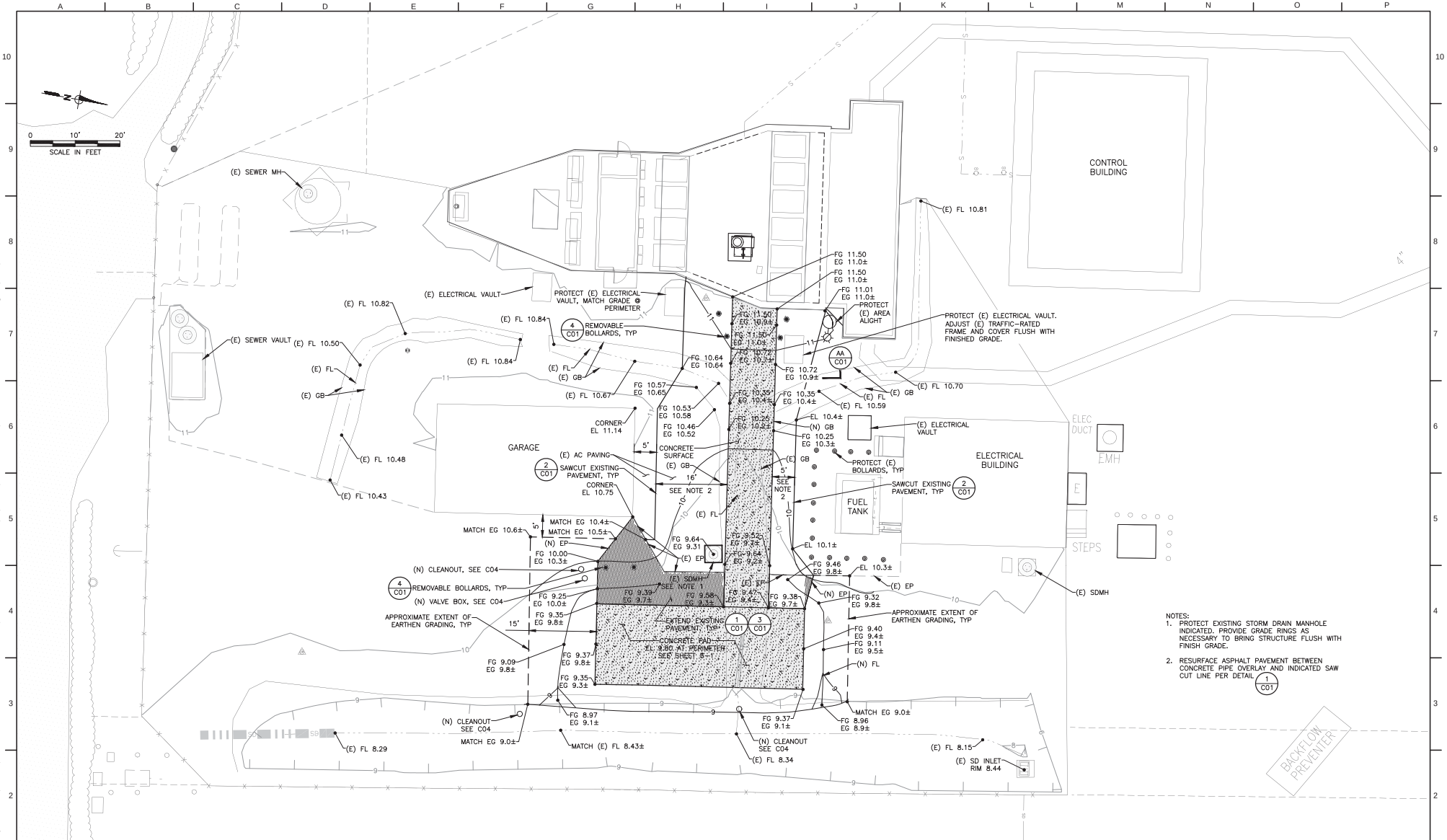

NOTES:
1. PROTECT EXISTING STORM DRAIN MANHOLE INDICATED. PROVIDE GRADE RINGS AS NECESSARY TO BRING STRUCTURE FLUSH WITH FINISH GRADE.
2. RESURFACE ASPHALT PAVEMENT BETWEEN CONCRETE PIPE OVERLAY AND INDICATED SAW CUT LINE PER DETAIL 1 C01

REGISTERED PROFESSIONAL ENGINEER — WILLIAM L. NEWMAN — No. C38830 Exp. 12-31-21 — CIVIL — STATE OF CALIFORNIA — 5/28/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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No.	ZONE	REVISIONS	BY	DATE
		CONFORMED TO ADDENDA	TZN	5/2021

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CITY OF MILPITAS — CALIFORNIA — JANUARY 20, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

PAVING AND GRADING PLAN

JOB NUMBER 270-50-18-14
DRAWING NUMBER C03
SHEET NUMBER 7 OF 30
REVISION 01

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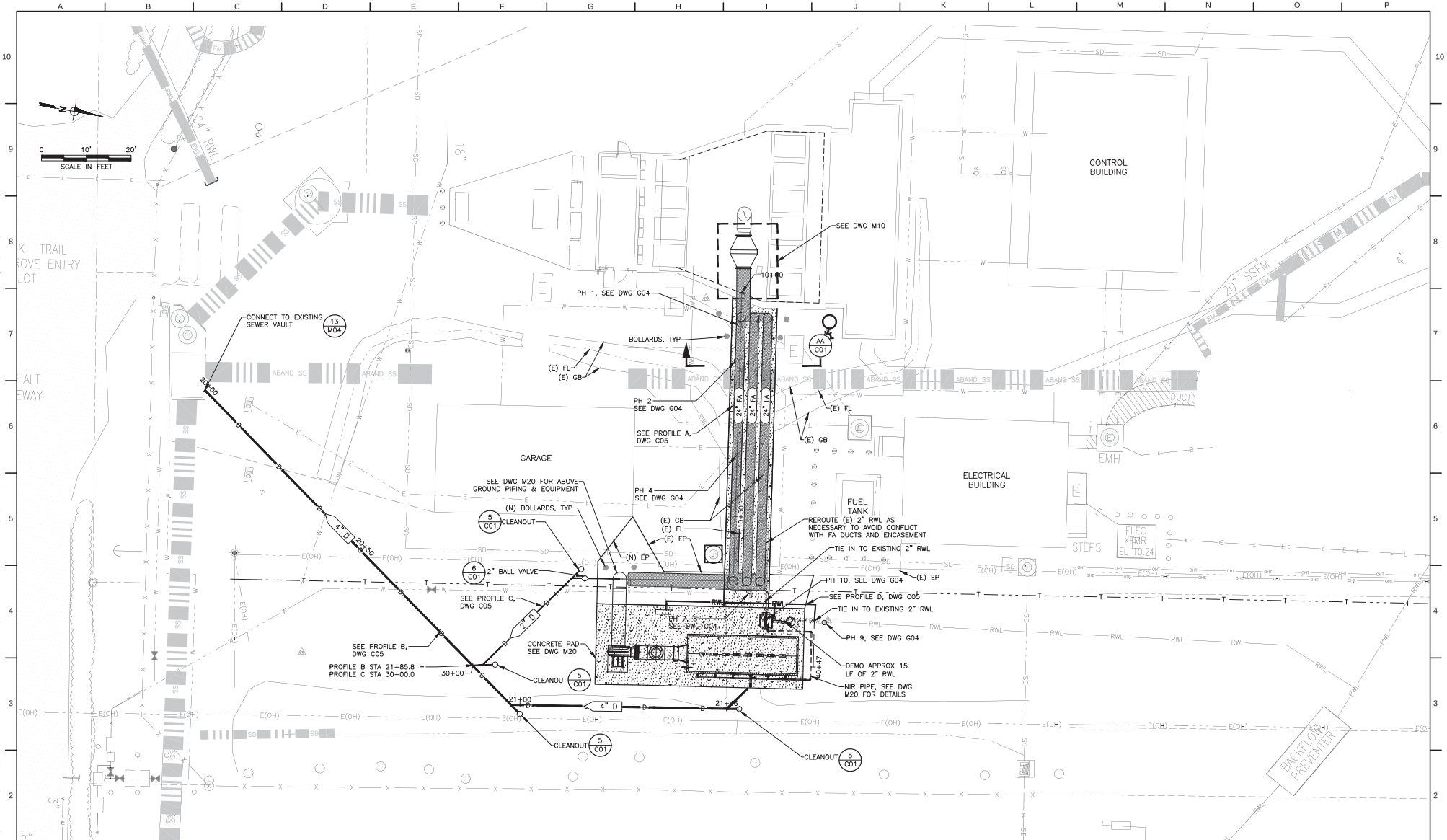

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REGISTERED PROFESSIONAL ENGINEER
No. C38830
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
5/28/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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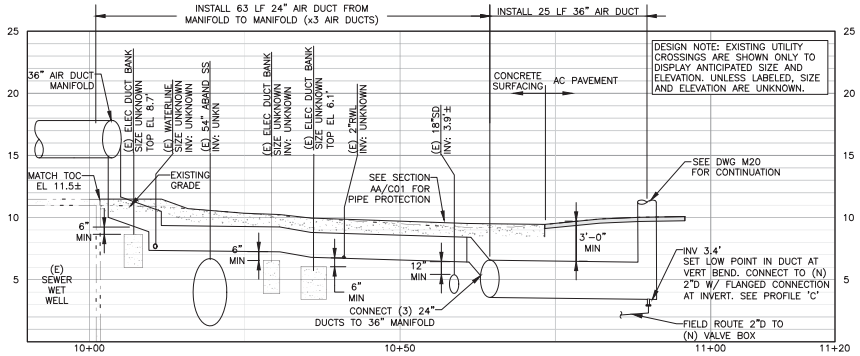
CITY OF MILPITAS
CALIFORNIA
JANUARY 30, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

UTILITY PLAN

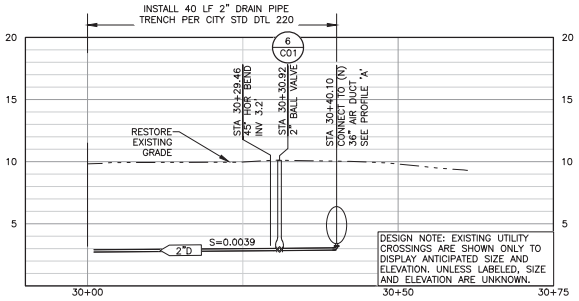
JOB NUMBER 270-50-18-14
DRAWING NUMBER C04
SHEET NUMBER 8 OF 30
REVISION

1360



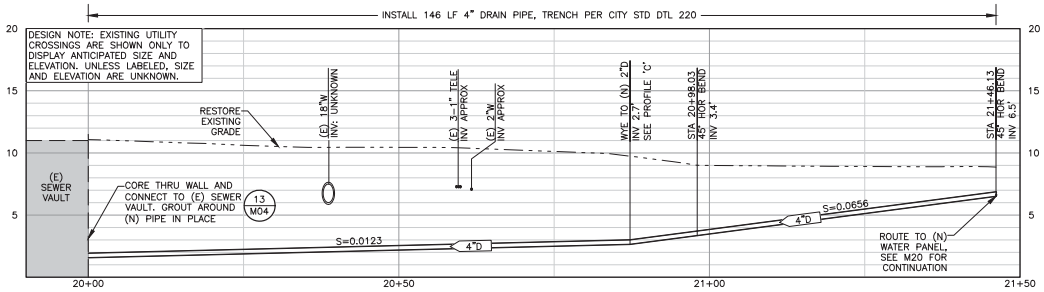
PROFILE A

SCALE: H:1"=10', V:1"=5'



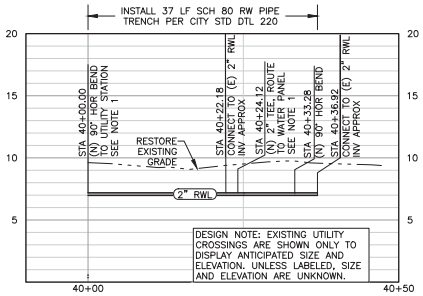
PROFILE C

SCALE: H:1"=10', V:1"=5'



PROFILE B

SCALE: H:1"=10', V:1"=5'



PROFILE D

SCALE: H:1"=10', V:1"=5'

REGISTERED PROFESSIONAL ENGINEER
No. C39830
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
8/28/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

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MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

UTILITY PROFILES

JOB NUMBER 270-50-18-14
DRAWING NUMBER **C05**
SHEET NUMBER 9 OF 30
REVISION

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STRUCTURAL NOTES

GENERAL

1. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, MECHANICAL, ELECTRICAL, AND SHOP DRAWINGS AND THE PROJECT SPECIFICATIONS (IF ANY).
2. CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE (CBC). THE CBC SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR THESE DOCUMENTS ARE MORE RESTRICTIVE.
3. NOTHING SHOWN OR OMITTED FROM THESE DOCUMENTS SHALL RELIEVE THE CONTRACTOR FROM FULL COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
4. THE CONTRACTOR ALONE IS RESPONSIBLE FOR JOB SITE SAFETY. SITE REVIEW OF THE CONSTRUCTION BY THE ENGINEER IS TO DETERMINE CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. IT DOES NOT ENCOMPASS SAFETY PROCEDURES OR OPERATIONS.
5. WITHOUT EXCLUSION OF ANY REFERENCE IN THE CONSTRUCTION DOCUMENTS TO ANY RULE OR REGULATION, THE ENGINEER IS NOT ASSUMING ANY PROVISIONS OF SUPERVISION OF CONSTRUCTION METHODS OR PROCESSES.
6. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. DURING CONSTRUCTION, BRACING OR SHORING SHALL SUPPORT STRUCTURES WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.
7. SEE ALL OTHER PROJECT DOCUMENTS FOR CONDUITS AND OTHER ITEMS TO BE EMBEDDED OR PASSED THROUGH THE CONCRETE.
8. PENETRATIONS THROUGH SLABS LESS THAN 12 INCHES IN DIAMETER MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ASSOCIATED DRAWINGS FOR LOCATIONS.
9. WRITTEN DIMENSIONS SHALL BE USED FOR CONSTRUCTION. DO NOT SCALE DRAWINGS.
10. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL AND/OR ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
11. MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND EMBEDMENTS NOT SHOWN ON THE DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO PLACING CONCRETE.
12. DIMENSIONS INDICATED WITH AN * SHALL BE COORDINATED WITH MECHANICAL AND/OR ELECTRICAL DRAWINGS AND EQUIPMENT SUPPLIED.
13. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. SHOULD CONFLICTS OR INTERFERENCE OCCUR, THEY SHALL BE RESOLVED WITH THE ENGINEER. EXISTING FIELD CONDITIONS AT VARIANCE WITH THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ANY WORK IS PERFORMED.
14. USE PERTINENT STANDARD DETAILS SHOWN, EVEN THOUGH THEY MAY NOT BE CALLED OUT AT LOCATIONS WHERE THEY APPLY.
15. CONDITIONS NOT SPECIFICALLY SHOWN OR INDICATED SHALL BE CONSTRUCTED SIMILAR TO DETAILS SHOWN FOR THE RESPECTIVE MATERIALS OR CONDITIONS.

DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS. DEFERRED SUBMITTALS LISTED BELOW ARE THE RESPONSIBILITY OF THE CONTRACTOR. DEFERRED SUBMITTAL ITEMS HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD. REFER TO CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION.
   a) EQUIPMENT ANCHORAGE
   a) CONDUIT SUPPORTS, INCLUDING DUCT SUPPORT SYSTEMS
2. UNLESS OTHERWISE NOTED, DEFERRED SUBMITTAL ITEMS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
3. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL DURING THE CONSTRUCTION PHASE OF THE PROJECT.
4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS.
5. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN FAVORABLY REVIEWED BY THE OWNER.

SPECIAL INSPECTION

1. SPECIAL INSPECTION SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE CBC. UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATIONS, SPECIAL INSPECTION SHALL BE PROVIDED BY AND PAID FOR BY THE OWNER. THE FOLLOWING ITEMS, AS A MINIMUM, SHALL RECEIVE SPECIAL INSPECTION:

ITEM	CONCRETE INSPECTIONS AND VERIFICATION	FREQUENCY	
		CONTINUOUS	PERIODIC
1.	INSPECTION OF REINFORCING STEEL AND PLACEMENT.		X
2.	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.3, ITEM 2.	X	
3.	INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.		X
4.	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	X	
5.	VERIFYING USE OF REQUIRED DESIGN MIX.		X
6.	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	
7.	INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	
8.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X
9.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X

ITEM	FOUNDATION INSPECTIONS AND VERIFICATION	FREQUENCY	
		CONTINUOUS	PERIODIC
	SOILS		
1.	VERIFY SUBGRADE MATERIALS BELOW THE FOOTING FOR DESIGN BEARING CAPACITY.		X
2.	VERIFY DEPTH OF EXCAVATION AND TYPE OF SUBGRADE MATERIALS REACHED.		X
3.	VERIFY MATERIALS USED, LAYERED THICKNESSES AND COMPACTION OF BACK FILLS.	X	

NOTATION:

"X" DENOTES EITHER CONTINUOUS OR PERIODIC INSPECTIONS.
"—" DENOTES AN ACTIVITY THAT IS EITHER A ONE TIME ACTIVITY OR ONE WHOSE FREQUENCY IS DEFINED IN SOME OTHER MANNER

DEFINITIONS:
CONTINUOUS - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED (CBC, SECTION 202)

PERIODIC - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED (CBC, SECTION 202)

SPECIAL INSPECTOR - A QUALIFIED PERSON EMPLOYED OR RETAINED BY THE OWNER AND APPROVED BY THE AUTHORITY HAVING JURISDICTION AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION.

DESIGN LOADS

1. LIVE LOADS:

USE OR OCCUPANCY	UNIFORM LOAD (psf)	CONCENTRATED LOAD (lbs)
EQUIPMENT SLABS	250	-(1)

(1) REFER TO EQUIPMENT MANUFACTURER'S DRAWINGS FOR CONCENTRATED LOAD.

2. WIND:

BASIC WIND SPEED V_{ult} (3-SECOND GUST):	99 MPH
RISK CATEGORY:	III
WIND EXPOSURE CATEGORY:	B
INTERNAL PRESSURE COEFFICIENT	N/A
C&C PRESSURES FOR DEFERRED SUBMITTALS	N/A

3. SEISMIC:

SEISMIC IMPORTANCE FACTOR (I_E)	1.25
RISK CATEGORY:	III
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S_S = 2.056g, S_1 = 0.791g
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS:	S_{DS} = 1.371g
SEISMIC DESIGN CATEGORY:	E
ANALYSIS PROCEDURE USED:	ASCE 7-16; CHAPTER 13

4. SNOW:

GROUND SNOW LOAD (P_g):	0 PSF
FLAT-ROOF SNOW LOAD (P_f):	N/A
SNOW EXPOSURE FACTOR (C_e):	N/A
SNOW LOAD IMPORTANCE FACTOR (I_s):	N/A
THERMAL FACTOR (C_t):	N/A

SOIL PARAMETERS

1. ALLOWABLE SOIL BEARING CAPACITY:

FOUNDATION TYPE	ALLOWABLE BEARING CAPACITY (1) FOR DL + LL
MAT FOUNDATION	1,000 psf

(1) ALLOWABLE BEARING VALUES MAY BE INCREASED BY 1/3 FOR LOAD CASES INCLUDING WIND AND/OR SEISMIC.

2. COEFFICIENT OF FRICTION:

   A COEFFICIENT OF SLIDING FRICTION OF 0.35 BETWEEN MAT FOUNDATION AND CLASS 2 AGGREGATE BASE.

CONDUITS AND PIPES EMBEDDED IN CONCRETE

1. CONDUIT, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN LIMITATIONS OF THE PROJECT DRAWINGS AND SPECIFICATIONS, AND ACI 318 MAY BE PERMITTED TO BE EMBEDDED IN CONCRETE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER OF RECORD, PROVIDED THEY ARE NOT CONSIDERED, BY THE ENGINEER OF RECORD, TO DISPLACE STRUCTURAL CONCRETE, EXCEPT AS PROVIDED HEREIN.
2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE.
3. CONDUITS AND PIPES, WITH THEIR FITTINGS, EMBEDDED WITHIN A COLUMN SHALL NOT DISPLACE MORE THAN 4-PERCENT OF THE AREA OF THE CROSS SECTION ON WHICH THE STRENGTH IS CALCULATED OR WHICH IS REQUIRED FOR FIRE PROTECTION. THE ENGINEER OF RECORD SHALL DETERMINE IF THE STRENGTH OF THE CONSTRUCTION HAS BEEN SIGNIFICANTLY IMPAIRED.
4. CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM SHALL SATISFY THE FOLLOWING:
   a) THEY SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 THE OVERALL THICKNESS OF SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
   b) MINIMUM CENTER-TO-CENTER SPACING BETWEEN CONDUIT AND/OR PIPING RUNS SHALL BE 3 TIMES OUTSIDE DIAMETER OR WIDTH.
   c) THEY SHALL BE LOCATED IN SUCH A MANNER AS TO MAINTAIN A MINIMUM OF 1-INCH CLEAR SPACE BETWEEN THE EMBEDDED ITEM AND PRIMARY REINFORCEMENT.
   d) THEY SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION. THE ENGINEER OF RECORD SHALL DETERMINE IF THE STRENGTH OF THE CONSTRUCTION HAS BEEN SIGNIFICANTLY IMPAIRED.
5. NO LIQUIDS, GAS, OR VAPOR, EXCEPT WATER NOT EXCEEDING 90 DEGREES FAHRENHEIT NOR 50 PSI, SHALL BE PLACED IN THE PIPES UNTIL THE CONCRETE HAS ATTAINED ITS DESIGN STRENGTH.
6. IN SOLID SLABS, CONDUITS AND/OR PIPING SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCEMENT AT THE CENTERLINE OF THE SLAB. AT A MINIMUM, THEY SHALL BE LOCATED IN SUCH A MANNER AS TO MAINTAIN A MINIMUM OF 1-INCH CLEAR SPACE BETWEEN THE EMBEDDED ITEM AND PRIMARY REINFORCEMENT.
7. CONCRETE COVER FOR PIPES, CONDUITS, AND FITTINGS SHALL NOT BE LESS THAN 2-INCHES FOR CONCRETE EXPOSED TO EARTH, CONTAINED LIQUIDS, OR WEATHER, NOR LESS THAN 1-INCH FOR CONCRETE NOT EXPOSED TO CONTAINED LIQUIDS, WEATHER OR IN CONTACT WITH GROUND.
8. ADDITIONAL REINFORCEMENT WITH AN AREA NOT LESS THAN 0.002 TIMES THE AREA OF CONCRETE SECTION SHALL BE PROVIDED NORMAL TO THE CONDUIT AND/OR PIPING.
9. CONDUITS AND/OR PIPING SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF PRIMARY REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.

SITE WORK

1. EXCAVATION FOR PADS AS SHOWN ON THE DRAWINGS: THE BOTTOMS OF ALL EXCAVATIONS SHALL BE LEVEL, TAMPED FIRM, CLEAN AND FREE FROM ALL DEBRIS OR FOREIGN MATTER.
2. OVER-EXCAVATION SHALL EXTEND LATERALLY BEYOND THE OUTSIDE EDGE OF FOOTINGS BY A MINIMUM OF 1/2 THE DEPTH OF OVER-EXCAVATION BELOW THE FOOTING OR 12-INCHES.
3. WHERE PRACTICABLE, SIDES OF FOOTINGS SHALL BE CUT NEAT AND CONCRETE POURED DIRECTLY AGAINST THE EXCAVATION. IF FORMING IS REQUIRED, THE TRENCHES SHALL BE EXCAVATED WIDE ENOUGH TO PERMIT THE ERECTION AND REMOVAL OF FORMS.
4. THE BOTTOM OF ALL EXCAVATIONS SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, MOISTURE CONDITIONED TO WITHIN 5 PERCENT (±1 PERCENT) OVER THE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A LEAST 90 PERCENT (±1 PERCENT) RELATIVE COMPACTION.
5. CLASS 2 AGGREGATE BASEROCK SHALL CONSIST OF MATERIAL FREE FROM DEBRIS AND ORGANIC OR OTHER DELETERIOUS MATERIALS. BACKFILL MATERIAL SHALL BE PLACED IN 8-INCH LAYERS, LEVELED, RAMMED AND TAMPED IN PLACE. COMPACTION OF ALL LAYERS SHALL BE A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

REGISTERED PROFESSIONAL ENGINEER DAVID M. BEEVUE No. S 4872 Exp. 06/30/21 STRUCTURAL STATE OF CALIFORNIA
8/27/2020

QA/QC REVIEW: TJC
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CITY OF MILPITAS CALIFORNIA JANUARY 20, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

STRUCTURAL GENERAL NOTES I

JOB NUMBER 270-50-18-14
DRAWING NUMBER GS-1
SHEET NUMBER 10 OF 30
REVISION

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CONCRETE REINFORCING

1. REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION A706 OR A615, GRADE 60.
2. REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CRSI MANUAL OF STANDARD PRACTICE.
3. REINFORCING SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

CONDITION	COVER (INCHES)
UNFORMED SURFACES IN CONTACT WITH EARTH	3
FORMED SURFACES EXPOSED TO EARTH, WATER AND/OR WEATHER	2
CONCRETE SURFACES FOR DRY CONDITIONS - SLABS	1 1/2

4. SPLICED BARS SHALL HAVE A MINIMUM CLASS B CONTACT LAP AS SPECIFIED IN THE LATEST EDITION OF ACI 315 DETAILING MANUAL AND ACI 318 UNLESS OTHERWISE NOTED ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, ld = DEVELOPMENT LENGTH AS DEFINED IN THE STANDARD DETAILS OF THESE DRAWINGS. HOOKS OF REINFORCING STEEL SHALL COMPLY WITH ACI 318.
5. WRITTEN SPACING AND LOCATION OF REINFORCING SHALL TAKE PRECEDENCE OVER DEPICTED SPACING AND LOCATION.
6. UNLESS OTHERWISE NOTED ON THE DRAWINGS, REINFORCING BARS SHOWN TERMINATING WITH A HOOK SHALL BE FABRICATED WITH A STANDARD HOOK AS DEFINED WITHIN ACI 318. WHERE SECTION THICKNESS DOES NOT ALLOW FOR FULL HOOK EXTENSION, TILT HOOK UNTIL HOOK FITS. ALTERNATIVELY CONTRACTOR MAY USE 180° HOOK OR TWO SMALLER BARS OF EQUIVALENT AREA OF STEEL.
7. IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND BE TERMINATED WITH A STANDARD HOOK.
8. AT FOOTING CORNERS AND INTERSECTIONS, EXTEND BARS AROUND CORNERS AND LAP A MINIMUM OF 40 BAR DIAMETERS.

CONCRETE ANCHORS

1. CAST-IN ANCHOR RODS/BOLTS SHALL BE STAINLESS STEEL. TYPE 316 FOR EXTERIOR CONDITIONS.
2. POST-INSTALLED CONCRETE ANCHORS, INCLUDING ADHESIVE AND EXPANSION ANCHORS, SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND THE APPROPRIATE EVALUATION REPORT. ANCHORS WITHOUT A CURRENT ICC-ES ESR, IAPMOES ER OR EQUAL SHALL NOT BE USED.
3. UNLESS OTHERWISE INDICATED, ALL ADHESIVE AND EXPANSION ANCHORS FOR INSTALLATION IN CONCRETE SHALL HAVE SATISFIED THE REQUIREMENTS OF THE SIMULATED SEISMIC TESTS OF ACI 355.4 OR ACI 355.2, NO SUBSTITUTION SHALL BE ALLOWED.
4. CONTRACTOR SHALL LOCATE EXISTING REBAR USING NON-DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES FOR POST-INSTALLED ANCHORS. ADJUST SPACING OF ANCHORS TO MISS EXISTING REINFORCING. TOTAL NUMBER OF ANCHORS PROVIDED SHALL BE EQUAL TO THAT SHOWN ON THE DRAWINGS.
5. ADHESIVE ANCHORS SHALL CONSIST OF A TWO-COMPONENT RESIN ADHESIVE. THE PACKAGES CONTAINING EACH COMPONENT SHALL BE ATTACHED TO A DISPENSING MANIFOLD. AN AUGER STYLE NOZZLE SHALL BE ATTACHED FOR PROPER MIXING OF THE ADHESIVE COMPONENTS. WHERE THREADED RODS ARE REQUIRED, RODS SHALL CONFORM TO ASTM A193 GRADE B7. WHERE STAINLESS STEEL IS CALLED FOR ON THE DRAWINGS, STAINLESS STEEL SHALL BE TYPE 316.
6. WHERE THE DESIGN OF THE ANCHORAGE REQUIRES ADDITIONAL SUPPLEMENTAL CONCRETE REINFORCING STEEL TO PROTECT AGAINST CONCRETE FAILURE MODES, THE DESIGN OF THE ADDITIONAL SUPPLEMENTAL REINFORCING STEEL SHALL BE INCLUDED AS PART OF THE SUBMITTED ANCHORAGE CALCULATIONS. THE ADDITIONAL SUPPLEMENTAL CONCRETE REINFORCING STEEL SHALL BE TREATED AS PART OF THE REQUIRED BUILDING AND/OR EQUIPMENT ANCHORAGE AND SHALL BE PROVIDED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER.

CONCRETE

1. REINFORCED CONCRETE SHALL CONFORM TO ACI 318.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II. ONE BRAND OF CEMENT SHALL BE USED THROUGHOUT THE WORK.
3. ALL AGGREGATES SHALL CONFORM TO ASTM C33. THE MAXIMUM SIZE AGGREGATE SHALL BE 1 INCH.
4. MIXING WATER SHALL BE POTABLE WATER FREE FROM INJURIOUS AMOUNTS OF ACID, ALKALI, OR OTHER HARMFUL SUBSTANCES. WATER SHALL BE OBTAINED FROM LOCAL UTILITY COMPANY MAINS UNLESS THE ENGINEER APPROVES ANOTHER SOURCE.
5. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.
6. CURING COMPOUNDS SHALL CONFORM TO ASTM C309.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE MINIMUM REQUIREMENTS LISTED BELOW. CEMENT CONTENT SHALL BE INCREASED OVER THAT LISTED IF REQUIRED TO OBTAIN THE LISTED COMPRESSIVE STRENGTH.

LOCATION	MIN 28 DAY STRENGTH (psi)	MIN CEMENT CONTENT (lbs)	SLUMP (in)
STRUCTURAL CONCRETE	4,000	560	3-5

8. FOR ADDITIONAL BENEFITS OF INCREASED COHESION, IMPROVED COMPACTION, REDUCED SCALING AND ENHANCED LONG TERM QUALITY DURABILITY, ALL CONCRETE SHALL HAVE AIR ENTRAINMENT OF 3.5 TO 5.0 PERCENT.
9. ALL CONCRETE SHALL BE TRANSIT MIXED IN ACCORDANCE WITH ASTM C194, EXCEPT THAT SMALL BATCHES OF 1/2 CUBIC YARD OR LESS MAY BE MIXED ON THE SITE.
10. TRANSIT MIXED CONCRETE SHALL BE MIXED FOR NOT LESS THAN 10 MINUTES TOTAL, OF WHICH NOT LESS THAN 3 MINUTES SHALL BE ON THE SITE JUST PRIOR TO PLACEMENT. MIXING SHALL BE CONTINUOUS WITH NO INTERRUPTIONS FROM THE TIME THE TRUCK IS FILLED UNTIL THE TIME IT IS EMPTIED. CONCRETE SHALL BE PLACED WITHIN ONE HOUR OF THE TIME WATER IS FIRST ADDED. TRANSIT MIXED CONCRETE SHALL NOT EXCEED A TEMPERATURE OF 90 DEGREES FAHRENHEIT WITHOUT APPROVAL OF THE ENGINEER.
11. ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 3/4" MINIMUM CHAMFER, UNLESS NOTED OTHERWISE.
12. FOR ALL CONCRETE PLACED ON SOIL, THE SUBGRADE SHALL BE THOROUGHLY WETTED PRIOR TO PLACING. SEE OTHER NOTES FOR ADDITIONAL SUBGRADE REQUIREMENTS.
13. BEFORE PLACING CONCRETE, MIXING, CONVEYING, FINISHING EQUIPMENT, FORMS AND REINFORCING SHALL BE WELL CLEANED.
14. CONCRETE SHALL BE CONVEYED FROM MIXER TO FINAL LOCATION AS RAPIDLY AS POSSIBLE BY METHODS PREVENTING SEPARATION OF THE INGREDIENTS. DEPOSIT CONCRETE AS NEARLY AS POSSIBLE IN FINAL POSITION TO AVOID REHANDLING.
15. VIBRATION SHALL BE BY MEANS OF MECHANICAL VIBRATORS IN DIRECT CONTACT WITH THE CONCRETE, AND NOT BY VIBRATING THE FORMS OR REINFORCING. VIBRATION SHALL CONTINUE UNTIL WATER SHOWS THE FIRST SIGNS OF RISING.

CONCRETE FINISHING, CURING AND PATCHING

1. AS SOON AS CONCRETE IN SLABS HAS SET SUFFICIENTLY TO BE WORKABLE, IT SHALL BE HAND FLOATED WITH A WOOD FLOAT. ALL EXTERIOR SLABS SHALL BE GIVEN A LIGHT BROOM NON-SLIP FINISH UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. FINISHED SURFACES OF ALL SLABS SHALL BE TRUE AND FLAT IN ACCORDANCE WITH ELEVATIONS AND SLOPES SHOWN ON THE DRAWINGS. THE MAXIMUM VARIATION ALLOWED FROM THE SPECIFIED SLOPES AND SURFACES SHALL BE 1/8 INCH WITH NOT MORE THAN 1/8-INCH VARIATION IN ANY 10-FOOT LENGTH.
3. CONCRETE SLABS SHALL BE CURED BY MEANS OF AN APPROVED CURING COMPOUND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
4. EDGE FORMS 8 INCHES OR LESS IN HEIGHT AT SLABS SHALL REMAIN IN PLACE 24 HOURS AFTER PLACEMENT.
5. IMMEDIATELY AFTER FORM REMOVAL, FORM TIES SHALL BE REMOVED FROM EXPOSED SURFACES AND HOLES AND OTHER VOIDS SHALL BE POINTED FLUSH WITH MORTAR COMPOSED OF ONE PART PORTLAND CEMENT AND TWO PARTS SAND. FINS, BURRS, ETC. SHALL BE REMOVED WHILE THE CONCRETE IS STILL GREEN. VOIDS, POCKETS, AND HONEYCOMBS WHICH WOULD EITHER WEAKEN CONCRETE OR DISFIGURE EXPOSED SURFACES SHALL BE SIMILARLY PATCHED. IF, IN THE ENGINEER'S OPINION, HONEYCOMBING IS SUCH THAT THE STRENGTH OF THE STRUCTURE IS IMPAIRED, WHOLE SECTIONS OF THE WORK MAY BE REQUIRED BY THE ENGINEER TO BE REMOVED AND REPLACED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.

ABBREVIATIONS:

Ø	DIAMETER
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM
ALT	ALTERNATE(ING)
APPROX	APPROXIMATE(LY)
AR	ANCHOR ROD
ARND	AROUND
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	ASTM INTERNATIONAL
ATR	ALL-THREADED ROD
BLDG	BUILDING
B.O.	BOTTOM OF
BOT	BOTTOM
BTWN	BETWEEN
CBC	CALIFORNIA BUILDING CODE
C/C	CENTER TO CENTER
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CSK	COUNTERSINK
CTJ	CONTROL JOINT
CTR	CENTER (ED)
D	DEEP, DEPTH
d_b	BAR DIAMETER
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DR	DRAIN
DWG(S)	DRAWING(S)
DWL(S)	DOWEL(S)
(E)	EXISTING
EA	EACH
EF	EACH FACE
EMBED	EMBEDMENT
EOR	ENGINEER OF RECORD
EQ	EQUAL (LY)
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE
ESR	EVALUATION SERVICE REPORT
ETC	ETCETERA
EW	EACH WAY
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXST	EXISTING
f'c	CONCRETE COMPRESSIVE STRENGTH
f'm	MASONRY PRISM STRENGTH
FDN	FOUNDATION
FIN	FINISH (ED)
FO	FACE OF
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GALVS	GALVANIZED STEEL
HOR	HORIZONTAL
HP	HIGH POINT
IAMPO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICALS
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT	INTERIOR
JB	JUNCTION BAR
JT	JOINT
JT FLR	JOINT FILLER
Ld	DEVELOPMENT LENGTH
Ldh	DEVELOPMENT LENGTH STANDARD HOOK
LG	LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LP	LOW POINT
LS	CLASS B TENSION CONTACT LAP SPLICE
LT	LEFT
LW	LIGHTWEIGHT
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
O/E	OR EQUAL
OC	ON CENTER
OPNG(S)	OPENING(S)
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
PCF	POUNDS PER CUBIC FOOT
PRCST	PRECAST
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
RC	REINFORCED CONCRETE
REINF	REINFORCE (D, ING)
REQD	REQUIRED
REV	REVISION
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPEC	SPECIFICATION, SPECIFIED
STD	STANDARD
STIR.	STIRRUP (S)
STL	STEEL
STRUC	STRUCTURE (S, URAL)
T&B	TOP AND BOTTOM
TJ	TOOLED JOINT
T.O.	TOP OF
TOC	TOP OF CONCRETE
TYP	TYPICAL
UES	UNIFORM EVALUATION SERVICES
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT

LEGEND:

CONCRETE

PAVEMENT OR SIDEWALK

STRUCTURAL FILL/BACKFILL

UNDISTURBED EARTH

SLOPE DOWN

ABBREVIATION NOTES:

1. ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT STEEL CONSTRUCTION MANUAL BY AISC.
2. ABBREVIATIONS OF TECHNICAL SOCIETIES AND TRADE ASSOCIATIONS MAY BE FOUND IN THE SPECIFICATIONS
3. WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 2.4.
4. ABBREVIATIONS LISTED ARE FOR USE WITH STRUCTURAL DRAWINGS ONLY. SOME ABBREVIATIONS LISTED MAY NOT BE USED ON THE PLANS.

BAR SIZE	3000 PSI CONCRETE				
	ld (INCHES)		ls (INCHES)		ldh (INCHES)
	TOP BAR	OTHER	TOP BAR	OTHER	
#3	22	17	29	23	9
#4	29	23	38	30	11
#5	36	28	47	37	14
#6	43	34	56	45	17
#7	63	49	82	64	20
#8	72	56	94	73	22
#9	81	63	106	82	25
#10	91	70	119	91	28

NOTES:

1. ld: DEVELOPMENT LENGTH FOR A STRAIGHT REINFORCING BAR IN TENSION.
   ls: CLASS B TENSION CONTACT LAP SPLICE LENGTH.
   ldh: DEVELOPMENT LENGTH FOR STANDARD HOOKS IN TENSION.
2. LAP SPLICES SHALL BE CLASS B TENSION LAP SPLICES TYPICAL, UNLESS OTHERWISE NOTED ON DRAWINGS.
3. TOP BAR IS ANY HORIZONTAL BAR WITH MORE THAN 12" CONCRETE CAST IN ONE LIFT BENEATH THE BAR, INCLUDING BUT NOT LIMITED TO, HORIZONTAL BARS CAST IN WALLS.
4. SPLICES IN HORIZONTAL BARS SHALL BE STAGGERED.
5. UNLESS OTHERWISE DETAILED ON THE DRAWINGS, SPLICES IN TWO CURTAINS SHALL NOT OCCUR IN THE SAME LOCATION.

LAP SPLICE LENGTH

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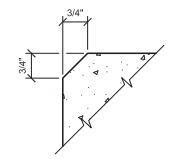
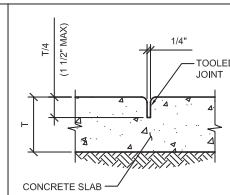


UON ON DRAWINGS

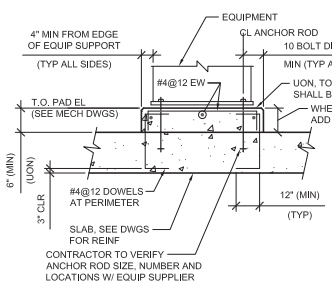
CONCRETE CHAMFER

DETAIL 03028 NTS -



TOOLED CONTROL JOINT

DETAIL 03030 NTS -



NOTES:

1. CAST-IN PLACE ANCHOR ROD SHOWN. AS AN ALTERNATIVE, CONTRACTOR MAY USE POST INSTALLED CONCRETE ANCHORS AT LOCATIONS AND APPLICATIONS WHERE PERMITTED IN THE CONTRACT DOCUMENTS.
2. CAST-IN-PLACE ANCHORS SHALL BE USED FOR VIBRATORY EQUIPMENT.

EQUIPMENT PAD

DETAIL 03076 NTS VAR

REGISTERED PROFESSIONAL ENGINEER DAVID M. WEST No. S 4872 Exp. 06/30/21 STRUCTURAL STATE OF CALIFORNIA

8/27/2020

QA/QC REVIEW: TJC

DATE: 8/5/2020

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MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

STRUCTURAL
GENERAL NOTES II, ABBREVIATIONS, AND LEGEND

JOB NUMBER 270-50-18-14
DRAWING NUMBER GS-2
SHEET NUMBER 11 OF 30
REVISION

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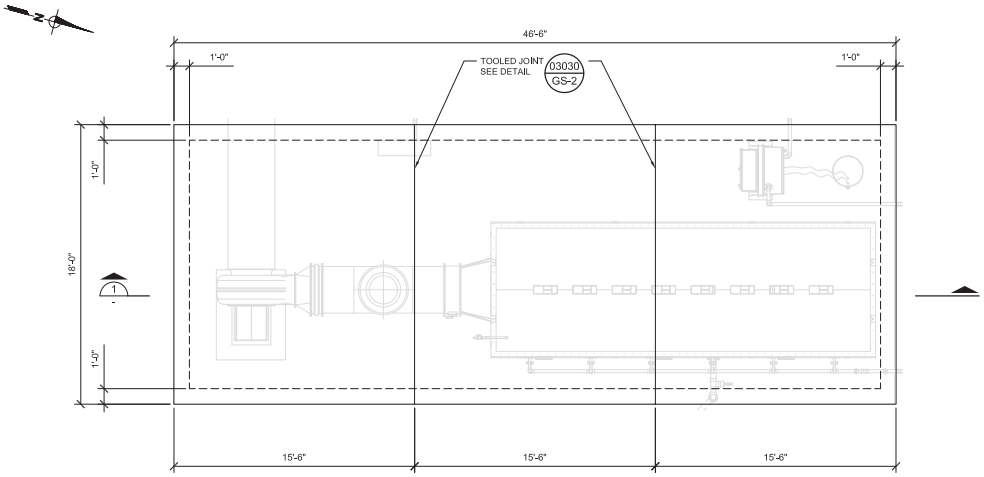
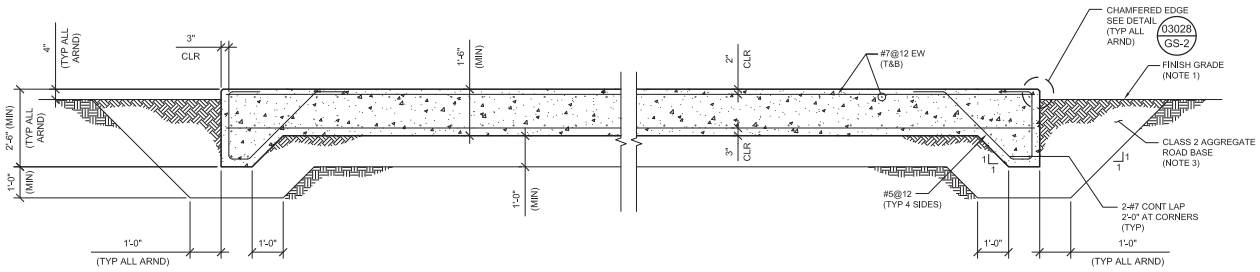


ODOR CONTROL PAD

SCALE: 1/4"=1'-0"



SECTION 1

SCALE: 1/2"=1'-0"

NOTES:

1. SLOPE GRADE AWAY FROM SLAB.
2. EQUIPMENT ANCHORAGE ARE DEFERRED SUBMITTAL ITEMS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR. EQUIPMENT ANCHORAGE HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD. REFER TO STRUCTURAL NOTES ON SHEET GS-1 FOR ADDITIONAL INFORMATION.
3. 12" THICK (MIN) CLASS 2 AGGREGATE ROAD BASE (3/4" TO FINE) COMPACTED TO 95% OF MAXIMUM DENSITY AND MOISTURE CONTENT OF NOT LESS THAN TWO PERCENTAGE POINTS ABOVE OPTIMUM PER ASTM D1557.

CLASS 2 AGGREGATE ROAD BASE GRADATION	
SIEVE SIZE	PERCENT PASSING
1"	100
3/4"	88-100
NO. 4	30-65
NO. 30	5-35
NO. 200	0-12

4. SEE CIVIL DRAWINGS FOR ORIENTATION ON PROJECT SITE.

TJC and ASSOCIATES Pvt. Ltd.

REGISTERED PROFESSIONAL ENGINEER DAVID M. YOST No. S 4872 Exp. 06/30/21 STRUCTURAL STATE OF CALIFORNIA
8/27/2020

QA/QC REVIEW: TJC
DATE: 8/5/2020

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IF NOT SCALE ACCORDINGLY

SCALE : AS SHOWN
DRAWN BY : BV
DESIGNED BY : DMY
PROJ. MGR. : DMY

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CITY OF MILPITAS CALIFORNIA JANUARY 20, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

STRUCTURAL
ODOR CONTROL PAD PLAN AND SECTION

JOB NUMBER 270-50-18-14
DRAWING NUMBER **S-1**
SHEET NUMBER 12 OF 30
REVISION

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GENERAL MECHANICAL NOTES

1. THE MECHANICAL DRAWINGS SHOW ONLY GENERAL ARRANGEMENTS FOR THE PIPING AND EQUIPMENT AND DO NOT INCLUDE ALL THE PIPING LOGIC, VALVES, INSTRUMENTS, CONTROL DEVICES, AND APPURTENANCES THAT ARE INCLUDED IN THE PROCESS AND INSTRUMENTATION DIAGRAMS OR REQUIRED BY THE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE ALL PIPING, EQUIPMENT, AND APPURTENANT DEVICES, INCLUDING ALL THAT ARE INDICATED IN EITHER THE MECHANICAL DRAWINGS, PROCESS AND INSTRUMENTATION DIAGRAMS, OR THE SPECIFICATIONS TO PROVIDE COMPLETE PROCESS SYSTEMS.
2. EQUIPMENT AND PIPING COORDINATION AND INSTALLATION DRAWINGS ARE REQUIRED. SEE DIVISION 15 SPECIFICATIONS. THE CIVIL, YARD PIPING, AND MECHANICAL DRAWINGS SHOW ADDITIONAL PIPING DETAILS.
3. PIPE SUPPORTS AND SEISMIC RESTRAINTS SHALL BE PROVIDED PER THE MECHANICAL DETAILS AND THE SPECIFICATIONS. AT LOCATIONS WHERE SPECIFIC TYPES OF SUPPORTS OR SEISMIC RESTRAINTS ARE INDICATED, CONTRACTOR SHALL PROVIDE THE INDICATED TYPES. AT LOCATIONS WHERE SUPPORTS OR SEISMIC RESTRAINTS ARE REQUIRED BUT NO SPECIFIC TYPES ARE INDICATED, CONTRACTOR SHALL SELECT AND PROVIDE SUPPORTS AND RESTRAINTS IN ACCORDANCE WITH DETAILS ON DRAWINGS M0001 – M0003. SUPPORTS AND RESTRAINTS SHALL BE SUBMITTED FOR REVIEW AS PART OF THE EQUIPMENT AND PIPING COORDINATION AND INSTALLATION DRAWINGS.
4. THE NUMBER OF PIPE SUPPORTS SHOWN IN THE DRAWINGS IS THE MINIMUM. CONTRACTOR SHALL PROVIDE CALCULATIONS SHOWING THE REQUIRED SIZE AND SPACING OF ALL PIPE SUPPORTS.
5. PIPE PENETRATIONS THROUGH STRUCTURE WALLS, FLOOR, AND CEILINGS SHALL BE PROVIDED AS SHOWN ON DRAWING M0004 UNLESS OTHERWISE INDICATED.

GENERAL PIPE SUPPORT NOTES

1. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS IS GIVEN ON THE DRAWINGS, THE CONTRACTOR SHALL USE APPROPRIATE SYSTEM. SEE TABLE B, THIS DRAWING. PIPE AND CONDUIT SUPPORT SYSTEMS SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE MINIMUM LOAD AND SPAN REQUIREMENTS SPECIFIED.
2. UNLESS OTHERWISE SPECIFIED, HANGERS, ATTACHMENTS AND SUPPORTS SHALL BE TYPE 316 STAINLESS STEEL. NUTS, BOLTS AND WASHERS SHALL BE TYPE 316 STAINLESS STEEL.
3. UNLESS OTHERWISE SPECIFIED, EXPANSION ANCHORS SHALL NOT BE USED.
4. MSS REFERS TO THE MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, STANDARD PRACTICE SP58 AND SP69.
5. HANGER BRACKETS AND SUPPORT COMPONENTS MAY BE INTERCHANGED.
6. CONCRETE INSERTS IN AREAS BELOW WATER SURFACE OR NORMALLY SUBJECT TO SUBMERGING SHALL BE EMBEDDED ANCHOR BOLTS OR EQUAL.
7. PROVIDE PLASTIC OR RUBBER CHANNEL END CAPS AT EXPOSED ENDS OF CHANNELS 7'-0 OR LESS ABOVE FLOOR.
8. MAXIMUM DESIGN WEIGHTS AND LOADS SHALL BE AS SHOWN IN TABLE A OR AS SHOWN IN DETAILS ON THIS DRAWING.
9. WHEN SUPPORTING PIPING REQUIRES HORIZONTAL FLEXIBILITY NORMAL TO A STEEL BEAMS AXIS, USE STRUCTURAL ATTACHMENTS C AND D AS SHOWN ON DRAWING M0003. TYPE F ON DRAWING M0003 SHALL BE USED FOR PARALLEL FLEXIBILITY.
10. ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SHALL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGITUDINAL SWAY. BRACINGS SHALL BE CALCULATED TO RESIST SEISMIC LOADINGS AS SPECIFIED BY SMACNA AND AS INDICATED IN THE SPECIFICATIONS.
11. FITTINGS SHALL NOT BE LESS THAN MSS CL B.
12. UNLESS OTHERWISE SPECIFIED, TRAPEZE AND PIPE RACK COMPONENTS SHALL HAVE A MINIMUM STEEL THICKNESS OF 12 GAGE WITH A MAXIMUM DEFLECTION 1/240 OF THE SPAN. MINIMUM CHANNEL COMPONENT SIZE SHALL BE 1⅝" SQUARE AS MANUFACTURED BY SUPER STRUT, UNISTRUT, ELCEN, OR EQUAL.
13. FOR STRUCTURAL ATTACHMENTS SEE DWG M0003.
14. NOT ALL PIPE HANGERS ARE USED IN THESE CONTRACT DRAWINGS.
15. DESIGN ANCHOR BOLTS OR CHEMICAL ANCHORS FOR ALL PIPE SUPPORTS AND SEISMIC RESTRAINTS AS SPECIFIED IN DIVISION 5, DIVISION 15, AND SECTIONS 01612 AND 01614. IF ANCHOR BOLT SIZES AND/OR EMBEDMENTS ARE INDICATED ON DETAILS, THESE ARE THE MINIMUM REQUIREMENTS. PROVIDE CALCULATIONS AS SPECIFIED IN SECTION 01612.

SEISMIC BRACING NOTES

1. ALL PIPES SHALL BE BRACED TO RESIST LATERAL AND LONGITUDINAL SEISMIC LOADS IN ACCORDANCE WITH DIVISION 15 SPECIFICATIONS.
2. SEE TABLE C FOR MAXIMUM SPACING AND PIPE SIZES
3. SEE TABLE D FOR ACCEPTABLE PIPE HANGERS
4. PROVIDE 1/16" THICK NEOPRENE ISOLATION BETWEEN COPPER PIPING AND HANGERS

TABLE A

HANGER & SUPPORT SPACING AND ALLOWABLE ROD LOADS

NOMINAL PIPE SIZE (INCHES)	SUPPORT ROD SIZE & MAXIMUM LOAD PER ROD, SEE NOTE 2		MAXIMUM PIPE SPAN (FEET) SEE NOTE 3			
	ROD SIZE (INCHES)	MAXIMUM LOAD (POUNDS	STEEL	COPPER	PLASTIC SEE NOTE 4	CAST IRON SEE NOTE 5
⅜ to ¾	⅜	610	5	5	CONTIN UOUS	–
1	⅜	610	5	5	5	–
1¼	⅜	610	5	5	5	–
1½	⅜	610	5	5	5	–
2	⅜	610	10	5	5	12 FEET FOR PRESSURE PIPE 10 FEET FOR SOIL PIPE
2½	⅜	610	10	10	5	
3	⅜	610	10	20	5	
4	⅜	1130	10	20	5	
6	⅝	1810	15	20	5	
8	¾	2710	15	20	5	
10	¾	2710	20	–	5	
12	⅞	3770	20	–	10	
14	1	4960	20	–	–	
16	1	4960	20	–	–	
18	1	4960	20	–	–	
20	1¼	8000	20	–	–	
24	1¼	8000	20	–	–	

TABLE A NOTES:
1. DESIGN WEIGHT SHALL BE TWICE THE WEIGHT OF THE PIPE FULL OF WATER PLUS THE WEIGHTS OF VALVES, FITTINGS, INSULATING MATERIALS AND SUSPENDED HANGER COMPONENTS ON THE RUN OF PIPE BEING SUPPORTED.
2. ROD SIZES SHOWN ARE FOR THE SUPPORT OF A SINGLE PIPE. WHEN SUPPORTING MORE THAN ONE PIPE, ROD SHALL BE SIZED USING THE DESIGN WEIGHTS (SEE NOTE 1) TO DETERMINE THE TOTAL DESIGN LOAD. THE TOTAL DESIGN LOAD SHALL NOT EXCEED THE MAXIMUM LOADS IN THE TABLE.
3. PIPE SHALL NOT HAVE POCKETS FORMED IN THE SPAN DUE TO SAGGING OF THE PIPE BETWEEN SUPPORTS CAUSED BY THE WEIGHT OF THE PIPE, MEDIUM IN THE PIPE, INSULATION, VALVES AND FITTINGS.
4. SPAN SHOWN IS FOR SCHEDULE 80 PVC PIPE AT 100°F. SPANS FOR OTHER PLASTICS, OTHER PVC PIPE SCHEDULES AND PIPES AT HIGHER TEMPERATURES SHALL BE SHORTENED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. "CONTINUOUS" MEANS PIPE SHALL BE IN UNISTRUT OR SIMILAR CHANNEL.
5. PROVIDE A MINIMUM OF ONE PIPE HANGER PER PIPE LENGTH, WITHIN 4-INCHES OF THE BELL.
6. PIPE HANGER & SUPPORT SELECTION SHALL BE IN ACCORDANCE WITH TABLE B AND DIVISION 15 SPECIFICATIONS.

TABLE B

HANGER & SUPPORT SELECTION

SYSTEM TEMP RANGE °F	INSULATION NOTE 1	PIPE ATTACHMENT DETAIL NOS. HORIZONTAL: STRAPS	BANDS	CLAMPS	TRAPEZES & RACKS	THERMAL HANGER SHIELDS	STAN-CHIONS	VERTICAL: SST RISER CLAMPS	BUILDING STRUCTURAL ATTACHMENT TYPES: INSERTS	BEAM CLAMPS	WELDED & BOLTED ATTACH-MENTS	BRACKET
HOT A-1 120-450	COVERED	13	1,2	3	20	SEE SPEC	10,10A	11,12	A	C,D	J,M	B,G,H,K
	BARE	6.7 13	1,2	3	20	SEE SPEC	10,10A					
AMBIENT B 60-119	COVERED	13	1,2	3	20	SEE SPEC	9,10,10A	11,12	A	C,D	J,M	B,G,H,K
	BARE	6.7 13	1,2	3	20	SEE SPEC	9,10,10A					
COLD C-1 33-59	COVERED	13	1,2,3	3	20	SEE SPEC	10,10A	11,12	A	C,D	J,M	B,G,H,K
	BARE	6.7 13	1,2,3	3	20	SEE SPEC	10,10A					

TABLE B NOTES:
1. HANGERS ON INSULATED SYSTEMS SHALL INCORPORATE THERMAL HANGER SHIELDS
2. HANGER & SUPPORT SPACING SHALL BE IN ACCORDANCE WITH TABLE A.
3. TYPE 6 AND TYPE 7 HANGERS: FOR COPPER PIPE, SECURE A 1/16" THICK NEOPRENE STRIP TO FRAMING CHANNEL WITH A COMPATIBLE WATERPROOF ADHESIVE.
4. TYPE 6 HANGER: DO NOT USE FOR HORIZONTAL PIPES LARGER THAN 2" WHEN FRAMING CHANNEL IS MOUNTED VERTICALLY
5. PROVIDE SAFETY END CAPS TO ALL FRAMING CHANNELS

TABLE C

PIPE SPAN FOR SEISMIC BRACING

NORMAL PIPE SIZES (INCHES)	MAXIMUM PIPE SPAN (FEET)	ROD SIZE (INCHES)
2	15	⅜
2½	15	⅜
3	15	⅜
4	15	⅜
6	20	½
8	20	⅝
10	30	⅘
12	30	1
14	30	1
16	35	1
18	35	1

TABLE D

HANGER TEMPERATURE & MATERIALS FOR SEISMIC BRACING

X INDICATES PIPE HANGERS SUITABLE FOR SEISMIC BRACING AT CONDITIONS LISTED BELOW	SEE DWG M0003 FOR PIPE HANGER TYPE: 1	2	3	6	7	9	10	11	13
– SERVICE TEMPERATURE –									
33°-59°F INSULATED			X			X		X	
120°-450°F UNINSULATED	X	X	X	X	X	X	X	X	X
60°-119°F	X	X	X	X	X	X	X	X	X
– PIPING MATERIALS –									
STEEL	X	X	X	X	X	X		X	X
COPPER		X		X	X				X
PLASTIC	X	X		X	X			X	X
CAST IRON	X	X		X	X		X	X	X

REGISTERED PROFESSIONAL ENGINEER NICY L. SANDELL No. 86703 Exp. 3-31-23 CIVIL STATE OF CALIFORNIA 8/28/2020

QA/QC REVIEW: DJA
DATE: 8/28/2020

THIS LINE IS 1 INCH
AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE : AS SHOWN
DRAWN BY : SMB
DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES
2020 Research Park Drive
Suite 100
Davis, California 95618
(530) 756-5905
FAX (530) 756-5991

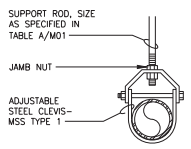
CITY OF MILPITAS CALIFORNIA JANUARY 25, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

MECHANICAL DETAILS 1

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M01**
SHEET NUMBER 13 OF 30
REVISION

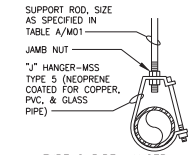
N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-M01.dwg 3/23/2021 1:24 PM sbarber



TYPE 1 PIPE HANGER
1/2" THROUGH 12" PIPE

DETAIL 1/VAR

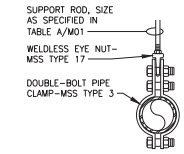
NOT TO SCALE



TYPE 2 PIPE HANGER
1/2" THROUGH 8" PIPE

DETAIL 2/VAR

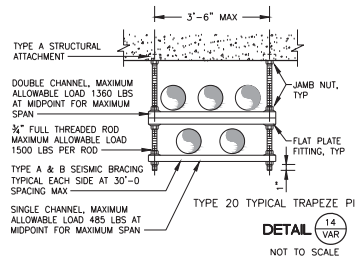
NOT TO SCALE



TYPE 3 PIPE HANGER
3/4" THROUGH 12" PIPE

DETAIL 3/VAR

NOT TO SCALE

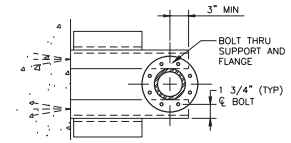


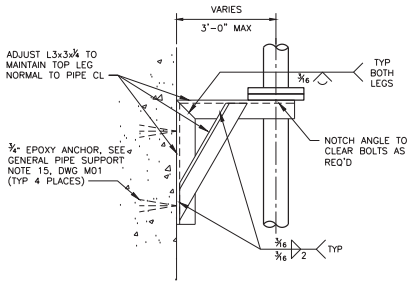
NOTES:
1. PIPING SPAN SHALL BE AS SPECIFIED IN TABLE A/M01. SEE NOTE 2, TABLE A/M01.
2. MAXIMUM DESIGN WEIGHT SHALL BE AS FOLLOWS; 3/8" TO 1 1/4" PIPE-100% OF DESIGN WEIGHT, TABLE A/M1. 1/2" TO 12" PIPE-50% OF DESIGN WEIGHT, TABLE A/M01.
3. TOTAL LOADS ON END CONNECTIONS SHALL NOT EXCEED 1/2 THE MAXIMUM ALLOWABLE LOAD AT MID-POINT.
4. VERTICAL SPACING SHALL BE AS REQUIRED.

TYPE 20 TYPICAL TRAPEZE PIPE HANGER

DETAIL 14/VAR

NOT TO SCALE

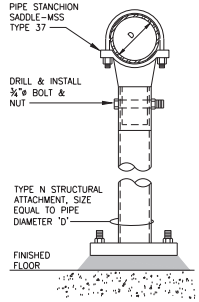




PIPE SUPPORT

DETAIL 17/VAR

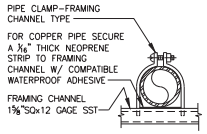
NOT TO SCALE



TYPE 10 PIPE HANGER
4" THROUGH 12" PIPE

DETAIL 10/VAR

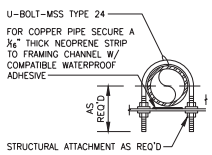
NOT TO SCALE



TYPE 6 PIPE HANGER
3/8" THROUGH 8" PIPE

DETAIL 6/VAR

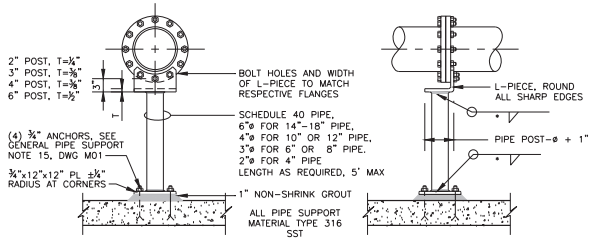
NOT TO SCALE



TYPE 7 PIPE HANGER
1/2" THROUGH 12" PIPE

DETAIL 7/VAR

NOT TO SCALE

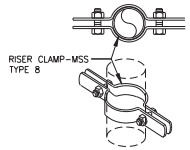


*NOTE:
WELD SIZE 3/4" FOR 2" - 4" POST; 3/8" FOR 6" POST.

FLANGE MOUNTED PIPE SUPPORT

DETAIL 15/VAR

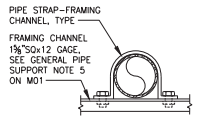
NOT TO SCALE



TYPE 12 PIPE HANGER
1/2" THROUGH 12" PIPE

DETAIL 12/VAR

NOT TO SCALE

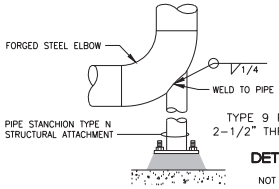


TYPE 13 PIPE HANGER
1/2" THROUGH 6" PIPE

DETAIL 13/VAR

NOT TO SCALE

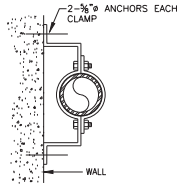
APPROXIMATE SIZES FOR STANCHION								
NPS OF PIPING (INCHES)	2 1/2	3	4	6	8	10	12	14
NPS OF PIPE FORMING LEG (IN)	1 1/2	2	3	4	6	8	8	10



TYPE 9 PIPE HANGER
2-1/2" THROUGH 14" PIPE

DETAIL 9/VAR

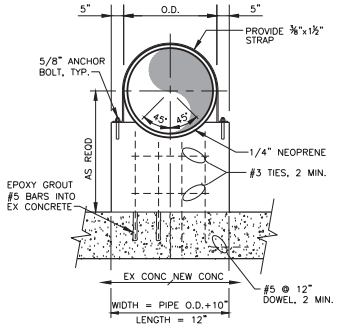
NOT TO SCALE



TYPE 11 PIPE HANGER
3/4" THROUGH 8" PIPE

DETAIL 11/VAR

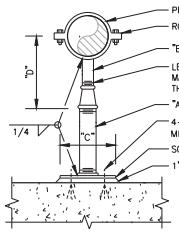
NOT TO SCALE



CONCRETE PIPE SUPPORT

DETAIL 16/VAR

NOT TO SCALE



ADJUSTABLE PIPE SUPPORT

DETAIL 18/VAR

NOT TO SCALE

ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE DIMENSIONS IN INCHES					
SIZE OF SUPPORTED PIPE	PIPE SIZE "A"	PIPE SIZE "B"	"C"	"D" MINIMUM	"D" MAXIMUM
* 2 1/2	2 1/2	1 1/2	12	8	13
3	2 1/2	1 1/2	12	8 1/2	13 1/2
3 1/2	2 1/2	1 1/2	12	8 1/2	13 1/2
4	3	2 1/2	12	9 1/2	14
6	3	2 1/2	12	10 1/2	15 1/2
8	3	2 1/2	12	11 1/2	16 1/2
10	3	2 1/2	12	13 1/2	18 1/2
12	3	2 1/2	12	15	19 1/2

* USE 2 1/2" SUPPORTS FOR PIPES LESS THAN 2 1/2"ø

NOTE:
1. FOR CONNECTION TO STEEL DECK, WELD ALL AROUND WITH 1/4" FILLET.

REGISTERED PROFESSIONAL ENGINEER
NEY L. SANDLE
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
5/28/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

THIS LINE IS 1 INCH
AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE : AS SHOWN
DRAWN BY : SMB
DESIGNED BY : WLS
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE

WEST YOST ASSOCIATES
2020 Research Park Drive
Suite 100
Davis, California 95618
(530) 756-5905
FAX (530) 756-5991

CITY OF MILPITAS
CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

MECHANICAL DETAILS 2

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M02**
SHEET NUMBER 14 OF 30
REVISION

N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-M02.dwg 3/23/2021 1:25 PM sbarber

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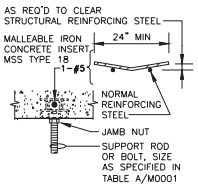


MAXIMUM ALLOWABLE LOAD:

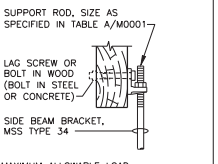
ROD SIZE	LOAD
⅜"	610 LBS
½"	1130 LBS
⅜"–⅞"	1140 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE A STRUCTURAL ATTACHMENT

DETAIL 1/VAR

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

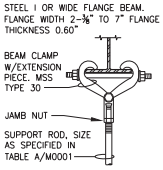
ROD SIZE	LOAD WOOD	LOAD CONCRETE/STEEL
⅜"	390 LBS	610 LBS
½"	640 LBS	1130 LBS
⅝"	760 LBS	1810 LBS
¾"	830 LBS	2710 LBS
⅞"	830 LBS	3770 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE B STRUCTURAL ATTACHMENT

DETAIL 2/VAR

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

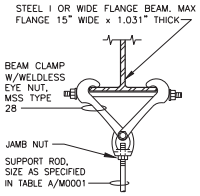
ROD SIZE	LOAD
⅜"	610 LBS
½"	1130 LBS
⅜"–⅞"	1140 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE C STRUCTURAL ATTACHMENT

DETAIL 3/VAR

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

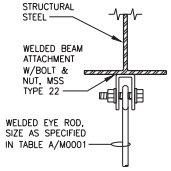
ROD SIZE	LOAD
⅜"	610 LBS
½"	1130 LBS
⅝"	1810 LBS
¾"	2710 LBS
⅞"	3770 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE D STRUCTURAL ATTACHMENT

DETAIL 4/VAR

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

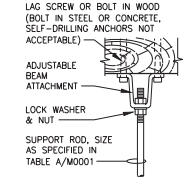
ROD SIZE	LOAD
⅜"	610 LBS
½"	1130 LBS
⅝"	1810 LBS
¾"	2710 LBS
⅞"	3770 LBS
1"	4960 LBS
1¼"	8000 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE F STRUCTURAL ATTACHMENT

DETAIL 5/VAR

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

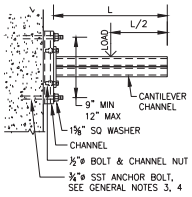
ROD SIZE	LOAD WOOD	LOAD CONCRETE/STEEL
⅜"	425 LBS	610 LBS
½"	715 LBS	1130 LBS
⅝"	810 LBS	1810 LBS
¾"	1500 LBS	2710 LBS
⅞"	1650 LBS	3770 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE J STRUCTURAL ATTACHMENT

DETAIL 6/VAR

NOT TO SCALE



BRACKET MAY BE USED WITH VARIOUS HANGER, ROLLER, GUIDE & CLAMP ASSEMBLIES

CAPACITY AT MID-POINT:

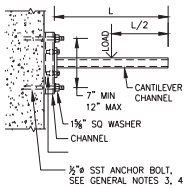
LENGTH	LOAD
12"	2000 LBS
18"	1300 LBS
24"	1000 LBS
30"	800 LBS
36"	650 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE K STRUCTURAL ATTACHMENT

DETAIL 7/VAR

NOT TO SCALE



BRACKET MAY BE INSTALLED AS SHOWN OR INVERTED, & USED WITH VARIOUS HANGER, ROLLER, GUIDE & CLAMP ASSEMBLIES

CAPACITY AT MID-POINT:

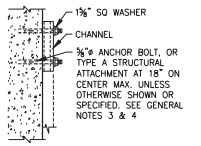
LENGTH	LOAD
6"	1800 LBS
12"	1000 LBS
18"	700 LBS
24"	500 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE L STRUCTURAL ATTACHMENT

DETAIL 8/VAR

NOT TO SCALE



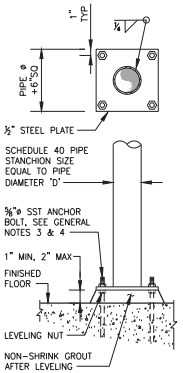
NOTES:

1. EPOXY ANCHORS MAY BE USED IN-LIEU OF EXPANSION ANCHORS WHERE THE ATTACHMENT IS NOT IN TENSION.
2. WHEN THE ATTACHMENTS ARE PLACED IN TENSION, SUCH AS ON A CEILING, A TYPE "A" ON SHEET M0003 STRUCTURAL ATTACHMENT OR A CAST IN ANCHOR BOLT SHALL BE USED.
3. BRACKET MAY BE WALL OR CEILING MOUNTED, AND MAY BE USED WITH VARIOUS HANGER, GUIDE, RACK, OR ANCHOR AND SWAY BRACE ASSEMBLIES.
4. MAXIMUM LOAD CAPACITY SHALL BE AS RECOMMENDED BY THE CHANNEL MANUFACTURER.
5. SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001.

TYPE M STRUCTURAL ATTACHMENT

DETAIL 9/VAR

NOT TO SCALE

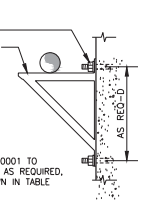


SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001.

TYPE N STRUCTURAL ATTACHMENT

DETAIL 10/VAR

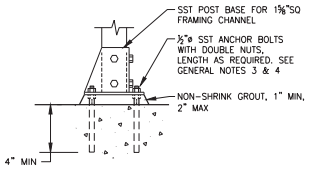
NOT TO SCALE



TYPE G STRUCTURAL ATTACHMENT

DETAIL 11/VAR

NOT TO SCALE



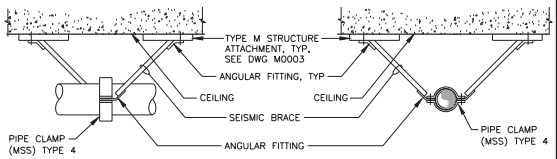
TYPE E STRUCTURAL ATTACHMENT

DETAIL 12/VAR

NOT TO SCALE

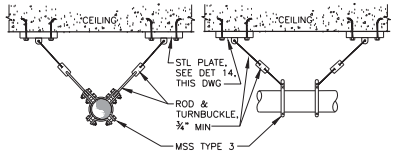
GENERAL NOTES:

1. NOT ALL PIPE ATTACHMENTS ARE USED IN THESE CONTRACT DRAWINGS.
2. SEE GENERAL PIPE SUPPORT NOTES ON DRAWING M0001.
3. ALL ATTACHMENTS, HANGERS, AND SUPPORTS SHALL BE TYPE 316 STAINLESS STEEL. ANCHOR BOLTS, BOLTS, NUTS, AND WASHERS SHALL BE TYPE 316 STAINLESS STEEL.
4. SEE GENERAL PIPE SUPPORT NOTE NOTE 15, DRAWING M0001.



TYPE A SEISMIC LONGITUDINAL BRACING

TYPE A SEISMIC LATERAL BRACING

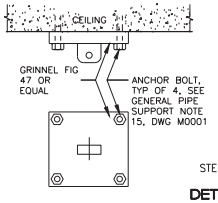


TYPE B SEISMIC LATERAL BRACING

TYPE B SEISMIC LONGITUDINAL BRACING

DETAIL 13/VAR

NOT TO SCALE



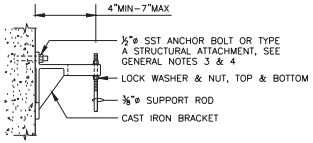
MAXIMUM ALLOWABLE LOAD:			
PLATE THICKNESS	ROD SIZE	BOLT SIZE	LOAD
¾"	1"	¾"	4960 LBS
1"	1¼"	⅞"	8000 LBS
1"	1½"	1"	11630 LBS

ATTACH ROD TO STEEL PLATE WITH STAINLESS STEEL CLEVIS. GRINNEL FIG. 299 OR EQUAL

STEEL PLATE

DETAIL 14/TYP

NOT TO SCALE



MAXIMUM ALLOWABLE LOAD: 180 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A/M0001

TYPE H STRUCTURAL ATTACHMENT

DETAIL 15/VAR

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER NICKY L. SANDLIN No. 86703 Exp. 3-31-23 CIVIL STATE OF CALIFORNIA 8/28/2021

QA/QC REVIEW: DJA

DATE: 8/28/2020

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DESIGNED BY : WLS
PROJ. MGR. : WLS

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CITY OF MILPITAS CALIFORNIA JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

MECHANICAL DETAILS 3

JOB NUMBER 270-50-18-14

DRAWING NUMBER **M03**

SHEET NUMBER 15 OF 30

REVISION

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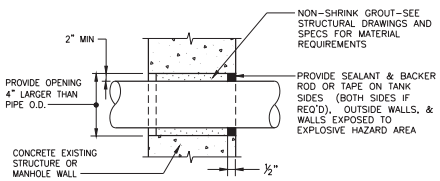
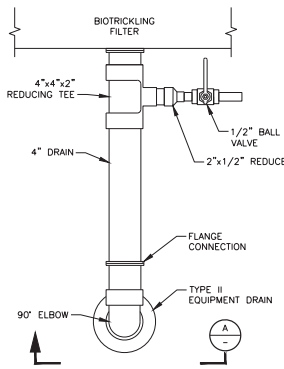


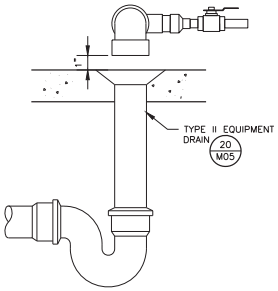
EXISTING WALL PIPE PENETRATION

DETAIL 13/VAR

NOT TO SCALE



PLAN

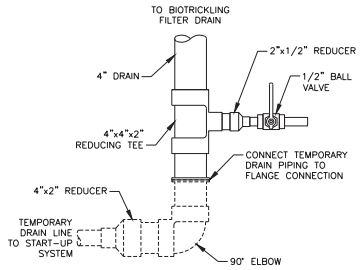


SECTION A/–

PERMANENT CONNECTION CONFIGURATION AT BIOTRICKLING FILTER DRAIN

DETAIL 14/M20

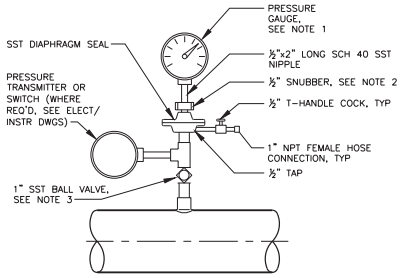
NOT TO SCALE



TEMPORARY CONNECTION CONFIGURATION AT BIOTRICKLING FILTER DRAIN

DETAIL 15/M20

NOT TO SCALE



NOTES:

1. FOR GAUGE AND APPURTENANCES DETAILS, SEE SPEC. SECTION 15095.
2. WHERE REQUIRED BY SCHEDULE IN SPEC SECTION 15110.
3. IF NO PRESSURE SWITCH OR TRANSMITTER, BOSS, NIPPLE AND VALVE MAY BE 1/2".

PRESSURE GAUGE (FOUL AIR SERVICE)

DETAIL 16/–

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
NICKY L. SANDLE
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
8/28/2021

QA/QC REVIEW: DJA

DATE: 8/28/2020

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CITY OF MILPITAS
CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

MECHANICAL DETAILS 3

JOB NUMBER 270-50-18-14

DRAWING NUMBER **M04**

SHEET NUMBER 16 OF 30

REVISION

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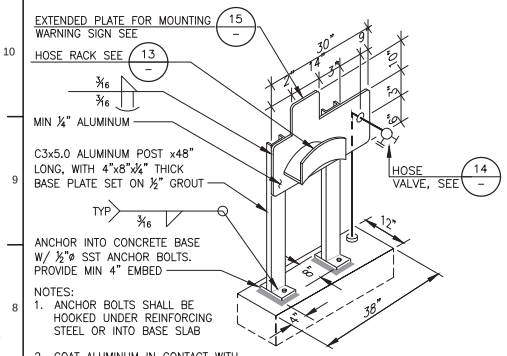
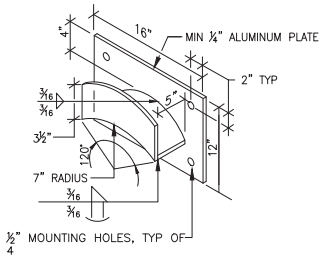


NOTES:
1. ANCHOR BOLTS SHALL BE HOOKED UNDER REINFORCING STEEL OR INTO BASE SLAB
2. COAT ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATION SECTION 09960
3. ROUND CORNERS TO REMOVE SHARP EDGES, TYP ALL CORNERS

POST MOUNTED UTILITY STATION

DETAIL 10/VAR

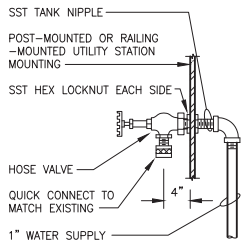
NOT TO SCALE



HOSE RACK

DETAIL 13/VAR

NOT TO SCALE

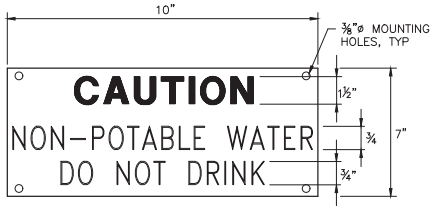


NOTE:
HOSE VALVES SHALL BE 1–INCH BRASS ANGLE VALVE WITH COMPOSITION DISC, CRANE 17, LUNKENHEIMER 214, POWELL 151 OR EQUAL WITH THREADED NIPPLE ADAPTER FOR HOSE CONNECTION. SUPPLY ONE 50 FOOT LENGTH OF 1–INCH DIAMETER RUBBER HOSE WITH APPROPRIATE END FITTINGS FOR ATTACHMENT FOR EACH UTILITY STATION. HOSE SHALL BE NEOPRENE OR EPDM WITH RAYON BRAID AND SHALL BE SUITABLE FOR WORKING PRESSURE OF 150 PSI. HOSE SHALL BE AS MANUFACTURED BY B.F. GOODRICH, GOODYEAR RUBBER COMPANY, UNIROYAL, OR EQUAL.

HOSE VALVE

DETAIL 14/VAR

NOT TO SCALE

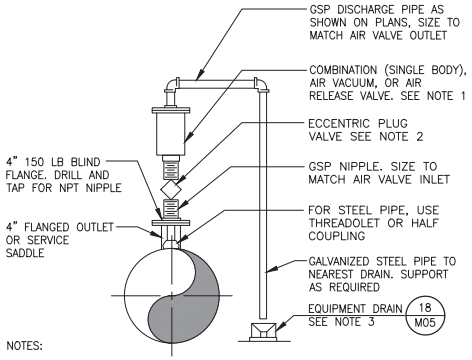


TYPICAL WARNING SIGN DETAIL

DETAIL 15/VAR

NOT TO SCALE

NOTE:
SEE SECTION 10020.

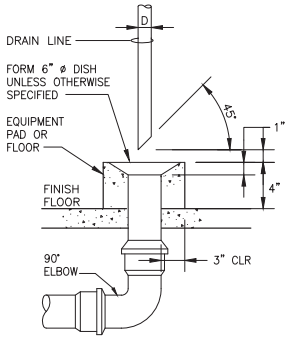


NOTES:
1. VALVE SIZE SHALL BE AS INDICATED ON PLANS. SEE SPECIFICATIONS FOR DUAL BODY COMBINATION AIR VALVES.
2. SERVICE TAP AND ECCENTRIC PLUG VALVE SHALL MATCH VALVE INLET SIZE.
3. WHERE CONDITIONS PERMIT OR AS SHOWN ON DRAWINGS, EXTEND PIPE THROUGH PUMP STATION DECK. DO NOT SUBMERGE END OF PIPE.
4. IF VALVE IS EQUIPPED WITH OTHER DRAIN OR DISCHARGE LINES, PIPE TO COMMON DISCHARGE AND INCREASE DISCHARGE PIPE BY SUM OF ALL CONTRIBUTING CONNECTIONS.

AIR VACUUM, AND AIR RELEASE (3" AND SMALLER)

DETAIL 17/VAR

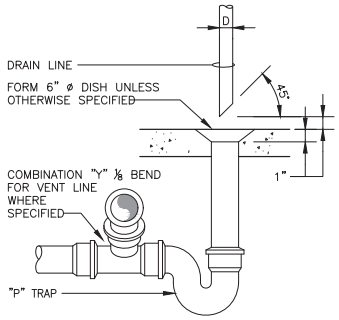
NOT TO SCALE



TYPE I EQUIPMENT DRAIN

DETAIL 18/VAR

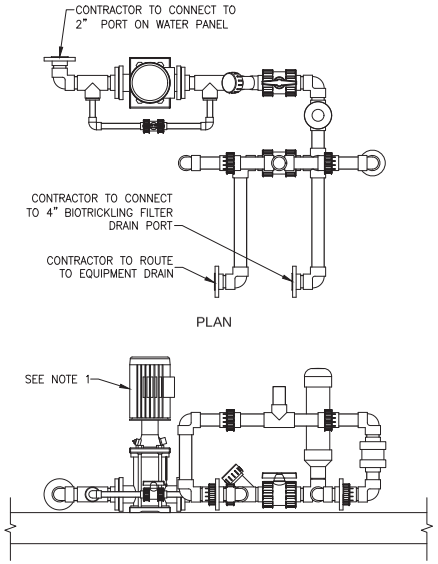
NOT TO SCALE



TYPE II EQUIPMENT DRAIN

DETAIL 20/VAR

NOT TO SCALE



NOTE:
1. START UP SYSTEM IS SHOWN FOR INFORMATION ONLY. THE EQUIPMENT SUPPLIER START UP SYSTEM IS TO BE PROVIDED BY THE MANUFACTURER. CONTRACTOR IS TO PROVIDE ALL PIPING TO AND FROM THE START UP SYSTEM AND MAKE ALL REQUIRED CONNECTIONS.

START–UP SYSTEM

DETAIL 21/M21

SCALE: 1"=1'–0"

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5/28/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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PROJ. MGR. : WLS

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CITY OF MILPITAS
CALIFORNIA
JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

MECHANICAL DETAILS 5

JOB NUMBER 270–50–18–14
DRAWING NUMBER **M05**
SHEET NUMBER 17 OF 30
REVISION

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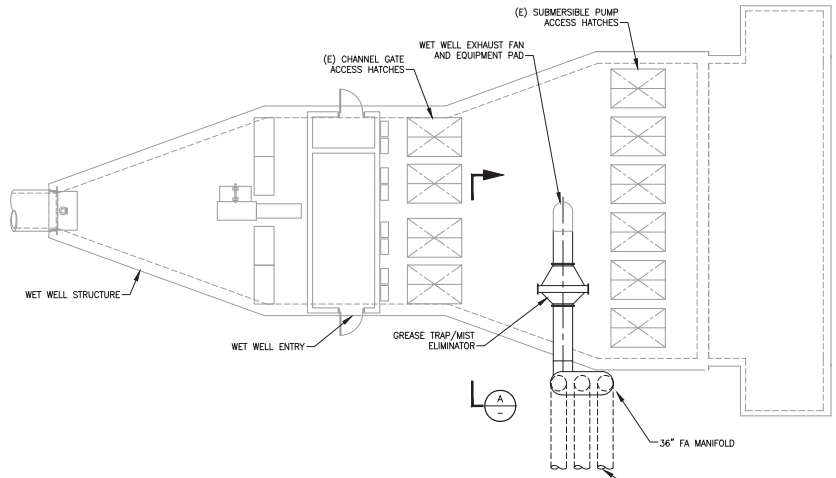
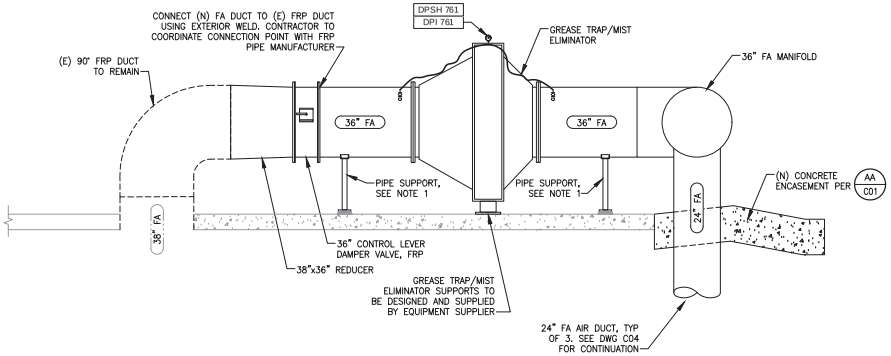


WET WELL EXHAUST PIPING

PLAN

SCALE: 1/8"=1'-0"



SECTION A

SCALE: 3/8"=1'-0"

NOTE:
1. LOCATIONS OF PIPE SUPPORTS SHOWN IS APPROXIMATE. CONTRACTOR TO DESIGN PIPE SUPPORTS, SEE SECTION 15096.

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SANDELL
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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PROJ. MGR. : WLS

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CITY OF MILPITAS
CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

WET WELL EXHAUST PIPING

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M10**
SHEET NUMBER 18 OF 30
REVISION

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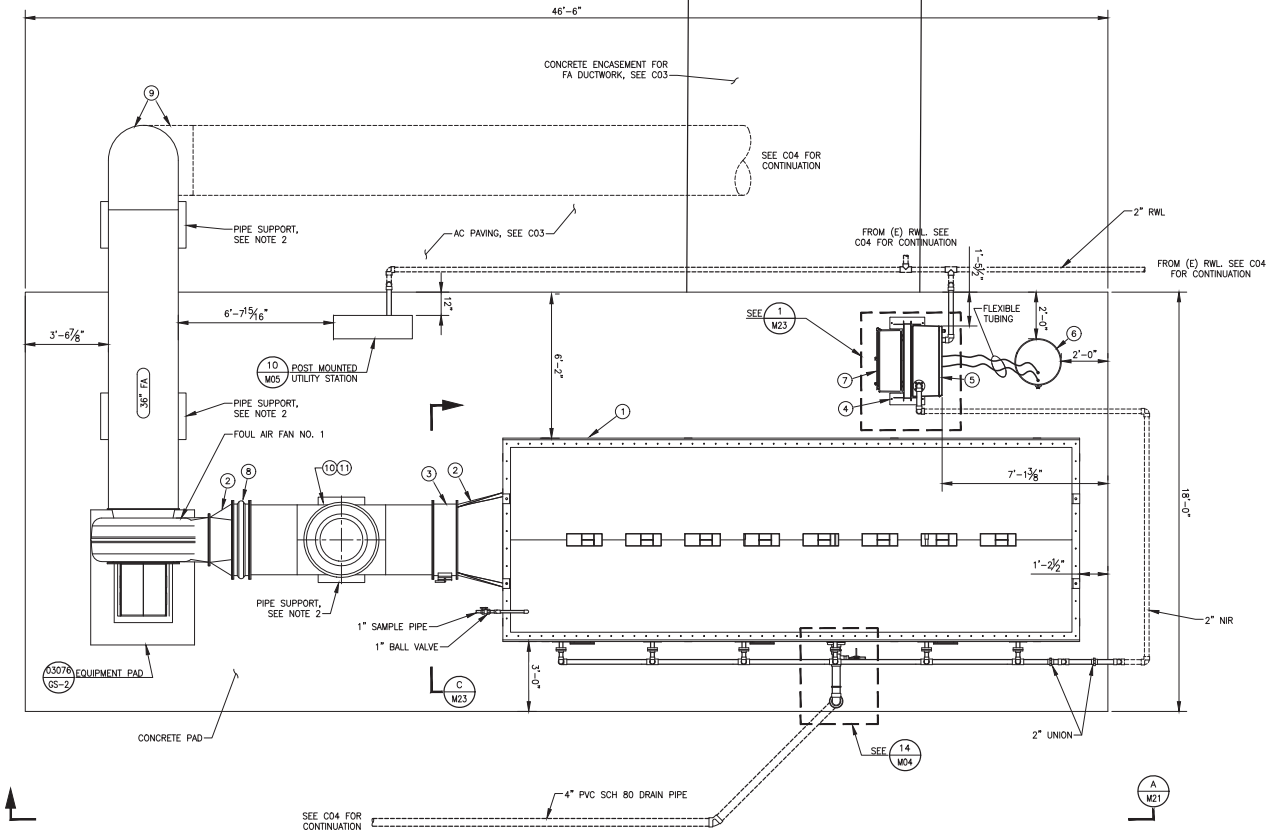

PLAN

SCALE: 3/8"=1'-0"

NOTES:

1. THIS DRAWING IS BASED ON BIOTRICKLING FILTER EQUIPMENT SUPPLIED BY THE FIRST NAMED MANUFACTURER IN SECTION 11302. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY MODIFICATIONS THAT ARE NECESSARY TO INSTALL EQUIPMENT PROVIDED BY ANOTHER MANUFACTURER. ALL MODIFICATIONS TO THE DESIGN REQUIRE APPROVAL BY THE ENGINEER.
2. LOCATIONS OF PIPE SUPPORTS SHOWN IS APPROXIMATE. CONTRACTOR TO DESIGN PIPE SUPPORTS, SEE SECTION 15096.

KEY NOTES:

1. BIOTRICKLING FILTER REACTOR, SEE SPECIFICATION 11302.
2. ø36", 48"x20" RECTANGULAR TRANSITION, FRP.
3. ø36", ISOLATION DAMPER VALVE, FRP.
4. PANEL STAND, 316 STAINLESS STEEL, SUPPLIED BY MANUFACTURER.
5. WATER PANEL, 316 STAINLESS STEEL, SUPPLIED BY MANUFACTURER. SEE SPECIFICATION 11302.
6. 55 GALLON NUTRIENT BARREL ASSEMBLY, HDPE, SUPPLIED BY MANUFACTURER. SEE SPECIFICATION 11302.
7. ELECTRICAL CONTROL PANEL, 316 STAINLESS STEEL, SUPPLIED BY MANUFACTURER. SEE SPECIFICATION 11302.
8. ø36" EPDM FLEX CONNECTOR.
9. ø36" 90° ELBOW
10. BIOFILTER BYPASS STACK
11. COVER OPENING WITH STAINLESS STEEL BIRD SCREEN

REGISTERED PROFESSIONAL ENGINEER
RANDY L. SANDELL
No. 86703
Exp. 3-31-23
CIVIL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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PROJ. MGR. : WLS

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CITY OF MILPITAS CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOTRICKLING FILTER PLAN

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M20**
SHEET NUMBER 19 OF 30
REVISION

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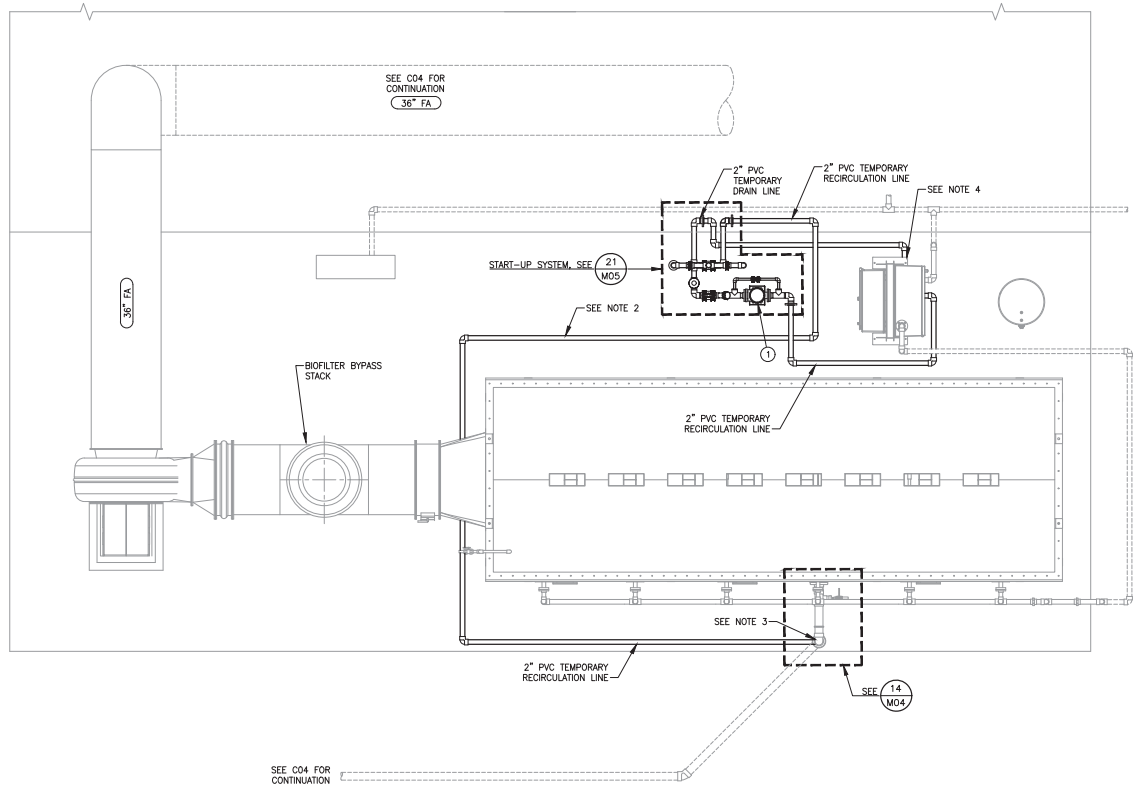

PLAN

SCALE: 3/8"=1'-0"

NOTES:

1. THIS DRAWING IS BASED ON BIOTRICKLING FILTER EQUIPMENT SUPPLIED BY THE FIRST NAMED MANUFACTURER IN SECTION 11302. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY MODIFICATIONS THAT ARE NECESSARY TO INSTALL EQUIPMENT PROVIDED BY ANOTHER MANUFACTURER. ALL MODIFICATIONS TO THE DESIGN REQUIRE APPROVAL BY THE ENGINEER.
2. CONTRACTOR IS TO MAKE ALL CONNECTIONS TO START-UP SYSTEM WITH TEMPORARY PIPING. FOLLOWING SUCCESSFUL EQUIPMENT START-UP, REMOVE TEMPORARY PIPING, AND START-UP SYSTEM. RETURN START-UP SYSTEM TO OWNER FOR STORAGE.
3. MAKE TEMPORARY CONNECTION TO BIOTRICKLING FILTER DRAIN DOWNSTREAM OF DRAIN LINE SAMPLE TAP AT FLANGE. REINSTATE DRAIN LINE TO EQUIPMENT DRAIN FOLLOWING SUCCESSFUL EQUIPMENT START-UP SEE DETAILS 9/M03 AND 10/M03.
4. TEMPORARILY ROUTE PIPE TO EQUIPMENT DRAIN FOR DURATION OF START-UP PERIOD. FOLLOWING STARTUP, DISCONNECT TEMPORARY PIPING AND INSTALL BLIND FLANGE AT WATER PANEL CONNECTION POINT.

KEY NOTES:

1 START-UP SYSTEM, SUPPLIED BY MANUFACTURER. SEE SPECIFICATION 11302.

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STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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DESIGNED BY : WLS
PROJ. MGR. : WLS

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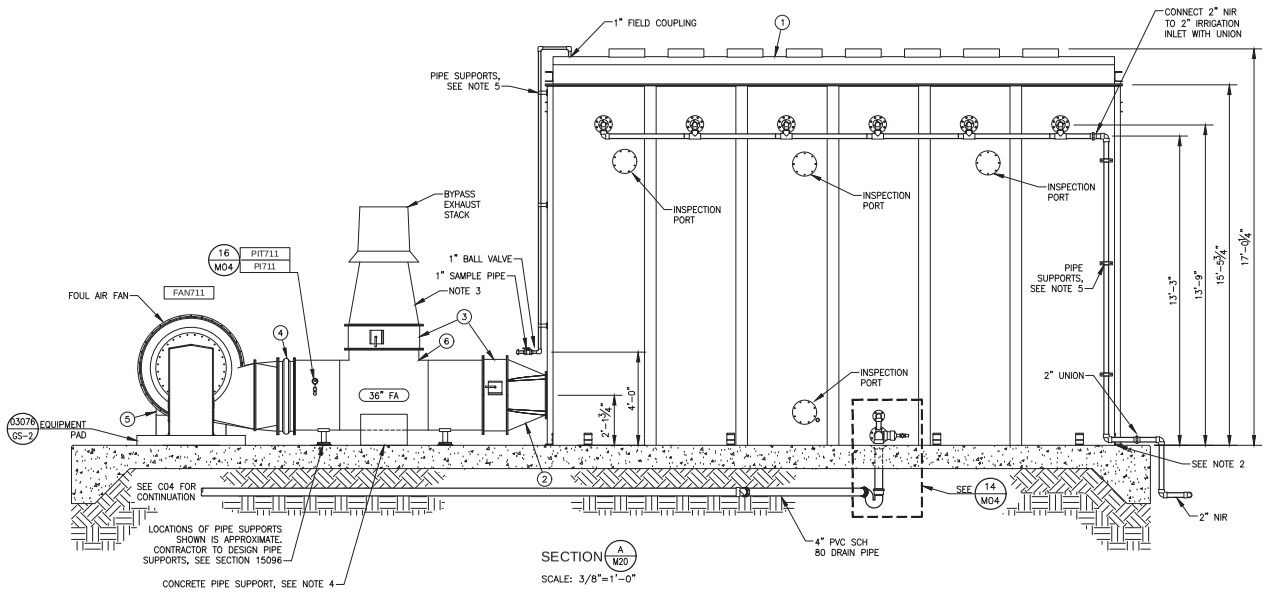
CITY OF MILPITAS
CALIFORNIA
JANUARY 20, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOTRICKLING FILTER TEMPORARY START-UP CONFIGURATION

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M21**
SHEET NUMBER 20 OF 30
REVISION

N:\Clients\270 City of Milpitas\50-18-14 Des Serv - Milpitas Main Lift Pump\CAD\Production\270-50-18-14-M21.dwg 3/23/2021 1:28 PM sbarber



SECTION A M20

SCALE: 3/8"=1'-0"

NOTES:

1. THIS DRAWING IS BASED ON BIOTRICKLING FILTER EQUIPMENT SUPPLIED BY THE FIRST NAMED MANUFACTURER IN SECTION 11302. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY MODIFICATIONS THAT ARE NECESSARY TO INSTALL EQUIPMENT PROVIDED BY ANOTHER MANUFACTURER. ALL MODIFICATIONS TO THE DESIGN REQUIRE APPROVAL BY THE ENGINEER.
2. SET BIOTRICKLING FILTER ON TWO LAYERS OF TYPE II (NO. 30) ASTM D226 FELT PAPER.
3. BRACKET UPPER STACK TO DISCHARGE DUCT.
4. BYPASS STACK FABRICATOR TO DESIGN SUPPORT AND ANCHORING FOR BYPASS STACK.
5. CONTRACTOR TO COORDINATE WITH BIOTRICKLING FILTER MANUFACTURER REGARDING TYPE AND LOCATION OF PIPE SUPPORTS. MANUFACTURER TO FABRICATE REQUIRED PIPE SUPPORT ATTACHMENTS.

KEY NOTES:

1. BioTRICKLING FILTER REACTOR, SEE SPECIFICATION 11302.
2. ø36", 48"x20" RECTANGULAR TRANSITION, FRP.
3. ø36", ISOLATION DAMPER VALVE, FRP.
4. ø36", EPDM FLEX CONNECTOR.
5. ø36" 90° ELBOW
6. ø36" TEE

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QA/QC REVIEW: DJA
DATE: 8/28/2020

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CITY OF MILPITAS
CALIFORNIA
JANUARY 26, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOTRICKLING FILTER SECTIONS 1

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M22**
SHEET NUMBER 21 OF 30
REVISION

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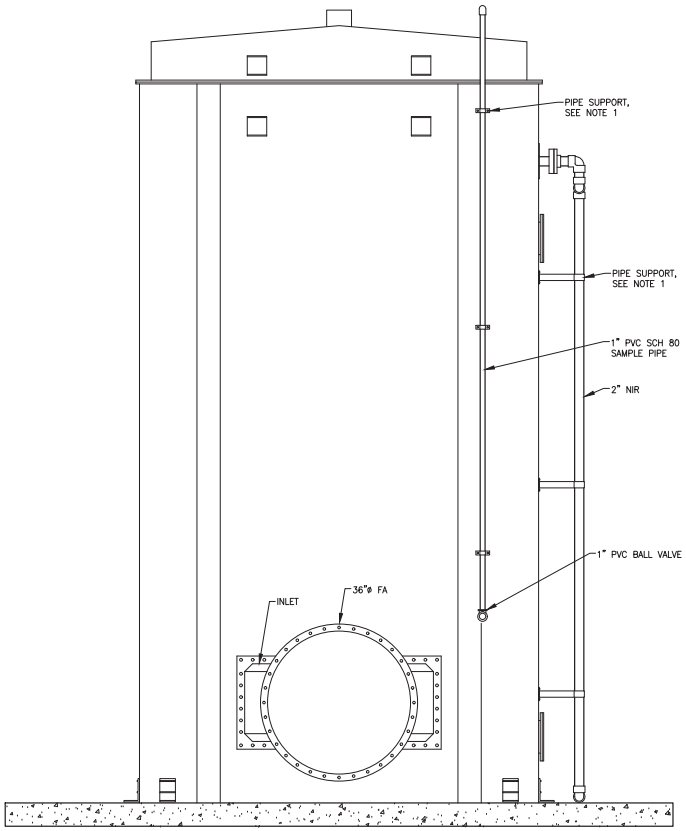
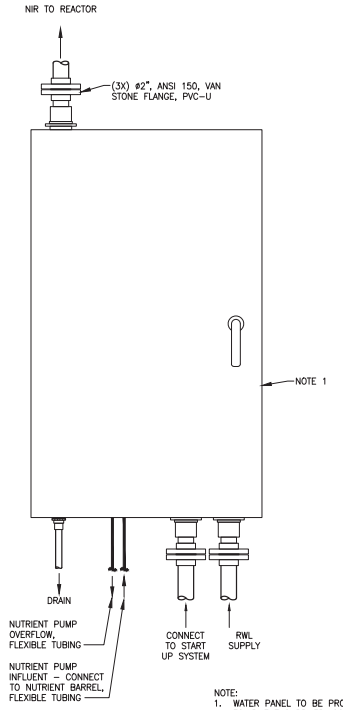


NOTE:
1. CONTRACTOR TO COORDINATE WITH BIOTRICKLING FILTER MANUFACTURER REGARDING TYPE AND LOCATION OF PIPE SUPPORTS. MANUFACTURER TO FABRICATE REQUIRED PIPE SUPPORT ATTACHMENTS.

BIOTRICKLING FILTER
SECTION (C / M20)
SCALE: 3/4"=1'-0"



NOTE:
1. WATER PANEL TO BE PROVIDED BY EQUIPMENT SUPPLIER. CONTRACTOR IS RESPONSIBLE FOR ALL PIPING AND TUBING REQUIRED TO CONNECT TO PANEL.

WATER PANEL
DETAIL (1 / M20)
NOT TO SCALE

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5/26/2021

QA/QC REVIEW: DJA
DATE: 8/28/2020

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CITY OF MILPITAS CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOTRICKLING FILTER SECTIONS 2

JOB NUMBER 270-50-18-14
DRAWING NUMBER **M23**
SHEET NUMBER 22 OF 30
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MISCELLANEOUS ELECTRICAL & INSTRUMENTATION ABBREVIATIONS

&	AND	HTR	HEATER	PRR	POWER RELAY
@	AT	HZ	HERTZ (CYCLES PER SECOND)	PS	PRESSURE SWITCH, POWER SUPPLY
A	AMBER, AMPERES	HZD	HAVARDOUS AREA, EXPLOSION PROOF	PT	POTENTIAL TRANSFORMER
AC	ALTERNATING CURRENT	I	INTERLOCK	PTT	PUSH TO TEST
AFF	ABOVE FINISHED FLOOR	I/O	INPUT/OUTPUT	PV	PROCESS VARIABLE
AI	ANALOG INPUT	ICR	INSTRUMENTATION CONTROL RELAY	PVC	POLY VINYL CHLORIDE
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL	INCAN	INCANDESCENT	PWM	PULSE WIDTH MODULATION
ALT	ALTERNATOR	INST	INSTANTANEOUS	PWR	POWER
AM	AMMETER	ISC	SHORT CKT INTERRUPTING CURRENT (SYMM)	R	RED
ATS	AUTOMATIC TRANSFER SWITCH	ISR	INTRINSICALLY SAFE RELAY	RCT	REPEAT CYCLE TIMER
AO	ANALOG OUTPUT	J	JUNCTION BOX	REF	REFERENCE
AWG	AMERICAN WIRE GUAGE	K	KILO, PREFIX	RIO	REMOTE I/O
B	BLUE	L	LINE	RTD	RESISTANCE TEMPERATURE DETECTOR
BC	BARE COPPER	LA	LIGHTNING ARRESTOR	RTM	RUN TIME METER
BFC	BELOW FINISHED CEILING	LC	LIGHTING CONTACTOR	RTU	REMOTE TELEMETRY UNIT
BOD	BIOCHEMICAL OXYGEN DEMAND	LCD	LIQUID CRYSTAL DISPLAY	RVNR	REDUCED VOLTAGE NON-REVERSING
BLK	BLANK	LED	LIGHT EMITTING DIODE	(R)	REWIRE, RELOCATE, REVISE, REUSE, REPLACE
BKR	BREAKER	LEL	LOWER EXPLOSIVE LIMIT	SC	SHORTING CONTACTOR
C	CONDUIT	LGT	LIGHT	SCH	SCHEDULE
CAP	CAPACITOR	LO	LOW	SEC	SECONDARY
CB	CIRCUIT BREAKER	LOR	LOCAL-OFF-REMOTE	SECS	SECONDS
CBL	CABLE	LOS	LOCK-OUT STOP SWITCH	SEL	SELECTOR
CH	CHANNEL	LP	LIGHTING PANELBOARD	SFA	SERVICE FACTOR AMPS
CKT	CIRCUIT	LPU	LINE PROTECTION UNIT	SP	SETPOINT
COAX	COAXIAL CABLE	LR	LATCHING RELAY	SPD	SURGE PROTECTIVE DEVICE
COMM	COMMUNICATION PORT	LS	LEVEL SWITCH	SPEC	SPECIFICATION
CP	CONTROL PANEL	M	MOTOR CONTRACTOR	SS	STAINLESS STEEL
CPT	CONTROL POWER TRANSFORMER	MAX	MAXIMUM	SSS	SOLID STATE SOFT STARTER
CR	CONTROL RELAY	MCC	MOTOR CONTROL CENTER	STT	START
CT	CURRENT TRANSFORMER	MCM	THOUSAND CIRCULAR MILS	STP	STOP
CTQ	CONSTANT TORQUE	MCP	MOTOR CIRCUIT PROTECTOR	SV	SOLENOID VALVE
CU	COPPER	MH	MANHOLE	SW	SWITCH
DC	DIRECT CURRENT	MHD	METAL HALIDE	SWBD	SWITCHBOARD
DET	DETAIL	MIN	MINIMUM	SWGR	SWITCHGEAR
DI	DIGITAL INPUT	MINS	MINUTES	SYMM	SYMMETRICAL
DIA	DIAGRAM	MISC	MISCELLANEOUS	T	TRIP
DISC	DISCONNECT	MNFR	MANUFACTURER	TB	TERMINAL BLOCK
DIV	DIVISION	MODEM	MODULATOR/DEMODULATOR	TC	TIME CLOCK
DO	DIGITAL OUTPUT	MOV	MOTOR OPERATED VALVE	TDOD	TIME DELAY ON DE-ENERGIZATION
DPDT	DOUBLE POLE DOUBLE THROW	MPS	MOTOR PROTECTION SYSTEM	TDOE	TIME DELAY ON ENERGIZATION
DWG	DRAWING	MS	MOISTURE SENSOR/SWITCH	TEL	TELEMETRY
ELEV	ELEVATION	MTR	MOTOR	TELCO	TELEPHONE COMPANY
EMT	ELECTRICAL METALLIC TUBING	MTS	MANUAL TRANSFER SWITCH	TEMP	TEMPERATURE
ETM	ELAPSED TIME METER	MUX	MULTIPLEXER	TM	THERMAL MAGNETIC
(E)	EXISTING	MV	MEDIUM VOLTAGE	TOC	TOTAL ORGANIC CARBON
F	FRAME	N	NEUTRAL	TR	TIME DELAY RELAY
FC	FAIL CLOSED	NC	NORMALLY CLOSED	TRIAD	TWISTED & SHIELDED 3 CONDUCTOR
FCS	FIELD CONTROL STATION	NEC	NATIONAL ELECTRICAL CODE	TS	TEMPERATURE SWITCH
FLA	FULL LOAD AMPS	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	TSPR	TWISTED & SHIELDED PAIR
FLP	FAIL LAST POSITION	NIC	NOT IN CONTRACT	TYP	TYPICAL
FO	FAIL OPEN	NO	NORMALLY OPEN	UG	UNDERGROUND
FLEX	FLEXIBLE, METAL LIQUID TIGHT CONDUIT	NP	NAMEPLATE	UL	UNDERWRITERS LABORATORIES
FS	FLOW SWITCH OR FULL SPEED	NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED
FV, FVNR	FULL VOLTAGE NON-REVERSING	(N)	NEW	UPS	UNINTERRUPTIBLE POWER SUPPLIES
FVR	FULL VOLTAGE REVERSING	OC	ON CENTER	V	VOLTAGE
FWD	FORWARD	OI	OPERATOR INTERFACE	VA	VOLT AMPS
(F)	FUTURE	OL	OVERLOAD	VAR	VOLT AMP REACTIVE
G	GREEN	ORP	OXIDATION REDUCTION POTENTIAL	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	P	PHASE, POLE	VLV	VALVE
GEN	GENERATOR	PB	PULL BOX	VM	VOLTMETER
GFI	GROUND FAULT CIRCUIT INTERRUPTER	PC	PERSONAL COMPUTER	VTQ	VARIABLE TORQUE
GND	GROUND	PE	PHOTOCELL	W	WHITE, WATTS
GRS	GALVANIZED RIGID STEEL CONDUIT	PF	POWER FAIL	WHM	WATT-HOUR METER
GRS-PVC	PVC COATED GRS CONDUIT	PFR	POWER (PHASE) FAIL RELAY	WM	WATTMETER
HC	PUSHBUTTON	PH	HYDROGEN ION CONCENTRATION	WP	WATERPROOF, WEATHER PROOF
HI	HIGH	PLC	PROGRAMMABLE LOGIC CONTROLLER	WS	TORQUE SWITCH
HID	HIGH INTENSITY DISCHARGE	PM	POWER MONITOR	XFMR	TRANSFORMER
HIM	HUMAN INTERFACE MODULE	PMP	PUMP	XS	MISCELLANEOUS SWITCH
HOA	HAND-OFF-AUTO	PNL	PANEL	Y	YELLOW
HOR	HAND-OFF-REMOTE	PR	PAIR, TWISTED & SHIELDED CABLE	Z	IMPEDANCE
HP	HORSEPOWER	PRESS	PRESSURE	ZS	LIMIT SWITCH
HPS	HIGH PRESSURE SODIUM	PRI	PRIMARY		
HS	HAND SWITCH	PROVIDE	FURNISH, INSTALL & CONNECT		

SWITCHES – PROCESS

SYMBOL	DESCRIPTION
FS	FLOW SWITCH – CLOSES UPON INCREASING FLOW
FS	FLOW SWITCH – OPENS UPON INCREASING FLOW
LS	LEVEL SWITCH – CLOSES UPON INCREASING LEVEL
LS	LEVEL SWITCH – OPENS UPON INCREASING LEVEL
PS	PRESSURE SWITCH – CLOSES UPON INCREASING PRESSURE (INCREASING VACUUM)
PS	PRESSURE SWITCH – OPENS UPON INCREASING PRESSURE (INCREASING VACUUM)
TS	TEMPERATURE SWITCH – CLOSES UPON INCREASING TEMPERATURE
TS	TEMPERATURE SWITCH – OPENS UPON INCREASING TEMPERATURE
ZS	LIMIT SWITCH – CLOSES AT SET LIMIT
ZS	LIMIT SWITCH – OPENS AT SET LIMIT
ZS	PROXIMITY SWITCH – CLOSES UPON DECREASING DISTANCE
ZS	PROXIMITY SWITCH – OPENS UPON DECREASING DISTANCE
WS	TORQUE SWITCH – CLOSES UPON INCREASING TORQUE
WS	TORQUE SWITCH – OPENS UPON INCREASING TORQUE

DEVICES – RELAY

SYMBOL	DESCRIPTION
CR 1 28, 111	CONTROL RELAY CR1 WITH NORMALLY OPEN CONTACT ON LINE 28 & NORMALLY CLOSED CONTACT ON LINE 111
TR 1	TIME DELAY RELAY TR2 – ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN
TDOE TDOD	TIME DELAY ON ENERGIZATION TIME DELAY ON DE–ENERGIZATION
M1	CONTACTOR OR STARTER M1
SV	SOLENOID
CR1 (105)	NORMALLY OPEN, RELAY CONTACT – ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105
CR1	NORMALLY CLOSED, RELAY CONTACT – ACTUATED BY RELAY CR1
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT – CONTACT CLOSES AFTER TR2 IS ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT – CONTACT OPENS AFTER TR2 IS ENERGIZED
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT – CONTACT OPENS AFTER TR2 IS DE–ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT – CONTACT CLOSES AFTER TR2 IS DE–ENERGIZED
TR2	CONTACT OPENS AND CLOSES IN A TIMED REPEAT CYCLE

COMPONENTS

SYMBOL	DESCRIPTION
RES	RESISTOR
	POTENTIOMETER
	CAPACITOR, FIXED
	CAPACITOR, ADJUSTABLE
	DIODE
	DIODE, ZENER
	VARISTOR TRANSIENT VOLTAGE SUPPRESSOR
	VOLTAGE SURGE SUPPRESSOR, AC
	RESISTANCE TEMPERATURE DETECTOR (RTD)
	THERMOCOUPLE (T/C)

DEVICES – MISCELLANEOUS

SYMBOL	DESCRIPTION
	AUDIBLE ALARM
	BATTERY
HTR	HEATER
	3 PHASE HEATER
G	GENERATOR
# HP	3 PHASE MOTOR # = MOTOR HP
# HP	SINGLE PHASE MOTOR
	TRANSFORMER
	LINE REACTOR

WIRING – CONNECTIONS

SYMBOL	DESCRIPTION
	PANEL OR EQUIPMENT WIRING
	FIELD WIRING
	CONDUCTORS – NOT CONNECTED
	CONDUCTORS – CONNECTED
	GROUND
	CHASSIS OR FRAME GROUND
	PLUG AND RECEPTACLE
	INCOMING LINE
	TERMINAL BLOCKS
	TERMINALS
SHIELD CONDUCTOR	SHIELDED CABLE

PLAN – SYMBOLS

SYMBOL	DESCRIPTION
	CONDUIT, EXPOSED
	CONDUIT, IN SLAB OR BELOW GRADE
	CONDUIT STUBBED OUT & CAPPED
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT ENDS
	CONDUIT CHANGE IN ELEVATION
G	BARE COPPER GROUND WIRE
	GROUND CONNECTION BOLTED TYPE
	GROUND CONNECTION EXOTHERMIC WELD TYPE
	PULL BOX
	DISCONNECT SWITCH
	FIELD CONTROL STATION WITH JUNCTION BOX
#A	FIELD CONTROL STATION WITH #AMP DISCONNECT SWITCH
	SPECIAL RECEPTACLE
J	JUNCTION BOX
T	THERMOSTAT
# A a	LIGHTING, FANS, HEATERS # – CIRCUIT BREAKER NUMBER A – FIXTURE SCHEDULE REF. a – CONTROL SWITCH REFERENCE
#	DUPLEX RECEPTACLE # – CIRCUIT BREAKER NUMBER
# $ 2 a	TOGGLE SWITCH # – CIRCUIT BREAKER NUMBER SUBSCRIPT – CIRCUIT CONTROLLED SUPERSCRIPT – BLANK = 1 POLE 2 = 2 POLE 3 = 3 WAY
#	CONDUIT #
##	EQUIPMENT NUMBER

SWITCHES – OPERATOR

SYMBOL	DESCRIPTION
SW	TOGGLE OR DISCONNECT SWITCH
PB	PUSHBUTTON – NORMALLY OPEN, MOMENTARY ACTION
PB	PUSHBUTTON – NORMALLY CLOSED, MOMENTARY ACTION
PB	PUSHBUTTON, MECHANICALLY INTERLOCKED, DOUBLE CIRCUIT – NORMALLY CLOSED AND NORMALLY OPEN, MAINTAINED ACTION
H O A	SELECTOR SWITCH, 3 POSITION – CONTACT STATUS SHOWN EXISTS AT POSITION OF H–HAND, O–OFF, OR A–AUTO
2 1 1 2	SELECTOR SWITCH, 2 POSITION – CONTACT STATUS SHOWN EXISTS AT POSITION AS SHOWN

DEVICES – FRONT PANEL

SYMBOL	DESCRIPTION
X	INDICATING LIGHT, LETTER "X" INDICATES COLOR: R=RED G=GREEN, A=AMBER, W=WHITE Y=YELLOW, B=BLUE
PTT X	INDICATING LIGHT, PUSH TO TEST
AMP	AMP METER
VM	VOLT METER
ETM	ELAPSED TIME METER
RTM	RUN TIME METER
XS	MULTI–POSITION SWITCH WHERE LETTER "X" IS FUNCTION: A=AMP, V=VOLT

DEVICES – PROTECTIVE

SYMBOL	DESCRIPTION
	DISCONNECT, 3 POLE
	CIRCUIT BREAKER, 3 POLE THERMAL MAGNETIC (TM) OR MOTOR CIRCUIT PROTECT (MCP)
OL	THERMAL OVERLOAD CONTACT
	THERMAL OVERLOAD ELEMENT
	FUSE WITH BLOWN FUSE INDICATING LIGHT
	FUSE
52	MEDIUM VOLTAGE DRAWOUT BREAKER
	LOW VOLTAGE DRAWOUT CIRCUIT BREAKER

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REGISTERED PROFESSIONAL ENGINEER JEREMY M. KIMPEL ELECTRICAL NO. 156980 Exp.6-30-2022 STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: XML
DATE: 5/26/2021

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DESIGNED BY : SMK
PROJ. MGR. : WLS

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CITY OF MILPITAS CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

ELECTRICAL SYMBOLS & ABBREVIATIONS

JOB NUMBER 270–50–18–14
DRAWING NUMBER **E01**
SHEET NUMBER 23 OF 30
REVISION

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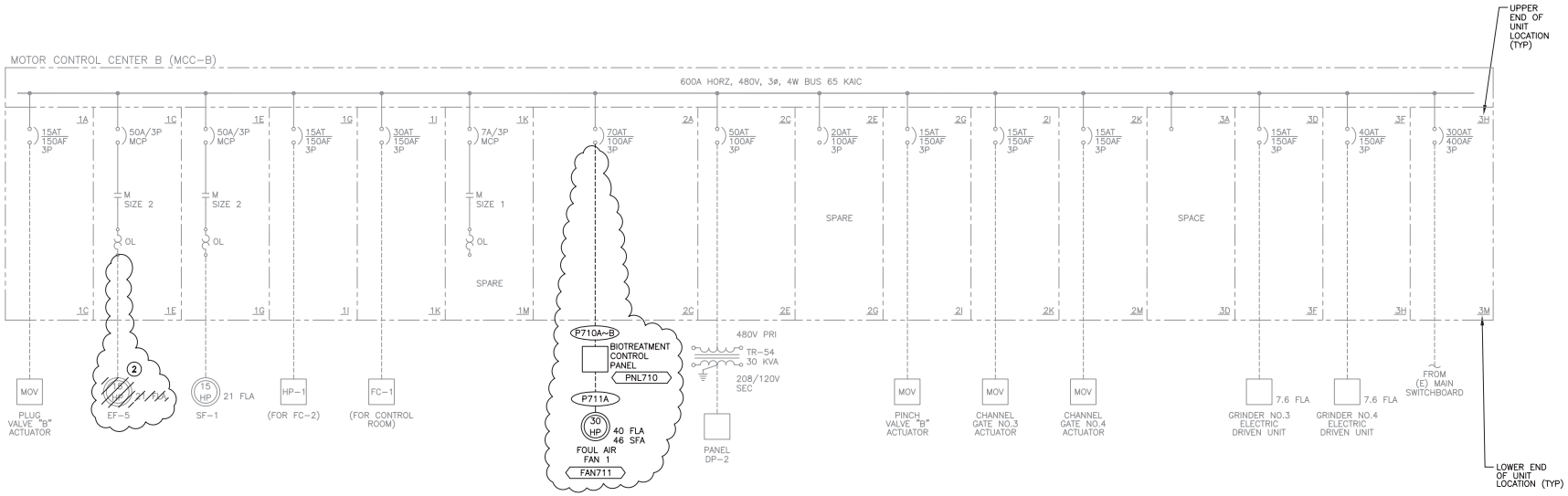
MCC-B LOAD CALCULATIONS	UTILITY SERVICE						GENERATOR SERVICE	
HP DESCRIPTION	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA
15 FAN	21	1	17,459		1	17,459	1	17,459
5 GRINDER	21	2	34,918		2	34,918	1	17,459
1 MOV	2	4	6,984		4	6,984	2	3,492
HVAC FC-1	15	1	12,471		1	12,471	1	12,471
HVAC HP-1	10	1	8,314		1	8,314	1	8,314
PANELBOARD LPDP-2	18.0		15,000			15,000		15,000
(1) 30 BIOTREATMENT FAN	40	1	33,255		1	33,255	1	33,255
SUBTOTAL	114.4		128,401	114		128,401		107,450
DIVERSITY FACTOR				100 %				
30 HP Largest motor @ 25% additional				33,255	0.25	8,314		
TOTAL						136,715		

/ 480 V, 3 Phase 4 Wire Service Amps =	164.4	Amps
	1.25	Multiplier
Service Size =	205.6	Amps
Main Size =	300.0	Amps
% Main Load =	69%	

GEN SIZE
800 KW
1,000 KVA
1203 AMPS

AMPS= 129
KVA= 107
%GEN LOAD= 10.7%



EXISTING MCC-B ONE LINE DIAGRAM (1)

NOTES:
(1) NEW WORK SHOWN IN BUBBLES.
(2) EXISTING EXHAUST FAN TO BE DEMOED. DISCONNECT & REMOVE CONDUCTORS FROM MCC TO EF-5 AND KEEP STARTER AS SPARE.

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5/26/2021

QA/QC REVIEW: XML
DATE: 5/26/2021

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DESIGNED BY : SMK
PROJ. MGR. : WLS

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MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

EXISTING MCC-B
ONE LINE DIAGRAM

JOB NUMBER 270-50-18-14
DRAWING NUMBER **E02**
SHEET NUMBER 24 OF 30
REVISION

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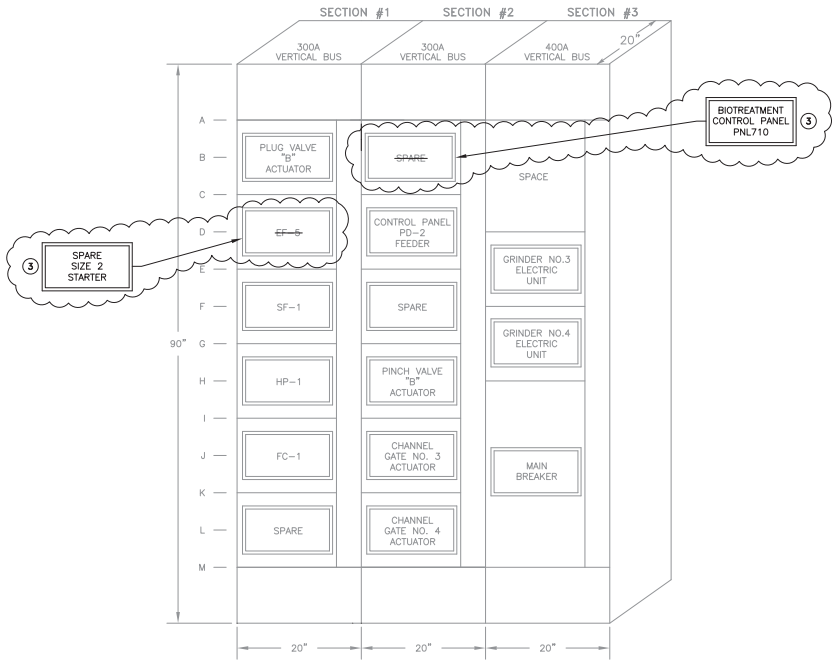

EXISTING MCC-B ELEVATION ①②

NOTES:
1. EXISTING MCC IS EATON FREEDOM SERIES 2100.
2. NEW WORK SHOWN IN BUBBLES.
3. REPLACE EXISTING NAMEPLATES WITH NEW NAMEPLATES AS SHOWN TO MATCH EXISTING LETTERING.

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5/26/2021

QA/QC REVIEW: XML
DATE: 5/26/2021

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PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE
		CONFORMED TO ADDENDA	SMK	05/2021

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Davis, California 95618
(530) 756-5905
FAX (530) 756-5991

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

EXISTING MCC-B ELEVATION

JOB NUMBER 270-50-18-14
DRAWING NUMBER **E03**
SHEET NUMBER 25 OF 30
REVISION

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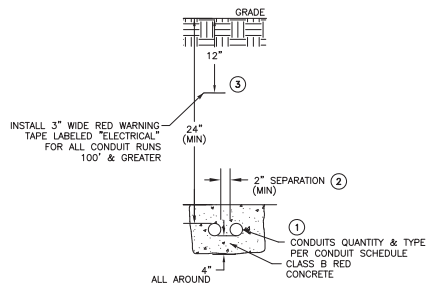
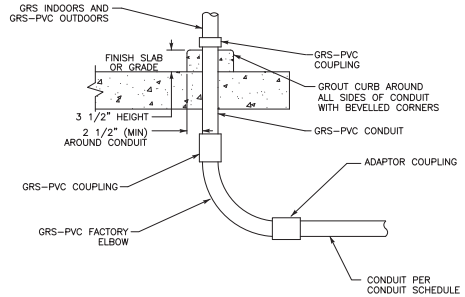


ENCASED CONDUITS (A / E04)

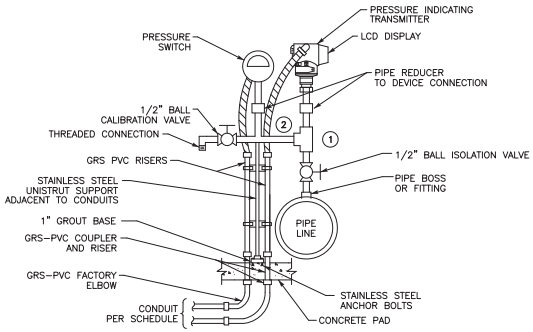
NOT TO SCALE **DETAIL**

NOTES:
1. PLACE CONDUIT RUNS OF 4 CONDUITS OR GREATER IN PLASTIC SPACERS (RATED FOR DIRECT BURIAL) EVERY 5' ALONG LENGTH OF RUN.
2. PROVIDE 12" (MIN) SEPARATION BETWEEN "A, C & D" TYPE GROUP AND "L & P" TYPE GROUP CONDUITS.
3. TRENCHING & COMPACTED BACKFILL PER SPECIFICATIONS.



EXPOSED CONDUIT TRANSITION (B / E04)

NOT TO SCALE **DETAIL**



PRESSURE SWITCH/INDICATOR (C / E04)

NOT TO SCALE **DETAIL**

NOTES:
1. 1/2" GALVANIZED PIPING & VALVES
2. SUPPORT HORIZONTAIL PIPE WITH SS CLAMP TO VERTICAL UNISTRUT.

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5/26/2021

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DATE: 5/26/2021

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DESIGNED BY : SMK
PROJ. MGR. : WLS

No.	ZONE	REVISIONS	BY	DATE
		CONFORMED TO ADDENDA	SMK	05/2021

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MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

TYPICAL ELECTRICAL DETAILS

JOB NUMBER 270-50-18-14
DRAWING NUMBER **E04**
SHEET NUMBER 26 OF 30
REVISION

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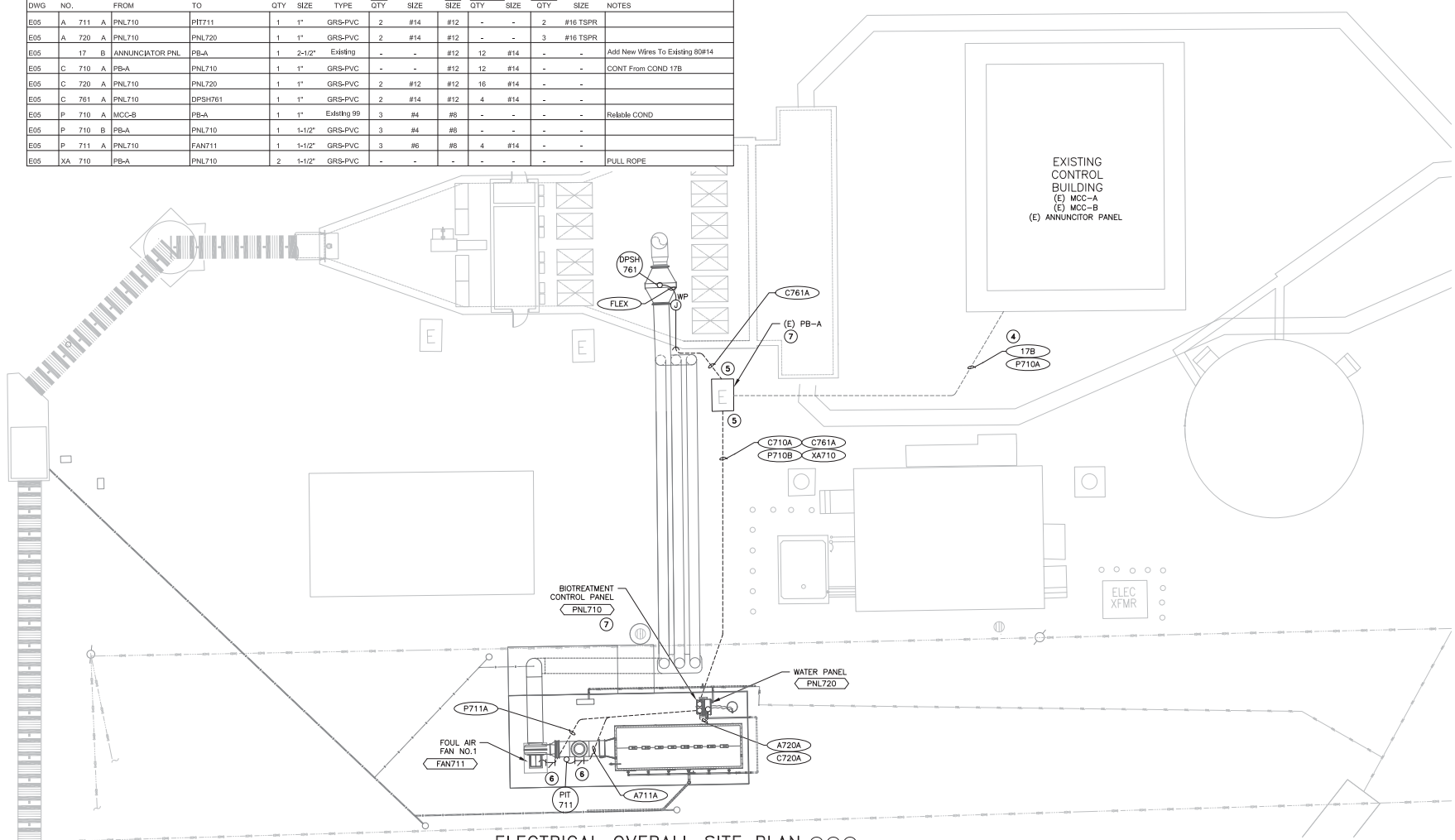
CONDUIT & WIRE ROUTING SCHEDULE

REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	PWR SIZE	GND SIZE	CONTROL QTY	CONTROL SIZE	SIGNAL QTY	SIGNAL SIZE	NOTES
E05	A 711 A	PNL710	PIT711	1	1"	GRS-PVC	2	#14	#12	-	-	2	#16 TSPR	
E05	A 720 A	PNL710	PNL720	1	1"	GRS-PVC	2	#14	#12	-	-	3	#16 TSPR	
E05	17 B	ANNUNCIATOR PNL	PB-A	1	2-1/2"	Existing	-	-	#12	12	#14	-	-	Add New Wires To Existing 80#14
E05	C 710 A	PB-A	PNL710	1	1"	GRS-PVC	-	-	#12	12	#14	-	-	CONT From COND 17B
E05	C 720 A	PNL710	PNL720	1	1"	GRS-PVC	2	#12	#12	16	#14	-	-	
E05	C 761 A	PNL710	DPSH761	1	1"	GRS-PVC	2	#14	#12	4	#14	-	-	
E05	P 710 A	MCC-B	PB-A	1	1"	Existing 99	3	#4	#8	-	-	-	-	Relable COND
E05	P 710 B	PB-A	PNL710	1	1-1/2"	GRS-PVC	3	#4	#8	-	-	-	-	
E05	P 711 A	PNL710	FAN711	1	1-1/2"	GRS-PVC	3	#6	#8	4	#14	-	-	
E05	XA 710	PB-A	PNL710	2	1-1/2"	GRS-PVC	-	-	-	-	-	-	-	PULL ROPE

0 10' 20'
SCALE IN FEET

NEMA 4X AREA
BEYOND CLASS 1, DIV 2

CLASS 1 DIV 2 AREA
WITHIN 3' AROUND ODOR CONTROL EQUIPMENT



ELECTRICAL OVERALL SITE PLAN 1 2 3

NOTES:
1. NOT ALL EXISTING EQUIPMENT AND CONDUITS ARE SHOWN, EQUIPMENT AND CONDUITS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK.
2. UG CONDUITS PER DWG E04, DETAIL "A". HAND DIG TRENCH FOR ALL UG CONDUITS IN EXISTING AREAS. EXISTING UG SERVICES ARE NOT SHOWN & SHALL BE PROTECTED FROM DAMAGE.
3. EXPOSED CONDUITS TRANSITIONS PER DWG E04, DETAIL "B". EXPOSED CONDUITS TO BE ATTACHED TO FLOOR WITH SS UNISTRUTS.
4. EXISTING CONDUITS TO BE RESCHEDULED, SEE CONDUIT SCHEDULE FOR DETAILS.
5. ROUTE NEW CONDUITS TO EXISTING PULL BOX.
6. PLACE "EYS" TYPE EXPLOSION PROOF BARRIER AT TRANSITION TO UG CONDUIT.
7. EXISTING PB-A CONDUITS/WIRES SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR TO PROTECT (E) VAULT IN PLACE. SEE CIVIL DRAWINGS FOR MORE INFORMATION.

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REGISTERED PROFESSIONAL ENGINEER
JOHN M. KIMPEL
NO. 15690
Exp.6-30-2022
ELECTRICAL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: XML
DATE: 5/26/2021

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PROJ. MGR. : WLS

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		CONFORMED TO ADDENDA	SMK	05/2021

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CITY OF MILPITAS
CALIFORNIA
INCORPORATED DEC. 1, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

ELECTRICAL OVERALL SITE PLAN

JOB NUMBER 270-50-18-14
DRAWING NUMBER **E05**
SHEET NUMBER 27 OF 30
REVISION

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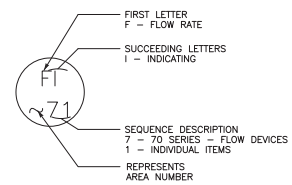
SYMBOL	DESCRIPTION
	P & I DIAGRAM SYMBOLS
XXX XXX	FIELD MOUNTED INSTRUMENT
XXX XXX	FACE MOUNTED INSTUMENT ON LOCAL PANEL, OPERATOR ACCESSIBLE
XXX XXX	FACE MOUNTED INSTRUMENT ON FIELD PANEL, OPERATOR ACCESSIBLE
XXX XXX	INSTRUMENT MOUNTED IN LOCAL PANEL, OPERATOR INACCESSIBLE
XXX XXX	INSTRUMENT MOUNTED IN FIELD PANEL, OPERATOR INACESSIBLE
I	OPERATION PERFORMED WITH LOGIC OR HARDWIRED DEVICES
DWG #	– REFERENCE ELEMENTARY DWG. #
XXX XXX	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL INDICATION
XXX XXX	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL ALARM INDICATION
XXX XXX	PLC OR COMPUTER PERFORMING INTERNAL OPERATION
XXX XXX	PLC OR COMPUTER PERFORMING INTERNAL ALARM OPERATION
$\propto \int d/dt$	PROPORTIONAL, INTEGRAL, AND DIFFERENTIAL PARAMETERS
% +/–	RATIO AND BIAS PARAMETERS
	AUDIBLE ALARM (BUZZER OR HORN)
R#–C#	ANNUNCIATOR WINDOW R – ROW # C – COLUMN #
X	LAMP INDICATION (STATUS OR ALARM)
XXXXX	DISCRETE INPUT
	DISCRETE OUTPUT
	ANALOG INPUT
	ANALOG OUTPUT
a XXXX	JUMP TAG FROM ONE AREA TO ANOTHER AREA OF DRAWING "a" TAG CONNECT POINT ON EACH DRAWING
P–X	CONTINUED ON DWG P–X
#	AUTODIALER PRIORITY # PC BASED SOFTWARE

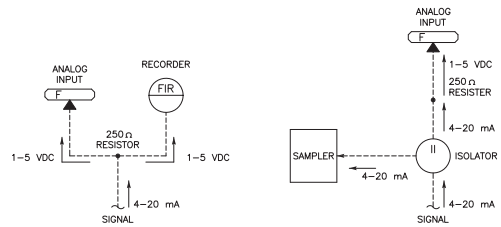
SYMBOL (OPEN / CLOSED)	DESCRIPTION
	P & I DIAGRAM SYMBOLS
	VALVE (GENERAL)
	BUTTERFLY VALVE
	GATE (GENERAL)
	CHECK VALVE (GENERAL)
	PUMP (GENERAL)
	BLOWER (GENERAL)
XXXX	VALVE/GATE NUMBER
XXXXX	EQUIPMENT NUMBER
	ELECTRIC SIGNAL
	LOGIC OR DATA SIGNAL
	PNEUMATIC SIGNAL
	CAPILLARY TUBING (FILLED SYSTEM)
	HYDRAULIC SIGNAL
ES AS	SONIC OR ELECTROMAGNETIC SIGNAL
E	ELECTRIC SUPPLY
SA	SERVICE AIR
IA	INSTRUMENT AIR
	DISCONNECT SWITCH

INSTRUMENT IDENTIFICATION LETTERS

	FIRST – LETTER: MEASURED OF INITIATING VARIABLE	SUCCEEDING – LETTER: MODIFIER	READOUT PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROLLER	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GENERAL		GLASS VIEWING DEVICE		
H	HAND				HIGH, OPENED
I	CURRENT (ELEC.)		INDICATING, INDICATOR		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW, CLOSED
M	MOISTURE	MOMENTARY			MIDDLE
N	STATUS		STATUS	USER'S CHOICE	USER'S CHOICE
O	OPERATOR		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RESET		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMITTER	TEST
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER LOUVER	
W	WEIGHT, FORCE		WELL		
X	SWITCH	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTER, CONVERTOR	
Z	POSITION DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSEIFIED FINAL CONTROL ELEMENT	



P&ID INSTRUMENT IDENTIFICATION EXAMPLE



TYPICAL SIGNAL FLOWS

NUMBERING SEQUENCE

SEQUENCE NUMBER	DESCRIPTION
00	COMMON ALARM
01–09	INDIVIDUAL ITEMS
10	MECHANICAL
20	MECHANICAL
30	MECHANICAL
40	MECHANICAL
50	LEVEL DEVICES
60	PRESSURE DEVICES
70	FLOW DEVICES
80	ANALYTICAL DEVICES
90	SAFETY & SECURITY DEVICES

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5/26/2021

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DATE: 5/26/2021

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No.	ZONE	REVISIONS	BY	DATE
		CONFORMED TO ADDENDA	SMK	05/2021

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CITY OF MILPITAS CALIFORNIA

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

INSTRUMENTATION SYMBOLS & ABBREVIATIONS

JOB NUMBER 270–50–18–14
DRAWING NUMBER I01
SHEET NUMBER 28 OF 30
REVISION

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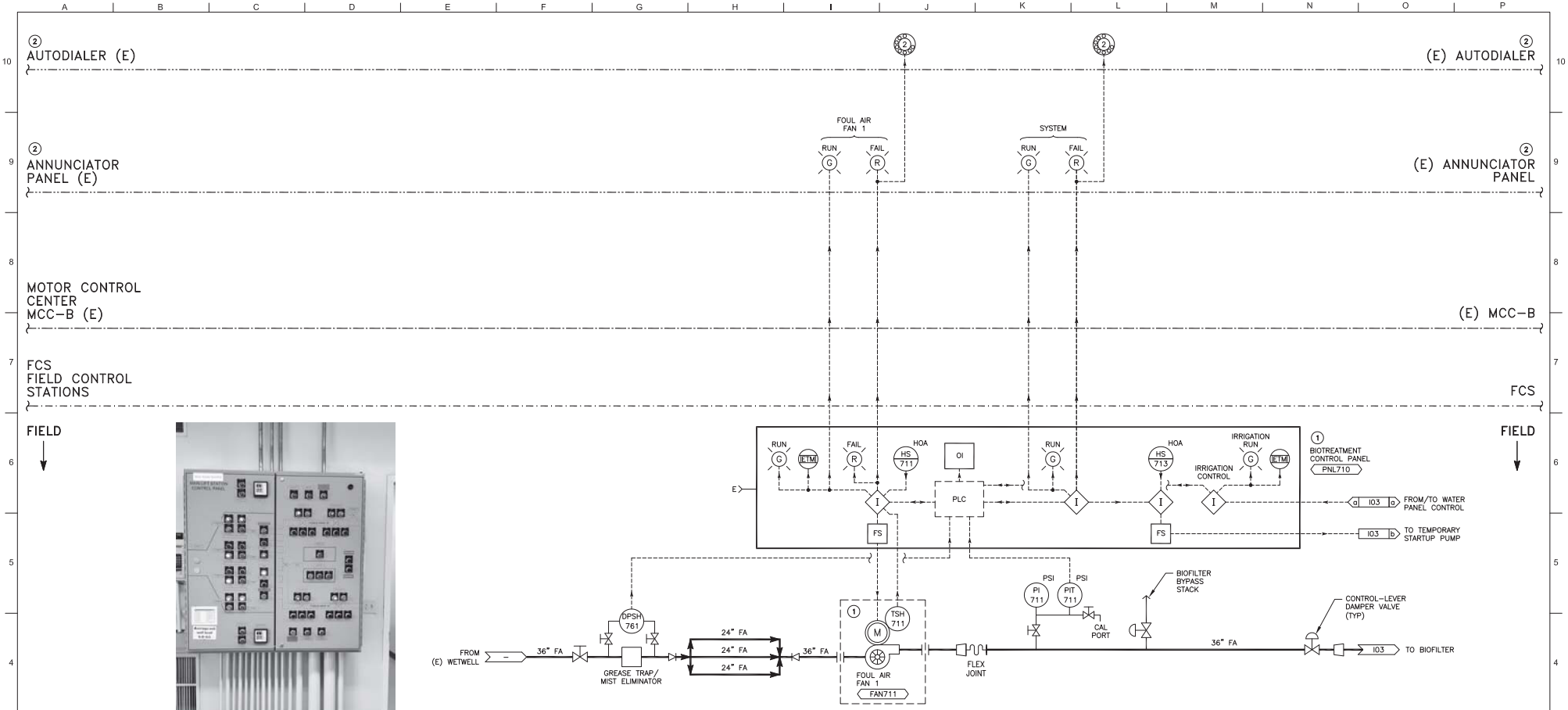

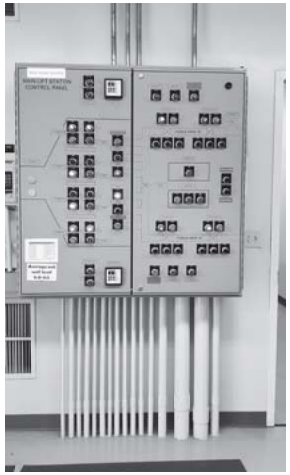

(E) ANNUNCIATOR PANEL (A PHOTO)

BIOTREATMENT FANS

NOTES:
1. SUPPLIED WITH BIOTREATMENT PACKAGE. SEE SPEC SECTION 11302 FOR DETAILS.
2. MODIFY EXISTING AUTODIALER & ANNUNCIATOR PANEL TO ADD INDICATING LIGHTS AS SHOWN PER OWNER'S INSTRUCTIONS. SEE PHOTO-A FOR EXISTING ANNUNCIATOR PANEL.

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		CONFORMED TO ADDENDA	SMK	05/2021

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CITY OF MILPITAS — CALIFORNIA — JANUARY 31, 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOTREATMENT FANS P&ID

JOB NUMBER 270-50-18-14
DRAWING NUMBER I02
SHEET NUMBER 29 OF 30
REVISION

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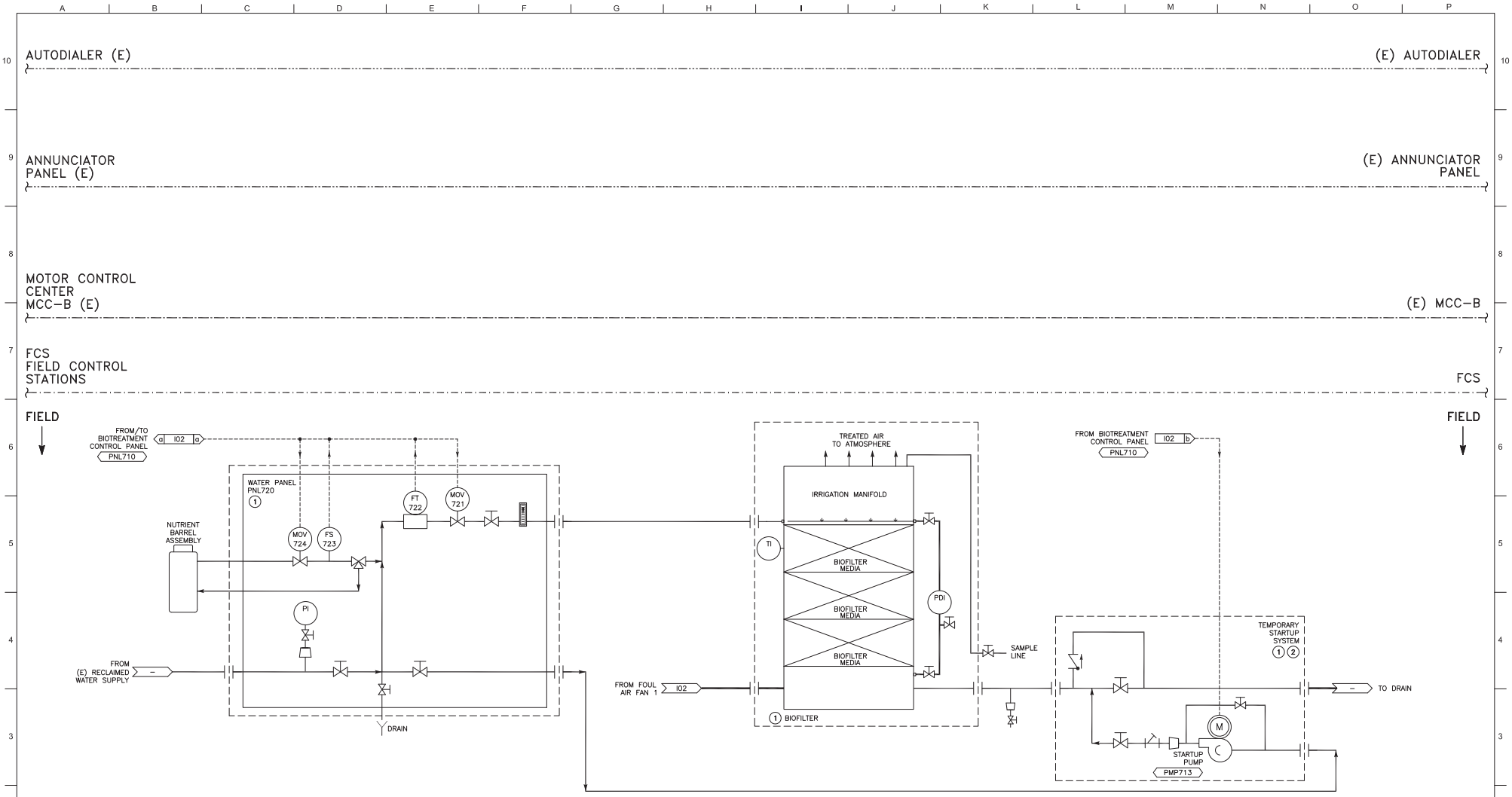

BIOFILTER

NOTES: (1) SUPPLIED WITH BIOTREATMENT PACKAGE, SEE SPEC SECTION 11302 FOR DETAILS.

(2) TEMPORARY STARTUP SYSTEM FOR INFORMATION ONLY. CONTRACTOR TO INSTALL ALL REQUIRED POWER AND CONTROLS, SEE CIVIL DRAWINGS FOR DETAILS.

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JOSEPH M. KINKEL
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Exp.6-30-2022
ELECTRICAL
STATE OF CALIFORNIA
5/26/2021

QA/QC REVIEW: XML

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		CONFORMED TO ADDENDA	SMK	05/2021

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CITY OF MILPITAS
CALIFORNIA
INCORPORATED 1954

MAIN SEWAGE PUMP STATION ODOR EMISSIONS CONTROL FACILITY

BIOFILTER P&I D

JOB NUMBER 270-50-18-14

DRAWING NUMBER I03

SHEET NUMBER 30 OF 30

REVISION

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CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve Amendment to Bateman Community Living, LLC Contract FY2020-21 for Senior Nutrition Services**
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Renee Lorentzen, Recreation and Community Services Director, 408-586-3226**
Recommendation:	Approve amendment to Bateman Community Living, LLC contract FY2020-2021 to increase the contract amount by $70,000 to $146,500 to cover the cost of additional Senior Nutrition meals during the pandemic.

Background:
In FY20-21, the City contracted with Bateman Community Living, LLC, for its Senior Nutrition Program (SNP) to provide approximately 14,000 meals to seniors. This lunch program is offered in collaboration with the Santa Clara County Senior Nutrition program and serves meals Monday – Friday at the Barbara Lee Senior. At the start of the pandemic daily lunch program numbers were slower than normal. However after a major Senior Check-in effort in which staff called all Senior Center members to let them know we were still open for social services support and nutrition support, City staff anticipated there would be a need for safe access to nutritious meals for resident seniors. As part of the pandemic response, Recreation and Community Services (RCS) staff applied for and were awarded $50,000 in CDBG funding during the regular grant funding cycle to support additional Senior Nutrition Meal service for FY2020-21.

The new pandemic operations at the Barbara Lee Senior Center which dictated moving the SNP to a “to-go” format proved a popular option for mobile seniors who wanted a safe environment when picking up their meals. Additionally, homebound seniors at the assisted living facility, Terrace Gardens, were offered the opportunity to order a hot lunch that was delivered to their doorstep by RCS interns. The $50,000 CDBG afforded for the purchase of “to-go” non-food supplies i.e. containers, bags, flatware, additional food warmers, and $40,000 in meals.

The program experienced an exponential increase in participation from an average of 80 meals per day, pre-pandemic, to as high as 200 per day with both the to-go onsite meal distribution and Terrace Gardens. In response to the continuing need, an additional $30,000 of CDBG funding was approved by City Council on May 7, 2021 to assist with funding the program for the remainder of FY2020-21. Staff has continued to monitor the daily average of meals served to determine adequate funding and contract allotment. As the program closes it’s FY2020-21 cycle, a contract amendment for the meal provider is needed in the amount of $70,000.

Since the start of the pandemic lockdown on March 17, 2020, the Barbara Lee Senior Center has served 33,296 senior meals.

Analysis:
The original contract with Bateman Community Living, LLC. (Bateman), for the provision of senior meals for the Senior Nutrition Program (SNP) in the amount of $76,500 provides approximately 14,000 meals to seniors over 250 serving days. The forecasted increase of an additional average of 50-52 meals per day during COVID-19 has been actualized and the program is currently averaging an additional 51 meals per day, or approximately 131 per day over the fiscal year. The FY2020-21 CDBG awards of $50,000 (of which $40,000 is for meals) and $30,000 for additional senior meals adequately covers the cost of an average of 131 per day for the curren

fiscal year Senior Nutrition Program. Due to an inadvertent administrative oversight, staff did not seek prior Council approval to amend the contract with Bateman.

Fiscal Impact:
With the CDBG FY 2020-21 allocation of $70,000 for senior meals there are sufficient monies in the program fund budget for this item.

California Environmental Quality Act:
N/A

Recommendation:
Approve amendment to Bateman Community Living, LLC contract FY2020-2021 to increase the contract amount by $70,000 to $146,500 to cover the cost of additional Senior Nutrition meals to be served during the pandemic.

Attachments:
1. Amended Contract: Bateman Community Living, LLC

AMENDMENT NO. 1
TO PROFESSIONAL SERVICES AGREEMENT
WITH
BATEMAN COMMUNITY LIVING, LLC
DBA TRIO COMMUNITY MEALS
FOR
SENIOR NUTRITION SERVICES

This Amendment No. 1 is entered on _____(effective date), by and between the City of Milpitas, a municipal corporation of the State of California (hereafter referred to as "City"), and **Bateman Community Living, LLC. DBA TRIO Community Meals,** a Delaware corporation (hereafter referred to as "Contractor"). City and Contractor are sometimes individually referred to as "Party" and collectively as "Parties" in this Amendment No. 1.

RECITALS

WHEREAS, on July 2, 2020, the Parties entered into an Agreement for Senior Nutrition Services (the "Agreement") with a compensation amount not to exceed $76,500.00, and a term period of July 1, 2020 to June 30, 2021; and

WHEREAS, the Parties now desire to amend the Agreement by replacing Exhibit C, Compensation, and increasing the maximum compensation amount by $70,000.00, for a new maximum compensation amount of $146,500.00; and

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained, the Parties agree to amend the Agreement as follows:

1. Exhibit C, Compensation, is hereby deleted in its entirety and replaced with Exhibit C-1, Compensation (Revised June 2021), attached hereto and incorporated herein by this reference.

2. Section 4a. Compensation. is hereby amended to read as follows:
"The total compensation under the terms of this Agreement shall not exceed One Hundred Forty-Six Thousand Five Hundred Dollars and Zero Cents ($146,500.00) for the Initial Term. The rate and schedule of payment is set out in EXHIBIT C-1, entitled "COMPENSATION," which is attached hereto and incorporated herein."

3. All other provisions of the Agreement not amended by this Amendment No. 1 shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties have executed this Amendment No. 1 as of the date first written above.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE TO AMENDMENT NO. 1
TO AGREEMENT
WITH
BATEMAN COMMUNITY LIVING, LLC
DBA TRIO COMMUNITY MEALS
FOR
SENIOR NUTRITION SERVICES

CITY OF MILPITAS

Approved By:

_____
Steven G. McHarris, City Manager

_____
Date

Approved As To Form:

_____
Christopher J. Diaz, City Attorney

Approved:

_____
Lauren Lai, CPA, MPA
Risk Manager/Director of Finance

Approved As To Content:

_____
Renee Lorentzen, Director of Recreation and Community Services

BATEMAN COMMUNITY LIVING, LLC
DBA TRIO COMMUNITY MEALS

_____
Signature

_____
Name

_____
Title

_____
Date

_____
DIR Registration Number (If Applicable)

EXHIBIT C-1

Compensation (Revised June 2021)

Pursuant to this Agreement, the CITY agrees to compensate CONTRACTOR in accordance with the terms and conditions of this AGREEMENT. CONTRACTOR will invoice CITY on a monthly cycle. CONTRACTOR will include with each invoice a detailed progress report that indicates the amount of budget spent on each task. CONTRACTOR will inform CITY regarding any out-of-scope work being performed by CONTRACTOR. CITY shall make payment to CONTRACTOR no later than thirty (30) days upon receipt and approval of invoice by CITY for the delivery of meals to the Senior Nutrition Program.

1. Invoices should be submitted to CITY no later than Friday of the delivery week.

2. Per meal cost will not exceed $5.44 per meal and total compensation will not exceed One Hundred Forty-Six Thousand Five Hundred Dollars and Zero Cents ($146,500.00) for the Initial Term.

3. Payment will be made payable to:

   Bateman Community Living LLC dba TRIO Community Meals
   PO Box 744849
   Altana, GA 30374-4849
   There shall be no reimbursable expenses under this Agreement.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Receive Monthly Report for Unhoused Services**
Category:	Consent Calendar-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Sharon Goei, Building Safety and Housing Director, 408-586-3260
Recommendation:	Receive April 2021 report for unhoused services.

Background:
On November 10, 2020, the City Council approved and authorized staff to enter into an agreement for homeless outreach, assessment, and street-based case management services with Santa Clara County Office of Supportive Housing.

On December 1, 2020, the City Council directed staff to implement a six-month pilot mobile shower and laundry Dignity on Wheels program with WeHOPE.

On March 1, 2021, the County's Homeless Engagement and Access Team (HEAT), via Abode Services, began conducting outreach to engage and provide resources to the City's unhoused residents.

The nonprofit service provider, WeHOPE, began providing mobile shower and laundry services every Sunday starting March 21, 2021 on the site on Winsor Street, immediately south of the Milpitas Library.

At the March 2, 2021 City Council meeting, Councilmember Chua presented a sample monthly assessment progress report and requested staff provide a way to monitor progress in a similar manner. At the April 6, 2021 City Council meeting, Councilmember Chua requested to receive statistics on the progress by the end of April or beginning of May. The Council supported Councilmember Chua's request at both meetings.

At the May 4, 2021 City Council meeting, the Council continued the March 2021 report for unhoused services to May 11 due to the late hour. At the May 11 City Council meeting, the item was continued again due to the late hour. At the May 18, 2021 City Council meeting, the Council received the March 2021 report for unhoused services and requested to continue receiving a monthly report.

This report reflects the April 2021 progress for unhoused services.

Analysis:
In April 2021, the HEAT Team continued to conduct outreach in the City of Milpitas to engage and provide resources to the City's unhoused residents. For the residents enrolled and assessed in March, the Team continued to coordinate care and maintain supportive contact. After the HEAT Team received updated encampment locations from the Milpitas Police Department on March 25, 2021, the Team started to conduct outreach to these locations beginning in April. The Team began to coordinate initial engagement at the various sites and allocated concentrated efforts revisiting various sites in order to build trust and rapport among the unhoused clients and to support the clients in accessing resources.

During the month of April, the HEAT Team enrolled 13 clients and completed assessments for 12 of them. Adding to 26 clients enrolled and assessed in March, this makes a total of 39 clients enrolled and 38 clients

assessed since services began in March. For the unhoused individuals that did not provide identifying information for the Team to enroll or assess, the Team provided basic needs items and community resources. See Attachment B for the HEAT Team April 2021 report.

After a great launch in March 2021, the mobile shower and laundry program continued seeing high usage by the Milpitas community. On the first day at the Milpitas site on March 21, 12 clients utilized the service, which is much higher than the average 4 to 6 clients at other cities. This is per the service provider, reflecting the robust outreach that was conducted to the unhoused and at-risk individuals in the community. This high usage is continuing in April as WeHOPE continued providing mobile shower and laundry services every Sunday. During the month of April, WeHOPE provided four sessions to the unhoused community, providing a total of 66 showers and 32 loads of laundry, serving 22 individuals. See Attachment C for the WeHOPE Dignity on Wheels April 2021 report.

In addition to working closely with the above service providers, City departments continued to collaborate in providing assistance to the unhoused residents as well as addressing the health and safety of the community. For a summary of the various activities and services for Milpitas unhoused residents as described above, refer to Attachment A for the April 2021 report for unhoused services.

Fiscal Impact:
There is no fiscal impact to the City budget other than staff time related to this item.

California Environmental Quality Act:
The action being considered has no potential for causing a significant effect on the environment and is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3).

Recommendation:
Receive April 2021 report for unhoused services.

Attachments:
A. April 2021 report for unhoused services
B. HEAT Team April 2021 report
C. WeHOPE Dignity on Wheels April 2021 report

APRIL 2021 REPORT FOR UNHOUSED SERVICES													
	Outreach Location	Type	Jurisdiction	Unhoused Count	Date Counted	Date Referred	Clients Enrolled	Date Enrolled	Clients Assessed	Date Assessed	Clients Housed	Date Housed	Notes
1	Hillview Bridge	Encampment	Valley Water			2/26/2021	1	4/2/2021	1	4/2/2021			
2	Topaz Street 1	Encampment	City			N/A							
3	Serra Center	Encampment	Private Property			3/26/2021							4/14/2021 Site restoration.
4	Ocean Supermarket	Encampment	Private Property			N/A							4/30/2021 No encampment observed on site.
5	Dixon Road 1	Encampment	City			3/25/2021							
6	Dixon Road 2	RV Vehicles	City			3/25/2021							
7	Calaveras Blvd Overpass	Encampment	City			3/19/2021	1	4/7/2021	1	4/7/2021			4/9/2021 Site restoration.
8	Dempsey Road	Encampment	City			3/25/2021							
9	Sinclair Frontage Road	Encampment	Union Pacific Railroad			3/25/2021	3	4/13/2021, 4/21/2021	3	4/13/2021, 4/21/2021			
10	Yosemite Business Park	Encampment	Private Property			3/25/2021							
11	Gibraltar Court	Trailers	City			3/25/2021							
12	Topaz Street 2	Encampment	City			3/25/2021							
13	Railroad Court	Camp/Trailers	City			3/25/2021							
14	Abel Plaza	Encampment	Private Property			3/25/2021							
15	S. Main Street	Encampment	City			3/25/2021							
16	S. Abbott Avenue	Encampment	City (if on street) or County (if on County property)			3/25/2021	1	4/28/2021		(9/28/2020)			
17	W Calaveras Blvd	Encampment	City			3/25/2021							
18	Ethyl Court	Camp/Cars	City			3/25/2021							
19	Hammond Way	Cars/Trailers	City			3/25/2021							
20	Coyote Creek Trail 1	Encampment	Valley Water			3/25/2021	1	4/20/2021	1	4/20/2021			
21	Coyote Creek Trail 2	Encampment	Valley Water			3/25/2021							
22	Coyote Creek Trail 3	Encampment	Valley Water			3/25/2021							
23	Calaveras Plaza Shopping Center	Outreach (contact made in non-encampment setting)	N/A			N/A							
24	Dignity on Wheels Mobile Shower and Laundry	Outreach (contact made in non-encampment setting)	N/A			N/A	4	4/4/2021, 4/18/2021	4	4/4/2021, 4/18/2021			
25	Dixon Landing Shopping Center	Outreach (contact made in non-encampment setting)	N/A			N/A							
26	Great Mall	Outreach (contact made in non-encampment setting)	N/A			N/A							
27	Milpitas Library	Encampment	N/A	2	4/26/2021	N/A	2	4/26/2021	2	4/26/2021			
28	Main Street	Outreach (contact made in non-encampment setting)	N/A			N/A							
29	Other (Street, Panhandle, Vehicle Dweller, or Unidentified Location)	Outreach (contact made in non-encampment setting)	N/A			N/A							
			Total	2			13		12				

WeHOPE Dignity on Wheels Mobile Shower and Laundry	Session Location	Service Dates	Number of Sessions	Total Unduplicated Individuals Served	Showers Provided	Loads of Laundry Provided
	Milpitas Library	4/4/2021, 4/11/2021, 4/18/2021, 4/25/2021	4	22	66	32

Santa Clara County Office of Supportive Housing
Abode Services
Milpitas HEAT Team
April 2021 Report

In April, Abode's HEAT outreach team continued to provide outreach services in the City of Milpitas, as a collaborative effort between the City of Milpitas, the Office of Supportive Housing, and community advocates. During April, the team collaborated with the Office of Supportive Housing to coordinate care for the enrolled and assessed clients that were referred to community queue in March, who were selected for potential housing opportunities through the SCC coordinated assessment process. The team supported these clients in completing housing readiness tasks required for permanent housing acquisition. Throughout the month of April, the team continued to maintain supportive contact with all active enrollments as needed.

Abode's HEAT team has enrolled 13 clients and completed 12 assessments during the month of April, as well as, provided basic needs items and community resources to 16 unhoused individuals who did not provide enough identifying information for the team to enroll or assess. The team made a total of 17 outreach contacts, separate from the 16 individuals who refused services for the month of April. In addition, the HEAT outreach team supported the Dignity on Wheels team by administering Vi-SPDAT assessments, facilitating shelter linkages, as well as, providing other basic needs items (food, clothing, and transportation needs) to the unhoused individuals participating in the scheduled Sunday event.

Since March 25, the team has conducted outreach engagement efforts to various encampment locations in Milpitas as listed on the updated encampment list from the Milpitas Police Department. The team began to coordinate initial engagement at the various sites in order to foster necessary rapport and earn trust amongst the various homeless communities. Throughout April, the team allocated time and concentrated efforts revisiting various sites to address ongoing community concerns, mitigating the natural consequences of scheduled abatements, and supporting the encampment members in accessing and enlisting in appropriate community resources.

The team has continued to track encampment and/ or contact locations where they have provided outreach support within the city. The following table reflects the number of outreach contacts, the total number of unhoused enrolled into the SCC HEAT program, as well as the number of VI-SPDAT assessments administered:

Milpitas HEAT Contact, Enrolled, Assessed Clients: April 2021

Outreach Location	Outreach Contact	Enrolled	Assessments
Milpitas Encampment- Abbott	**1**	**1**	
4/28/2021	1	1	
Milpitas Encampment- Calaveras 3	**2**	**1**	**1**
4/7/2021	1	1	1
4/26/2021	1		
Milpitas Encampment- Coyote Creek 16	**1**	**1**	**1**
4/20/2021	1	1	1
Milpitas Encampment- Milpitas Library	**2**	**2**	**2**
4/26/2021	2	2	2

Milpitas Encampment- Serra Center	**2**		
4/14/2021	2		
Milpitas Encampment- Sinclair Frontage 5	**3**	**3**	**3**
4/13/2021	2	2	2
4/21/2021	1	1	1
Milpitas Outreach - Dignity on Wheels	**5**	**4**	**4**
4/4/2021	2	1	1
4/18/2021	3	2	2
Milpitas Outreach-Hillview	**1**	**1**	**1**
4/2/2021	1	1	1
Grand Total	**17**	**13**	**12**

Milpitas Outreach= Contact made with client in non-encampment setting

Milpitas Encampment= Contact made at a location where a tent and/or other structures are used as shelter

WeHOPE

Reporting Period	Total unduplicated individuals served during reporting period	Total unduplicated individuals served during contract term	Total Field Visits this month
4/1/2021-4/30/2021	22	33	71

						Age (for Field Visits)								
Session Locations	Service Date(s) Sundays Only	Hours	Unduplicated Individuals at Sessions	Showers Provided	Loads of Laundry Provided	>19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Doesn't Know or Refused
TOTALS FOR MONTH		20	22	66	32	0	0	11	27	21	12	0	0	0
	4/4/2021													
	4/11/2021													
	4/18/2021													
	4/25/2021													

Gender (unduplicated)						Ethnicity (for Field Visits)							Race (for Field Visits)		
Male	Female	Trans Female (M to F)	Trans Male (F to M)	Gender Non-Conforming	Doesn't Know or Refused	White	Black of African American	Asian	American Indian or Alaskan Native	Native Hawaiian or Other Pacific Islander	Multiple Races	Doesn't Know or Refused	Non-Hispanic/Non-Latino	Hispanic /Latino	Doesn't Know or Refused
18	4	0	0	0	0	5	1	20	10	0	9	3	15	10	46

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	Approve Amendment to Measure F Oversight Committee Bylaws to Adjust Regular Quarterly Meeting Dates
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	**Lauren Lai, 408-586-3111**
Recommendation:	Approve Amendment to Measure F Oversight Committee Bylaws to Adjust Regular Quarterly Meeting Dates

Background:
On October 6, 2020, the City Council established the Measure F Oversight Committee ("MFOC" or "Committee") pending approval of the ballot measure. Council approved the Standardized City of Milpitas Commission By-Laws and approved the roles, responsibilities, and meeting requirements of the Committee as outlined in the addendum thereof (Addendum to Bylaws).

Analysis:
The Committee bylaw states:

> **Meetings:** "The Measure F Oversight Committee shall hold quarterly meetings the 3rd Wednesdays of March, June, September, and December at 7:00 PM at the Committee Conference Room in City Hall, or at another designated location.

However, after further review of other City commission schedules, staff determined that there is a conflict with the above Measure F Oversight Committee quarterly meeting schedule. Staff discussed alternate meeting dates with the Measure F Oversight Committee and is recommending a modification to the quarterly meeting schedule by moving them from the 3rd Thursday to the 3rd Wednesday. Staff proposes the following change to the Bylaws Addendum:

> **Meetings:** "The Measure F Oversight Committee shall hold quarterly meetings the 3rd Thursday of March, June, September, and December at 5:30 PM at the Committee Conference Room in City Hall, or at another designated location.

Policy Alternatives:

Alternative 1: Not approve the recommended change of meeting dates.

Pros: None. The alternative would result in meeting conflicts.
Cons: The original meeting date will conflict with other City sponsored meetings/events and will result in the City not being in compliance under Ordinance No. 262.6.
Reason not recommended: All City meetings must be available to the public for viewing per Ordinance No. 262.6.

Fiscal Impact:
There is no fiscal impact

California Environmental Quality Act:
n/a

Recommendation:
Approve Amendment to Measure F Oversight Committee Bylaws to Adjust Regular Quarterly Meeting Dates

Attachments:
1) Revised Addendum to Bylaws

CITY OF MILPITAS
COMMISSION BYLAWS
Revised Addendum: Measure F Oversight Committee

The Measure F Oversight Committee was established by the Milpitas City Council on October 6, 2020 subject to voter approval on November 3, 2020 of Measure F, a ¼ cent Sales Tax Measure with a sunset of the tax in eight years.

Advisory Area
This Committee advises the Council by Committee motion regarding staff recommendations, a report furnished and approved by the Committee, and/or at a City Council meeting:

•Annually, as part of the development of the budget, review the projected revenues and recommended expenditures for the funds generated by Measure F

•Annually, after the end of the Fiscal Year review status of programs and services, funded wholly or partially with proceeds from Measure F

•Receive annual presentations from the City' s sales and use tax consultant and the City's independent financial auditor.

Membership
While not required, it is preferred that Members of the Measure F Oversight Committee possess the following areas of expertise and/or are advocates for:

•Business and/or residential community

•Municipal or governmental services operations

•Municipal finance, taxation, budgeting, and/or accounting

Meetings
The Measure F Oversight Committee shall hold quarterly meetings the 3rd Thursdays of March, June, September, and December at 5:30 PM at the Committee Conference Room in City Hall, or at another designated location.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve and Authorize the City Manager to Enter into a Side Letter to Amend the Memorandum of Understanding between the City and LIUNA/UPEC Local 792, representing the Milpitas Employees Association (MEA) Unit amending the Vacation Cash Out MOU provisions.**
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	**Jeannine Seher, Director of Human Resources, 408-586-3086**
Recommendation:	Approve and Authorize the City Manager to Enter into a Side Letter to Amend the Memorandum of Understanding between the City and LIUNA/UPEC Local 792, representing the Milpitas Employees Association (MEA) Unit amending the Vacation Cash Out MOU provisions.

Background:

All employers conducting business in California are subject to the federal and state employment tax laws. Employers are responsible for reporting wages paid to their employees and paying Unemployment Insurance (UI) tax and Employment Training Tax (ETT) on those wages, as well as withholding and remitting federal and state income tax, Medicare tax, and SDI due on those wages. When an employee receives a benefit that is not otherwise nontaxable (e.g., health insurance), and has control of how that benefit is received, the employer is obligated to treat the benefit as taxable wages and withhold applicable taxes on the value of that benefit, regardless of whether or not the employee actually received the monetary value of the benefit, that is known as the constructive receipt doctrine codified in Section 451 of the Internal Revenue Code.

Employees in the MEA Unit have the ability to cash out vacation leave accruals each fiscal year based upon their accrual rates as specified in the Memorandum of Understanding (MOU). The constructive receipt doctrine requires the employer to tax employees who have a "choice" of taking cash for accrued vacation or using vacation accruals during a given year, are to be treated as if the employee has actually received the cash that year – *regardless* of whether or not the employee has actually taken the cash.

In order to continue to provide this benefit but to avoid the constructive receipt doctrine codified in Section 451 of the Internal Revenue Code, the parties have reached agreement on alternative language, as specified in the side letter.

Analysis:

The IRS states that the constructive receipt doctrine can be mitigated if the vacation cash out is limited by:

1) Restricting the cash out option of vacation to unforeseeable emergencies. The unforeseeable emergencies must be well defined and in compliance with guiding regulations. Further, the amount of the cash out is limited to an amount reasonably necessary to satisfy the emergency need (such as the amount needed to cover unforeseen hospital expenses).

2) Structuring the cash out provision in a manner that substantially restricts the employee's choice to receiving the cash out. For example, the City could establish a program that requires cash out

hours accrued over a specific amount – such as cashing out all accruals over 80 hours and eliminate all other cash out provisions.

3) The City could continue giving the employee the choice as to the number of hours one could elect to cash out; however, this election would be against "future accruals" and must be made ***prior*** to when the leave accrues and once made, the election is irrevocable.

The parties met and conferred in good faith to resolve this matter and selected options 1 and 3 above. Option 2 was not selected as it was not a desirable resolution of the employees.

Policy Alternative:

Alternative: Maintain the existing MOU language.

Pros: Will provide a previously committed benefit to City employees in the MEA bargaining unit.
Cons: The City will have to modify its payroll system and practices and begin taxing employees in this bargaining unit on their vacation accruals, regardless of whether or not they utilize the vacation cash-out provision of the MOU.

Reason for Not Recommending: In order to tax employees on their vacation accruals, the City will need to augment its current payroll system and processing, which will create significant technologic and administrative challenges.

Fiscal Impact:
There are insignificant impacts associated with implementing this change, to include staff time to change administrative forms and update work processes.

California Environmental Quality Act:
Approval of the recommendation is not an activity defined as a "project" under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines 15061(b) (3) and 15378(b)(4) either because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment and/or because the action is financial and/or administrative and does not directly impact the environment.

Recommendation:
Approve and Authorize the City Manager to Enter into a Side Letter to Amend the Memorandum of Understanding between the City and LIUNA/UPEC Local 792, representing the Milpitas Employees Association (MEA) Unit amending the Vacation Cash Out MOU provisions.

Attachment:
Side Letter to MOU with MEA, LIUNA/UPEC (792)

SIDE LETTER AGREEMENT
Between the City of Milpitas
and
Milpitas Employee Association
Regarding Vacation Leave Cash Outs

The constructive receipt doctrine (codified in Section 451 of the Internal Revenue Code) has potentially significant ramifications to employees in your bargaining unit. Under Treasury Regulation Section 1.451-2, employees who have a "choice" of taking cash for accrued vacation or using vacation accruals during a given year, are to be treated as if the employee has actually received the cash that year – ***regardless*** of whether or not the employee has actually taken the cash. The City of Milpitas and the Union want to address this, and as such, they are entering into this agreement.

This confirms the understanding reached between the City of Milpitas, hereinafter referred to as the City, and the LIUNA, UPEC 792, hereinafter referred to as the Union, representing the Milpitas Employee Association (MEA), collectively referred to as (the Parties).

The Parties agree to the following change to the Vacation cash out election language in the MOU, Section 23.09 as follows:

SECTION 23.00 - VACATION LEAVE

23.09 An employee may elect to cash out vacation leave accruals as either (1) a Future Vacation Leave Accrual Cash-out or (2) an Emergency Vacation Leave Cash-out, in accordance with the provisions below:

1. An employee whose annual vacation leave accrual is 120 hours or less may elect to cash out a maximum of 40 hours of accrued annual vacation leave per calendar year.
2. An employee whose accrued annual vacation leave exceeds 120 hours may elect to cash out a maximum of 80 hours per calendar year.
3. An employee who cashes out the maximum vacation accruals under the Future Vacation Leave Accrual provisions shall not be eligible for Emergency Vacation Leave cash-out in the same calendar year.
4. Future Vacation Leave Accrual Cash-out Eligibility:

   (a) The employee uses at least one full workday of paid vacation leave in the calendar year the election request is submitted.

   (b) Between November 1st of each year through the end of the first full pay period in December, an employee wishing to cash out future vacation accruals in accordance with the provision above may make a request by completing and submitting an Irrevocable Vacation Cash Out request form to the Director of Human Resources. Forms that are received after the first full pay period of December shall be ineligible for receiving the cash out the following calendar year.

Once the election is made, it is irrevocable, meaning the employees must cash out the elected number of accrued vacation hours during that calendar year. If the employee does not select a date to receive the cash out, the employee will be paid with the paycheck coinciding with the last pay period of the calendar year.

(c) The employee will select either pay period 7, pay period 13, pay period 19 or pay period 24 to receive the cash-out; however, in no circumstances can an employee receive payment for future vacation accrual cash-out until the employee has actually accrued that number of vacation hours. For example, an employee earning 5 hours of vacation per pay period, who wishes to cash out 40 hours of vacation accruals, may receive their cash-out accrual any time after eight pay periods have passed.

(d) As a condition of applying for cash-out, an employee must consent to future payroll deductions (in accordance with Section 7 below) for necessary withholdings of required taxes.

(e) All cash-outs of future vacation accruals will be included in an employee's regular paycheck.

5. Emergency Vacation Accrual Cash-out

(a) An employee may request to cash-out vacation due to an unanticipated emergency that is caused by an event beyond the control of the employee and when the employee can demonstrate that it would result in severe financial hardship to the employee if early withdrawal were not permitted. Severe financial hardship to the employee includes:

i. Losses resulting from a sudden and unexpected illness or accident of the employee or of a qualified family member.
ii. Losses of the employee's property due to casualty, or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the participant.
iii. Losses that can be resolved through reimbursement or compensation by insurance or otherwise, liquidation of the participant's assets, to the extent the liquidation of such assets would not itself cause severe financial hardship, or by cessation of voluntary deferrals to a 457 plan shall disqualify an employee from being eligible to receive Emergency Vacation Accrual Cash-out.
iv. Or any other reason as allowable per the IRS.

(b) Emergency Vacation Accrual Cash-out shall be limited to the amount of leave necessary to address the nature of the emergency and shall not exceed the maximums identified if section 23.09 (1) through (3).

6. Vacation leave may not be carried-over to cash-out in subsequent years, except upon separation from City service.

7. The Union understands and agrees that employees have a responsibility to pay their taxes in accordance with IRS regulations. Therefore, any adjustments for prior taxes shall be deducted from an employee's paycheck. The City shall provide the employee

a fourteen (14) calendar day notice before taking any payroll deductions for this purpose. For amounts greater than $100, the employee may request the deductions be taken over a period of sequential pay periods, not to exceed eight (8) pay periods.

Agreed:

Jeannine M. Seher Human Resources Director	Date
Steven McHarris City Manager	Date
For the Union:	
Ryan Heron Union Representative, LIUNA	6/2/21 Date
Robert DeLong MEA President	Date

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Accept Commissioner Resignation**
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	**Wendy Wood, City Clerk, 408-586-3001**
Recommendation:	Accept the resignation of Commissioner Gil Roy Galindez Casanova III from Community Advisory Commission; and confirm the noticing of the unscheduled vacancy.

Background:
In accordance with the City of Milpitas Commission By-Laws, any member or alternate member of a Commission who is no longer available to serve, must submit a resignation in writing by sending a written communication to the Mayor and the City Clerk, per adopted City Council Resolution No. 7702. The written resignation must then be accepted and confirmed by City Council via action on the consent calendar at a regularly scheduled City Council meeting. Commissioner Gil Roy Galindez Casanova III submitted a letter of resignation from Community Advisory Commission.

Analysis:
By state law, a Notice of an Unscheduled Vacancy must be posted by the City Clerk to advertise the vacant Commission seat. Final appointment to the board, commission, or committee for the Unscheduled Vacancy shall not be made by the legislative body for at least ten working days after the posting of the notice in the Clerk's office. The notice of the Unscheduled Community Advisory Commission was posted on June 2, 2021, in accordance with California Government Code 54974 (a).

Fiscal Impact:
There is no fiscal impact associated with this item.

Recommendation:
Accept the resignations of Commissioner Gil Roy Galindez Casanova III from Community Advisory Commission; and confirm the noticing of the unscheduled vacancy.

Attachments:
1. Email from Commissioner Gil Roy Galindez Casanova III

Karen Chew

Subject: FW: Community Advisory Commission - Resignation from Alternate Member (Gil Roy Casanova)

From: Gil Roy Casanova [redacted]
Sent: Tuesday, June 1, 2021 9:25 PM
To: Wendy Wood <wwood@ci.milpitas.ca.gov>; Rich Tran <rtran@ci.milpitas.ca.gov>
Cc: Robert Musallam <rmusallam@ci.milpitas.ca.gov>
Subject: Community Advisory Commission - Resignation from Alternate Member (Gil Roy Casanova)

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links.

Hello Wendy Wood and Mayor Rich Tran,

I would like to thank you for giving me the opportunity to serve in the Community Advisory Commission over the previous year and a half. It was an amazing learning experience to see how much work is being done behind the scenes for our amazing little town of Milpitas.

Unfortunately, I would have to resign from my position as an alternate member of the Community Advisory Commission of Milpitas as I am moving away for the time being to live life in a different state but I do plan on coming back to the city that I was born and raised in.

Once again, thank you so much for this amazing opportunity and hopefully we can work in the future.

_____

Gil Roy Galindez Casanova III

[redacted]

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Establish a Project titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds**
Category:	Consent Calendar-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Tony Ndah, Public Works Director, 408-586-2602**
Recommendation:	Establish CP 3495 titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds.

Background:

On October 6, 2020, City Council approved an amendment to the contract with Engie Services U.S., Inc. (Engie) for the implementation of energy and water conservation measures which consists of the retrofit of streetlights with LED fixtures; exterior and interior lighting efficiency upgrades at numerous City parks, sports fields, and facilities; and the installation of solar and battery backup systems at critical City facilities to improve the energy resiliency of these facilities during unplanned power outages. In addition to the approval of the contract amendment with Engie, Council also gave authorization to the City Manager to execute one or more amendments to the Energy Service Agreement to increase the maximum compensation by an aggregate amount not to exceed $3.3 million.

On March 11, 2021, President Biden signed into law the American Rescue Plan Act (ARPA), a $1.9 trillion stimulus package, to counteract the economic impacts of the pandemic. The ARPA allocation of to the City is $16,736,815 and is available in two tranches, with the first half received on June 1, and the second half to be provided in June 2022. On June 8, the City Council concurred that ARPA funding should be allocated for COVID-19 Safe Facility improvements in the amount of $375,000.

The Center for Disease Control (CDC) has stated that the Coronavirus (COVID-19) is spread mainly from person-to-person, through respiratory droplets produced when an infected person coughs or sneezes. The droplets can possibly be inhaled by people nearby. Because of this, the CDC recommends increasing building ventilation to cut down on recycled contaminated air.

Analysis:

As buildings age, the efficiency of equipment erodes, control systems fail, and HVAC systems drift from the design intent. As a result, building ventilation and indoor air quality degrade. Increased ventilation can be accomplished with air balancing of the HVAC system in the building.

Air balancing is a method of testing your heating and cooling system to spot any problems that are causing uneven airflow or negative air pressures in the building. Once identified these problems can be corrected so every room gets the amount of air it needs. Approval of this recommended budget amendment will allow staff to work with our contractor to assess and balance the HVAC systems in all City buildings to optimize air flow and ventilation ahead of staff returning to the workplace and reopening the buildings to the public. Although the City Manager has authority to execute amendments to the Energy Service Agreement, the amendment requires funding.

In addition to the HVAC work, additional measures to improve COVID-19 facility safety include HVAC filter upgrades, procurement of cleaning and disinfecting supplies for facilities, and the procurement of hand sanitizer stations, acrylic shields, and signage. Taken together, these measures will help prevent and reduce transmission of the COVID-19 virus and maintain healthy business operations and work environments as staff returns to the workplace and City facilities will reopen to the public.

Fiscal Impact:
The recommended budget actions will establish CP 3495 with appropriation from ARPA in amount of $375,000 to fund the implementation of air balancing on the HVAC systems for all City buildings as well as other COVID-19 facility safety improvements.

California Environmental Quality Act:
The action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(a) as it has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. In the alternative, the action is exempt from CEQA per Guidelines Section 15301 as the project involves only the minor alteration of existing public facilities and does not involve the expansion of any use.

Recommendation:
Establish CP 3495 titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds.

Attachment:
1. Budget Change Form
2. CIP Page for CP3495

City of Milpitas, California

BUDGET CHANGE FORM

Type of Change	From*		To*	
	Account	Amount	Account	Amount
Check one: ☒ **Budget Appropriation** ❒ **Budget Transfer**	180-2940 331-9513495153831	$375,000 $375,000	180-3952 331951349574800	$375,000 $375,000

Establish CP 3495 titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds.

Background:
On October 6, 2020, City Council approved an amendment to the contract with Engie Services U.S., Inc. (Engie) for the implementation of energy and water conservation measures which consists of the retrofit of streetlights with LED fixtures; exterior and interior lighting efficiency upgrades at numerous City parks, sports fields, and facilities; and the installation of solar and battery backup systems at critical City facilities to improve the energy resiliency of these facilities during unplanned power outages. In addition to the approval of the contract amendment with Engie, Council also gave authorization to the City Manager to execute one or more amendments to the Energy Service Agreement to increase the maximum compensation by an aggregate amount not to exceed $3.3 million.

On March 11, 2021, President Biden signed into law the American Rescue Plan Act (ARPA), a $1.9 trillion stimulus package, to counteract the economic impacts of the pandemic. The ARPA allocation of to the City is $16,736,815 and is available in two tranches, with the first half received on June 1, and the second half to be provided in June 2022. On June 8, the City Council approved the Preliminary ARPA Investment Plan, which including funding for COVID-19 Safe Facility improvements in the amount of $375,000.

The Center for Disease Control (CDC) has stated that the Coronavirus (COVID-19) is spread mainly from person-to-person, through respiratory droplets produced when an infected person coughs or sneezes. The droplets can possibly be inhaled by people nearby. Because of this, the CDC recommends increasing building ventilation to cut down on recycled contaminated air.

This budget amendment would appropriate ARPA funding for COVID safe HVAC improvements necessary for reopening City facilities to staff and the public.

Analysis:
As buildings age, the efficiency of equipment erodes, control systems fail, and HVAC systems drift from the design intent. As a result, building ventilation and indoor air quality degrade. Increased ventilation can be accomplished with air balancing of the HVAC system in the building.

Air balancing is a method of testing your heating and cooling system to spot any problems that are causing uneven airflow or negative air pressures in the building. Once identified these problems can be corrected so every room gets the amount of air it needs. Approval of this recommended budget amendment will allow staff to work with our contractor to assess and balance the HVAC systems in all City buildings to optimize air flow and ventilation ahead of staff returning to the workplace and reopening the buildings to the public. Although the City Manager has authority to execute amendments to the Energy Service Agreement, the amendment requires funding.

In addition to the HVAC work, additional measures to improve COVID-19 facility safety include HVAC filter upgrades, procurement of cleaning and disinfecting supplies for facilities, and the procurement of hand sanitizer stations, acrylic shields, and signage. Taken together, these measures would help prevent and reduce transmission of the COVID-19 virus and maintain healthy business operations and work environments as staff and the public return to the workplace.

Fiscal Impact:
The recommended budget actions will establish CP 3495 with appropriation from ARPA in amount of $375,000 to fund the implementation of air balancing on the HVAC systems for all City buildings as well as other COVID-19 facility safety improvements.

California Environmental Quality Act:
The action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(a) as it has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

Recommendation:
Establish CP 3495 titled "COVID-19 Safe Facility Improvements" and Approve a Budget Amendment in the Amount of $375,000 to Fund the Project with American Rescue Plan Act Funds.

Attachment:
Budget Change Form
CIP Page for CP3495

☐ **Check if City Council Approval required.** **Meeting Date**: June 15, 2021

Requested by:	**Department Head:** Tony Ndah	**Date:** June 15, 2021
Reviewed by:	**Finance Director:** Lauren Lai	**Date:** June 15, 2021

Date approved by City Council, if required: **Confirmed by:**

FI/24786/V **Form 30-222 (Rev. 1/92)**

City of Milpitas
2020-25 CAPITAL IMPROVEMENT PROGRAM

Category	Project Name		Estimate Level
Community Improvements	**3495**	**Safe Facilities**	1

CONTACTS: Tony Ndah (2602) / James Levers (2648)
PRIORITY: Governance and Administration

DESCRIPTION
This project provides for the implementation of COVID safe controls and safety measures necessary for the reopening of City building for staff and the public. The COVID safe controls and safety measures would help prevent and reduce transmission of the COVID-19 virus and maintain healthy business operations and work environments as staff and the public return to the work place. Work includes rebalancing and adjusting HVAC systems to increase total airflow in City buildings, HVAC filter upgrades, cleaning and disinfecting supplies for facilities, and the procurement of hand sanitizer stations, acrylic shields, and signage.

NOTES:

Uncommitted Balance as 6/9/2021: $0

ESTIMATED COST

	Prior Year	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	TOTAL
Improvements		375,000					**375,000**
TOTAL	**0**	**375,000**	**0**	**0**	**0**	**0**	**375,000**

FINANCING

	Prior Year	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	TOTAL
American Rescue Plan Act of 2021		375,000					**375,000**
TOTAL	**0**	**375,000**	**0**	**0**	**0**	**0**	**375,000**

FINANCE NOTES:

JUSTIFICATION NOTES:

PROJECT NOTES:

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Approve Delegation of Authority to the City Manager or Designee to Approve and Execute Project Related Documents and Urgent Administrative Items During the City Council Summer Recess, from the last City Council meeting held in June through August 5, 2021**
Category:	Consent Calendar-Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	Ashwini Kantak, Assistant City Manager, 408-586-3053
Recommendation:	Approve delegation of authority to the City Manager, or his designee, to approve and execute project related documents, including contract documents, and urgent administrative items during the City Council summer recess from the last City Council meeting held in June through August 5, 2021.

Background:
The City Council has a scheduled recess between the last City Council meeting in June and August 5, 2021, during which no regular City Council meetings will take place. In order to ensure that critical services and projects continue and are completed on time, especially related to the COVID-19 pandemic, it may be necessary to take action during Council recess. Therefore, it is requested that the City Council authorize the City Manager or his designee, to take appropriate action during the recess.

Analysis:
Authorizing the City Manager or his designee to take appropriate actions, including signing contracts within City Council's financial authority under the Municipal Code, will ensure that projects stay on schedule and that the City continues to provide vital services to the community. Deferring any actions until after the Council recess could potentially result in delayed responses to COVID-19, additional cost or delay to projects or services. A report summarizing any action taken by the City Manager or designee during the recess under this delegated authority will be presented to the City Council on August 17, 2021.

Policy Alternative
Alternative: Do not approve the requested delegation of authority

Pros: Retains Council approval authority

Cons: Will not enable timely action on urgent project and administrative needs to ensure continued provision of vital services to the community.

Reason for not Recommending: Will not allow timely action to ensure the continued delivery of services to the community and time sensitive actions on projects during the Council recess.

Fiscal Impact:
Approval of any potential agreements or contracts are anticipated to be within the Council approved budget; therefore, there is no fiscal impact.

CEQA
Not Applicable

Recommendation:
Delegate authority to the City Manager, or his designee, to approve and execute project related documents, including contract documents, and urgent administrative items during the City Council summer recess from the last City Council meeting held in June through August 5, 2021.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Conduct a Public Hearing and Adopt a Resolution Confirming the Assessment and Ordering the Levy for the Landscaping and Lighting Maintenance Assessment District No. 98-1(Sinclair Horizon) for Fiscal Year 2020-21**
Category:	Public Hearings-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, Engineering Director/City Engineer, 408-586-3301
Recommendation:	Open the public hearing, receive any comments, and move to close the hearing following any testimony: and adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 98-1 for Fiscal Year 2020-21.

Background:
Landscaping and Lighting Maintenance Assessment District No. 98-1, Sinclair Horizon (LLMD 98-1) provides for the maintenance and improvement of public landscaping, irrigation systems, and pedestrian walking path adjacent to Sinclair Frontage Road, and Los Coches Creek abutting the Sinclair Horizon residential subdivision in the areas as shown on the attached location map.

Analysis:
On May 18, 2021, the City Council adopted Resolution No. 9066 approving the Annual Engineer's Report and adopted Resolution No. 9067 declaring its intention to levy and collect assessment for Fiscal Year 2021-22 for LLMD 98-1.

A public hearing is necessary to adopt a resolution confirming the assessment and ordering the levy to collect assessments in LLMD 98-1. The total assessment for fiscal year 2021-22 is $48,528.62, with an assessment rate of $495.19 not exceeding the maximum rate per $496.05 per lot. The FY 2021-22 rate is approximately 5.45% higher than the previous year FY 2020-22 rate of $468.21.

Policy Alternatives:

Alternative 1:
Not approve resolution confirming the assessment and ordering the levy for LLMD 98-1.

Pros: None

Cons: The Landscaping and Lighting Act of 1972 requires the legislative body to adopt a resolution confirming the assessment and ordering the levy, not adopting the Resolution would jeopardize the City's ability to collect assessments for the maintenance and thereby the ability to fund maintenance and improvement services for LLMD 98-1.

Reason not recommended: To allow for the continued maintenance and improvement services of LLMD 98-1, staff recommends approving the Resolution Confirming the Assessment and Ordering the Levy for LLMD 98-1 for Fiscal Year 2021-22.

Fiscal Impact:

The levy and collection of annual assessments provides a funding source for the City to improve and maintain public landscaping, irrigation systems, and pedestrian walking paths within LLMD 98-1.

California Environmental Quality Act:
The levy and collection of assessments is not considered a project under CEQA as there will be no direct or reasonably foreseeable indirect physical change in the environment.

Recommendation:
Open the public hearing, receive any comments, and move to close the hearing following any testimony: and adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 98-1 for Fiscal Year 2020-21.

Attachments:
a) Resolution
b) Annual Engineer's Report
c) Location Map

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS, CONFIRMING THE ASSESSMENT AND ORDERING THE LEVY FOR THE LANDSCAPING AND LIGHTING MAINTENANCE ASSESSMENT DISTRICT NO. 98-1 FOR FISCAL YEAR 2021-22

WHEREAS, the City Council previously completed its proceedings in accordance with and pursuant to the Landscaping and Lighting Act of 1972, Part 2, Division 15 of the California Streets and Highways Code (commencing with Section 22500) (the "Act") to establish the Landscaping and Lighting Maintenance Assessment District No. 98-1 (the "Assessment District"); and

WHEREAS, the City Council has retained NBS for the purpose of assisting with the annual levy of the Assessment District, and the preparation and filing of an Annual Report; and

WHEREAS, the City Council has, by previous resolution, declared its intention to hold a Public Hearing concerning the levy and collection of annual assessments within the Assessment District; and

WHEREAS, a Public Hearing has been held and concluded and notice thereof was duly given in accordance with Section 22626 of the Act; and

WHEREAS, at the time and place specified in the Resolution of Intention the City Council conducted such hearing and considered all objections to the assessment.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. Confirmation of Assessment and Diagram: The City Council hereby confirms the assessment and the diagram as is described in full detail in the Annual Report on file with the City Clerk.

2. Levy of Assessment: Pursuant to Section 22631 of the Act, the adoption of this resolution shall constitute the levy of an annual assessment for the fiscal year commencing July 1, 2021, and ending June 30, 2022.

3. Ordering of the Levy: The City Council hereby orders NBS to prepare and submit the levy of annual assessments to Santa Clara County for placement on the Fiscal Year 2021-22 secured property tax roll.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

CITY OF MILPITAS

Fiscal Year 2021/22 Annual Report For:

Landscaping and Lighting Maintenance Assessment District No. 98-1

April 2021

Prepared by:

NBS
helping communities fund tomorrow

nbsgov.com

Corporate Headquarters
32605 Temecula Parkway, Suite 100
Temecula, C
Toll free: 800.6

CITY OF MILPITAS
LANDSCAPING AND LIGHTING MAINTENANCE ASSESSMENT DISTRICT NO. 98-1
455 East Calaveras Boulevard
Milpitas, California 95035
(408) 586-3000

CITY COUNCIL

Rich Tran, Mayor

Carmen Montano, Vice-Mayor

Evelyn Chua, Council Member

Karina R. Dominguez, Council Member

Anthony Phan, Council Member

CITY STAFF

Steve Erickson, PE, Engineering Director/City Engineer

Lauren Lai, Finance Director

Tony Ndah, Public Works Director

NBS

Tim Seufert, Client Services Director

Adina McCargo, Project Manager

Zaire Marin, Administrator

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1. ENGINEER'S LETTER

WHEREAS, in 1998 the City Council of the City of Milpitas (the "City"), State of California, under the Landscaping and Lighting Act of 1972 (the "Act"), created the City of Milpitas Landscaping and Lighting Maintenance Assessment District No. 98-1 (the "District") to provide for the continued maintenance, operation, and administration of various improvements within the boundaries of the District; and

WHEREAS, the City Council has directed NBS to prepare and file a report for Fiscal Year 2021/22 in accordance with Chapter 1, Article 4 of the Act presenting plans and specifications describing the general nature, location and extent of the improvements to be maintained; an estimate of the costs to maintain, operate, and service the improvements for the District for the referenced fiscal year; a diagram for the District showing the area and properties to be assessed; and an assessment of the estimated costs to maintain and service the improvements, stating the net amount to be assessed upon all assessable lots or parcels within the District in proportion to the special benefit received.

NOW THEREFORE, the following assessments have been calculated in accordance with the assessment methodology adopted and approved by the City Council at the time of District formation, and are made to cover the portion of the estimated costs of maintenance, operation, and servicing of the improvements, to be paid by the assessable real property within the District in proportion to the special benefit received:

District	Parcels	2021/22 Maximum Assessment Rate per Lot[(1)]	2021/22 Actual Assessment Rate per Lot	2021/22 Net Amount to be Assessed[(2)(3)]
LLMAD 98-1	98	$496.05	$495.19	$48,528.62

(1) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated using the February 2021/22 CPI.*

(2) *Amounts placed on the tax roll include the 1% Santa Clara County Collection Fee.*

(3) *This amount is only an estimate and does not reflect the final billed amount with rounding adjustments. Refer to Section 7 for the rounded figure.*

I identified all parcels which will have a special benefit conferred upon them from the improvements described in District's Plans and Specifications section of this Engineer's Report (the "Benefited Parcels"). For particulars as to the identification of said parcels, reference is made to the Assessment Diagram, a copy is on file in the office of the City Clerk.

I have assessed the costs and expenses of the improvements upon the Benefited Parcels. In making such assessment:

a. The proportionate special benefit derived by each Benefited Parcel from the improvements was determined in relationship to the entirety of the maintenance costs of the improvements;

b. No assessment has been imposed on any Benefited Parcel which exceeds the reasonable cost of the proportional special benefit conferred on such parcel from the improvements; and

c. Any general benefits from the improvements have been separated from the special benefits and only special benefits have been assessed.

I, the undersigned, respectfully submit the enclosed Engineer's Report and, to the best of my knowledge, information and belief, the Engineer's Report, Assessments, and the Assessment Diagrams herein have been prepared and computed in accordance with the order of the City Council of the City of Milpitas, the Act, and Article XIIID.

Steven Erickson 5-18-21

Steven Erickson, PE
Engineering Director/City Engineer

2. PLANS AND SPECIFICATIONS

The District provides for the continued administration, maintenance, operation, and servicing of various improvements located within the public right-of-way and dedicated easements within the boundaries of the District.

2.1 Location of Improvements

The District is located in the City of Milpitas, bounded on the east by Sinclair Frontage Road, on the west by Berryessa Creek, and on the north by Los Coches Street. The improvements maintained include public landscaping and irrigation improvements, including jogging paths, planter walls, grass berms, and ornamental planting, which are primarily situated within the public rights-of-way and dedicated public by easements within the District.

2.2 Landscaping Improvements

The landscaping and irrigation improvements were installed within the District in order to enhance the overall visual appearance for adjacent parcels. The improvements consist of the maintenance and operation of any or all public landscaping and irrigation improvements adjacent to curbs, including asphalt concrete jogging paths, planter walls, grass berms, and appurtenant irrigation systems; ornamental planting including lawns, shrubs, and trees, including necessary repairs, replacements, water, electric current, spraying, care, supervision, debris removal and all other items of work necessary and incidental for proper maintenance and operation thereof. The landscaping and irrigation improvements are collectively referred to as “landscaping improvements”. All such work will be performed in the following areas:

2.2.1 BERRYESSA CREEK

Due to the widening of the creek, improvements in Berryessa Creek were removed. Any improvements maintained in this reach (asphalt concrete jogging path, exercise equipment, planting, and irrigation) will no longer be maintained or improved.

2.2.2 LOS COCHES CREEK

1. A strip of land 812 feet long, 14 feet in width along the south bank of Los Coches Creek adjacent to Tract 9018. The improvements include an asphalt concrete jogging path, exercise equipment, planting, and irrigation.
2. A strip of land 5.5 feet wide within the Los Coches Street right-of-way between the back of sidewalk and the right-of-way along the south side of Los Coches Street between Berryessa Creek and Sinclair Frontage Rd. The improvements include planting and irrigation.

2.3 Capital Improvements

The City will initiate the design and construction of landscape and irrigation renovation along portions of Los Coches Street and Sinclair Frontage Road in Fiscal Year 2021/22. Capital Improvements are scheduled to be complete by June 30, 2026.

2.4 Overhead

In addition to the hard costs of maintaining the improvements mentioned above, the City will incur costs for staff time and expenses related to the management and maintenance of the improvements within the District. Staff time includes oversight and coordination of both City and contractor provided services, annual tax roll preparation, and addressing property owner questions and concerns. These activities are directly related to the maintenance of the improvements, and without them the improvements could not be efficiently completed or properly maintained on an ongoing basis.

3. ESTIMATE OF COSTS

The estimated costs of maintenance and servicing of the improvements as described in the Plans and Specifications are summarized below.

3.1 District Budget

The Fiscal Year 2021/22 estimated cost budget for the maintenance and servicing of the improvements is as follows:

Description	Fiscal Year 2021/22 Budget
Maintenance Staff[1]	$30,000
Capital Equipment	0
Supplies	1,800
Utilities (Water, Electricity)	19,000
Reserve Fund	10,000
Capital Improvement Program	4,000
Maintenance Costs	**$64,800**
NBS	$3,450
City Staff District Administration	400
County Auditor-Controller Fee[2]	485
District Specific Costs	**$4,335**
Total District Costs	**$69,135**
General Benefit Contribution[3]	(20,606)
Operating Reserve Contribution	0
Capital Improvement Fund Contribution	0
Net Amount to be Assessed	**$48,529**
Total District Lots	**98**
Rate per Lot[4]	**$495.19**
Maximum Rate Per Lot – 2021/22[5]	**$496.05**

(1) *The City's Department of Public Works is the provider of Maintenance Services.*

(2) *County Auditor-Controller Fee is currently 1% of the total levy submittal.*

(3) *General Benefit Contribution is not applied to District Specific Costs as these are special benefits to the District.*

(4) *The Rate per lot equals the Net Amount to be Assessed / Total District Lots. The Rate cannot exceed the maximum rate.*

(5) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated by using the February 2021/22 CPI.*

3.1.1 OPERATING RESERVE

It is the intent of the City to maintain an operating reserve which shall not exceed the estimated costs of maintenance and servicing of the improvements prior to December 10 of the fiscal year, or when the City expects to receive its apportionment of special assessments from the County, whichever is later. The operating reserve balance information for the District is as follows:

Estimated Fiscal Year Ending 6/30/2021 Operating Reserve Cash Balance	$3,946
Operating Reserve Collection for Fiscal Year 2021/22	10,000
Estimated Fiscal Year Ending 6/30/2022 Operating Reserve Cash Balance	**$13,946**

3.1.2 CAPITAL IMPROVEMENT BUDGET

The City will initiate the design of landscape and irrigation renovation along portions of Los Coches Street and Sinclair Frontage Road in Fiscal Year 2021/22. As of March 28, 2021, the balance available for the Capital Improvement Project was $172,100. The City will utilize these funds, along with an annual collection of $4,000 via the District from Fiscal Year 2021/22 to Fiscal Year 2025/26, to finance the project.

Capital Improvements are scheduled to be complete by June 30, 2026.

4. SPECIAL AND GENERAL BENEFIT

The improvements defined in Section 2 are expected to confer certain special benefits to parcels within the District. The special benefits are described in this section. Figures in this section are derived from a Special v. General Benefit Analysis performed in Fiscal Year 2014/15.

4.1 Introduction

Pursuant to Article XIIID, all parcels that receive a special benefit conferred upon them as a result of the installation, implementation and maintenance of the improvements, services and activities shall be identified, and the proportionate special benefit derived by each identified parcel shall be determined in relationship to the entire costs of the installation, implementation and maintenance of the improvements, services and activities.

Article XIIID, Section 4(a) of the California Constitution limits the amount of any assessment to the proportional special benefit conferred on the property. Proposition 218 requires that the City separate the general benefit from special benefit, so that only special benefit may be assessed to properties within the District. Furthermore, Article XIIID also provides that publicly owned properties must be assessed unless there is clear and convincing evidence that those properties receive no special benefit from the assessment.

4.2 Special Benefits Identified

The improvements described in Section 2 are expected to confer certain special benefits to parcels within the District. The special benefits conferred to property within the District can be grouped into two primary benefit categories: aesthetic benefit and safety benefit. The two district benefit categories are further expanded upon below.

- **Improved Aesthetics:** The aesthetic benefit relates to the increase in the overall aesthetics as a result of the ongoing maintenance, servicing and operation of the improvements within the District. Street landscaping improvements improve the livability, commercial activity, appearance and desirability for properties within the District. Regular maintenance ensures that the improvements do not reach a state of deterioration or disrepair so as to be materially detrimental to properties adjacent to or in close proximity to the improvements. The overall appeal of the District is enhanced when improvements are in place and kept in a healthy and satisfactory condition. Conversely, appeal decreases when improvements are not well-maintained, unsafe, or destroyed by the elements or vandalism. Streetscapes have a significant effect on how people view and interact with their community[1]. With streetscapes that are safe and inviting, people are more likely to walk, which can help reduce automobile traffic, improve public health, stimulate local economic activity and attract residents and visitors to the community[2].
- **Increased Safety:** Well maintained areas mitigate crime, especially vandalism, and enhance pedestrian safety. A recent study found that after landscape improvements were installed, there

[1] Victoria Transport Policy Institute. (2011). *Community Livability. Helping to Create Attractive, Safe, Cohesive Communities.* Retrieved from http://www.vtpi.org/tdm/tdm97.htm.
[2] *Ibid.*

was a 46% decrease in crash rates across urban arterial and highway sites and a second study reviewed found a 5% to 20% reduction in mid-block crashes after trees and planters in urban arterial roads were put in place. In addition, there is less graffiti, vandalism, and littering in outdoor spaces with natural landscapes than in comparable plant-less spaces[3]. The Victoria Transport Policy Institute has found that streetscapes reduce traffic speeds and when combined with improved pedestrian crossing conditions can significantly reduce collisions[4].

4.3 General Benefits Identified

Section 4 of Article XIIID of the California Constitution provides that once a local agency which proposes to impose assessments on property has identified those parcels that will have special benefits conferred upon them and upon which an assessment will be imposed, the local agency must next "separate the general benefits from the special benefits conferred," and only the special benefits can be included in the amount of the assessments imposed.

General benefit is an overall and similar benefit to the public at large resulting from the maintenance of the District's improvements provided by the assessments levied. The improvements to be maintained by the District are located within the District boundaries only. There will be no District maintenance activities provided for improvements located outside of the District boundaries.

The ongoing maintenance of the District improvements will provide aesthetic and safety benefits to the property within the District. However, it is recognized that the ongoing District maintenance activities will also provide a level of benefit to some property within proximity to the District, as well as individuals passing through. Therefore, the general benefit created as a result of the District maintenance activities has been considered.

4.4 Quantification of Benefit

As a result of the maintenance and operation of the improvements, there will be a level of general benefit to people that do not live in or intend to conduct business within the District. In order for property within the District to be assessed only for that portion of special benefits received from the district's maintenance activities, general benefits provided by the ongoing maintenance of the improvements needs to be quantified. The amount of general benefit that is provided from the District's maintenance activities cannot be funded via property owners' assessments.

The landscaping improvements are primarily located along Los Coches Street and Sinclair Frontage Road and within the subdivision along Los Coches Creek and Berryessa Creek. A portion of the maintained landscaping provides some general benefit to pass-thru traffic. Per the City, there is 52,912 square feet of landscaping being maintained.

<u>Los Coches Creek and Berryessa Creek</u>

As result of the District maintenance activities, there will be a level of general benefit to pedestrians and vehicular traffic that are not associated with property in the District. As expressed by the Court in *Beutz v. County of Riverside* (2010), "... *courts of this state have long recognized that virtually all public improvement*

[3] *Wolf, Kathleen L. (2010). Safe Streets – A Literature Review. In: Green Cities: Good Health (www.greenhealth.washington.edu)*. College of the Environment, University of Washington.

[4] Victoria Transport Policy Institute. (2011). *Community Livability. Helping to Create Attractive, Safe, Cohesive Communities.* Retrieved from http://www.vtpi.org/tdm/tdm97.htm.

projects provide general benefits." A route beginning or ending with a parcel within the District does not include the "general public" for purposes of determining general benefit. The landscaping improvements along the south side of Los Coches Creek and Berryessa Creek are local in nature, however even though they are intended primarily for localized access, there is some portion of pedestrian traffic that may not be accessing the adjacent properties. The landscaping improvements are located adjacent to the backyard of homes, and access is only available by walking or bicycling. There is no vehicular access to these improvements.

The Summary of Travel Trends, 2009 National Household Travel Survey (NHTS) prepared by the U.S. Department of Transportation Federal Highway Administration analyzed the number of person trips by various modes of transportations such as private vehicle, transit, walking or some other means of transportation. According to the Pacific Division data extracted from the 2009 NHTS database, of the annual 181,703 (in millions) total person trips, 21,252 (in millions) or 11.70% of those person trips were made by using walking as their mode of transportation, and 2,066 (in millions) or 1.14% of those person trips were made by bicycling[5].

According to the U.S. Census Bureau (2010), the average household size in the City is 3.34 persons[6]. Based on this average household size, and considering there are 98 residential units within the District, there are approximately 327 people residing within the District boundaries. There are an estimated 163 residential units in close proximity, but outside of the District boundaries. Based on the City's average household size, there are approximately 544 persons residing outside of the District boundaries, but have access to the landscaping improvements.

Community	Estimated Number of Residential Units	Estimated Number of Persons(1)
District	98	327
Sundrop Subdivision	83	277
Sinclair Renaissance Subdivision	80	267
Total Residential Population	**261**	**871**

(1) *U.S. Census Bureau (2010) average household size in the City is 3.34 persons.*[7]

In order to determine the estimated total number of persons who are within close proximity to the landscaping improvements, and would utilize walking or bicycling as their mode of transportation, we applied the 12.84% (11.70% walking, 1.14% bicycling) of person trips reported from the NHTS Pacific Division study, to the total nearby residential population (871). There are approximately 112 people within close proximity of the District that utilize walking or bicycling as their mode of transportation.

In order to determine the portion of the 112 persons that reside within the District, we applied the 2009 NHTS walking trip percentage (12.84%) to the District population (327). Approximately 42 people within the District boundaries use walking or bicycling as their primary mode of transportation. Therefore, the total

[5] *U.S Department of Transportation. Federal Highway Administration. (2011). Summary of Travel Trends: 2009 National Household Travel Survey. (Report No. FHWA-PL-11-022). Retrieved from http://nhts.ornl.gov*

[6] *U.S. Census Bureau. (2010). Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data. Milpitas, C.A. Retrieved March 23, 2015, http://quickf acts.census.gov/qf d/states/06/0647766.html*

[7] *Ibid.*

surrounding neighborhood area population, located outside of the District boundaries, but in close proximity the landscaping improvements, that uses walking or bicycling as their primary mode of transportation is estimated to be 70 people.

Community	Estimated Number of Persons
District	42
Sundrop Subdivision	36
Sinclair Renaissance Subdivision	34
Walking or Bicycling Population	**112**

In order to obtain a better picture of the overall level of general benefit provided by the landscaping improvements, the pedestrian traffic that utilizes walking or bicycling as the mode of transportation that will seek out and use the District improvements, but live outside of the District, must be considered. The 2009 NHTS further details the purposes of the reported walking (21,252 in millions) and bicycling (2,066 in millions) trips; based on the property types people entering the District would most likely do so for social or recreational activities.

The following details the number of walking and bicycling trips, based on the 2009 NHTS study, for each of the activities that are the most likely reasons people outside of the District would use the landscaping improvements:

Trip Purpose	Number of Walking or Bicycling Trips (in millions)
Social/Recreational	6,442
Total	**6,442**

Of the total number of walking and bicycling trips reported, 6,442 (in millions) or 27.63% are for purposes that persons outside of the District may use the landscaping improvements. Applying this percentage (27.63%) to the number of people walking or bicycling as their mode of transportation and that reside outside of the District (70), there are approximately 19 people (general benefit) that may use the landscaping improvements, but do not reside within the District. Taking the 19 people that may walk or bicycle, but reside outside of the District, divided by total residential population with access to the landscaping improvements (871), the estimated percentage of persons, engaging in what is considered general benefit because they do not reside within the District, represents 2.21%.

Los Coches Street and Sinclair Frontage Road

The City does not have a study showing traffic volume along Los Coches Street and Sinclair Frontage Road along the District boundaries. The portion of the maintained landscaping that is located along Los Coches Street and Sinclair Frontage Road provides some general benefit to pass-through traffic. Before the determination and allocation of the percentage of special and general benefit for the District can be made, the estimated pass-through traffic must be computed. The pass-through trips are vehicles driving along the maintained streets within the District for a portion of their trips, but not living or conducting business in the District and benefiting from the landscaping improvements in place.

The Sundrop and Sinclair Renaissance residential communities are located directly across the street and next to the District, and vehicles entering and/or exiting these communities in all likelihood are passing by a portion of the landscaping improvements for a portion of their trip. In lieu of having a study that identifies the pass-through traffic, the estimated number of trips generated for each community has been calculated based on the number of units and average number of trips per dwelling unit.

Community	Number of Residential Units(1)	Estimated Number of Daily Vehicle Trips(2)	% of Total Daily Vehicle Trips(3)
District	98	933.0	44.34%
Sundrop Subdivision	83	790.2	37.56%
Sinclair Renaissance Subdivision	80	380.8	18.10%
Total	**261**	**2,104.0**	**100.00%**

(1) *Number of Residential Units is from the City's Approved Projects map.*[8]

(2) *Per the ITE Trip Generation Report a single family residence generates an average of 9.52 trips per dwelling unit.*[9]

(3) *Number of daily trips has been reduced by 50% to account for vehicles entering and exiting the community from the opposite direction on Sinclair Frontage Road, and not driving along the portion of Los Coches Street and Sinclair Frontage Road with landscaping improvements maintained by the District.*

As detailed above, based on the average number of daily vehicle trips generated for the communities in close proximity to the District, 1,171 (55.66%) are generated by residential units located outside of the District (general benefit).

<u>All Locations and Landscaping Improvements – Residential Pass-thru Benefit</u>

The general benefit percentages determined in the previous sections for Los Coches Creek and Berryessa Creek (2.21%) and Los Coches Street and Sinclair Frontage Road (55.66%) were then applied to each corresponding location with landscaping improvements. The landscaping square footage being maintained by the District was provided by the City's Public Works Department. The general benefit percentage for each street type was multiplied by the total square footage being maintained for such street. The general benefit square footage was summed for all street segments and divided into the total square footage of all landscaping maintenance. The result is the combined general benefit percentage. The following table details this calculation.

Street Name	Total Square Footage	General Benefit Percentage	General Benefit Square Footage
Los Coches Creek	4,572	2.21%	101
Berryessa Creek	21,025	2.21%	465
Los Coches Street	24,747	55.66%	13,773
Sinclair Frontage	2,568	55.66%	1,429
Totals:	**52,912**		**15,768**
Landscaping General Benefit			**29.80%**

Based on the above calculations, the general benefit portion of the improved aesthetics and increased safety resulting from the landscaping improvements is estimated to be 29.80%.

[8] City of Milpitas. (2013). Approved Development Projects. Retrieved from http://www.ci.milpitas.ca.gov/government/planning/proj_approved.asp

[9] *Trip Generation, 9th Edition: An Informational Report of the Institute of Transportation Engineers. (2012). Washington, DC: Institute of Transportation Engineers.*

Public at Large General Benefit

Given the location and nature of the improvements, it is very unlikely the public at large would seek out or use the landscaping improvements within the District. In addition, there are more direct routes to access the industrial complexes/businesses located to the south of the District than the 2 lane Los Coches Street and Sinclair Frontage Road. Nevertheless, it is perceivable that members of the public at large may pass-thru a portion of the landscaping improvements, even if it's lost or leisure traffic. As such, general benefit of 2.00% has been assigned for the landscaping improvements to the public at large

4.4.1 COLLECTIVE DISTRICT-WIDE GENERAL BENEFIT

Since the District is comprised of improved aesthetics and increased safety benefits resulting from the collective landscaping improvements, the activity of both pedestrians and vehicles, and the public at large must be addressed in a collective form rather than independently. The sum of the calculated general benefits is the total general benefit related to all pass-thru traffic. This general benefit result is provided in the table below:

Residential Pass-thru General Benefit	29.80%
Public at Large General Benefit	2.00%
Total General Benefit	**31.80%**

The general benefit, which is the percentage of the total budget that must be funded through sources other than assessments, is 31.80%. The special benefit then, which is the percentage of the budget that may be funded by assessments, is 68.20%.

5. METHOD OF ASSESSMENT

5.1 Method of Assessment Spread

All parcels in the District on which residential dwellings will be constructed specially benefit from the improvements to an equivalent extent. These parcels are therefore assessed on a per lot basis for the maintenance and operation of the District, including incidentals and appurtenances, and will include all the costs of maintenance and/or operating the improvements. As outlined in Section 4, the total amount of general benefit from the improvements is determined to be 31.80%.

The preliminary maximum assessment rate for Fiscal Year 2021/22 is $496.05. The actual assessment rate levied on each taxable parcel for Fiscal Year 2021/22 is $495.19.

Each year the maximum assessment rate shall be increased by the percentage change from April 1st of the prior year to April 1st of the current year by the U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Indexes, Pacific Cities and U.S. City Average, San Francisco-Oakland-Hayward. The April 1, 2021 CPI was not available at the time of writing of this Report. For purposes of this report, the CPI increase was estimated by using the February 2021/22 CPI.

5.2 Maximum Assessment Rates

The following table provides the historical maximum assessment rates for Fiscal Year 2000/01 through the current fiscal year:

Fiscal Year	CPI	Percentage Increase[1]	Maximum Rate
2000/01	178.7	N/A	$292.803
2001/02	189.1	5.82%	309.844
2002/03	193.0	2.06%	316.234
2003/04	197.3	2.23%	323.280
2004/05	198.3	0.51%	324.918
2005/06	202.5	2.12%	331.800
2006/07	208.9	3.16%	342.286
2007/08	215.842	3.32%	353.661
2008/09	222.074	2.89%	363.872
2009/10	223.854	0.80%	366.789
2010/11	227.697	1.72%	373.086
2011/12	234.121	2.82%	383.611
2012/13	238.985	2.08%	391.581
2013/14	244.675	2.38%	400.904
2014/15	251.495	2.79%	412.079
2015/16	257.622	2.44%	422.118
2016/17	264.565	2.70%	433.494
2017/18	274.589	3.79%	449.919
2018/19	283.422	3.22%	464.392
2019/20	294.801	4.01%	483.037
2020/21	298.074	1.11%	488.400
2021/22	304.387	1.57%[2]	496.054

(1) *Percentage increase from April 1 of the prior year to April 1 of the current year in the US Department of Labor, Bureau of Labor Statistics, Consumer Price Index, Pacific Cities and US City Average, San Francisco-Oakland-Hayward.*

(2) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated using the February 2021/22 CPI.*

5.3 Appeals

Any property owner who feels that the amount of their assessment is in error as a result of incorrect information being used to apply the foregoing method of spread, may file an appeal with the Finance Director of the City. Any such appeal is limited to correction of an assessment during the current or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the Finance Director shall promptly review the information provided by the property owner and if he/she finds that the assessment should be modified, he/she shall have the authority to make the appropriate changes in the assessment roll. If any such changes are provided after the assessment roll has been filed with the County for collection, the Finance Director is authorized to refund to the property owner the amount of any approved reduction.

6. ASSESSMENT DIAGRAM

The following page provides a copy of the assessment diagram of the District.

ASSESSMENT DIAGRAM NUMBER	ASSESSMENT PARCEL NUMBER								
1	86-48-001	14	86-48-014	29	86-48-029	44	86-48-044	59	86-48-059
2	86-48-002	15	86-48-015	30	86-48-030	45	86-48-045	60	86-48-060
3	86-48-003	16	86-48-016	31	86-48-031	46	86-48-046	61	86-48-061
4	86-48-004	17	86-48-017	32	86-48-032	47	86-48-047	62	86-48-062
5	86-48-005	18	86-48-018	33	86-48-033	48	86-48-048	63	86-48-063
6	86-48-006	19	86-48-019	34	86-48-034	49	86-48-049	64	86-48-064
7	86-48-007	20	86-48-020	35	86-48-035	50	86-48-050	65	86-48-065
8	86-48-008	21	86-48-021	36	86-48-036	51	86-48-051	66	86-48-066
9	86-48-009	22	86-48-022	37	86-48-037	52	86-48-052	67	86-48-067
10	86-48-010	23	86-48-023	38	86-48-038	53	86-48-053	68	86-48-068
11	86-48-011	24	86-48-024	39	86-48-039	54	86-48-054	69	86-48-069
12	86-48-012	25	86-48-025	40	86-48-040	55	86-48-055	70	86-48-070
13	86-48-013	26	86-48-026	41	86-48-041	56	86-48-056	71	86-48-071
		27	86-48-027	42	86-48-042	57	86-48-057	72	86-48-072
		28	86-48-028	43	86-48-043	58	86-48-058	73	86-48-073

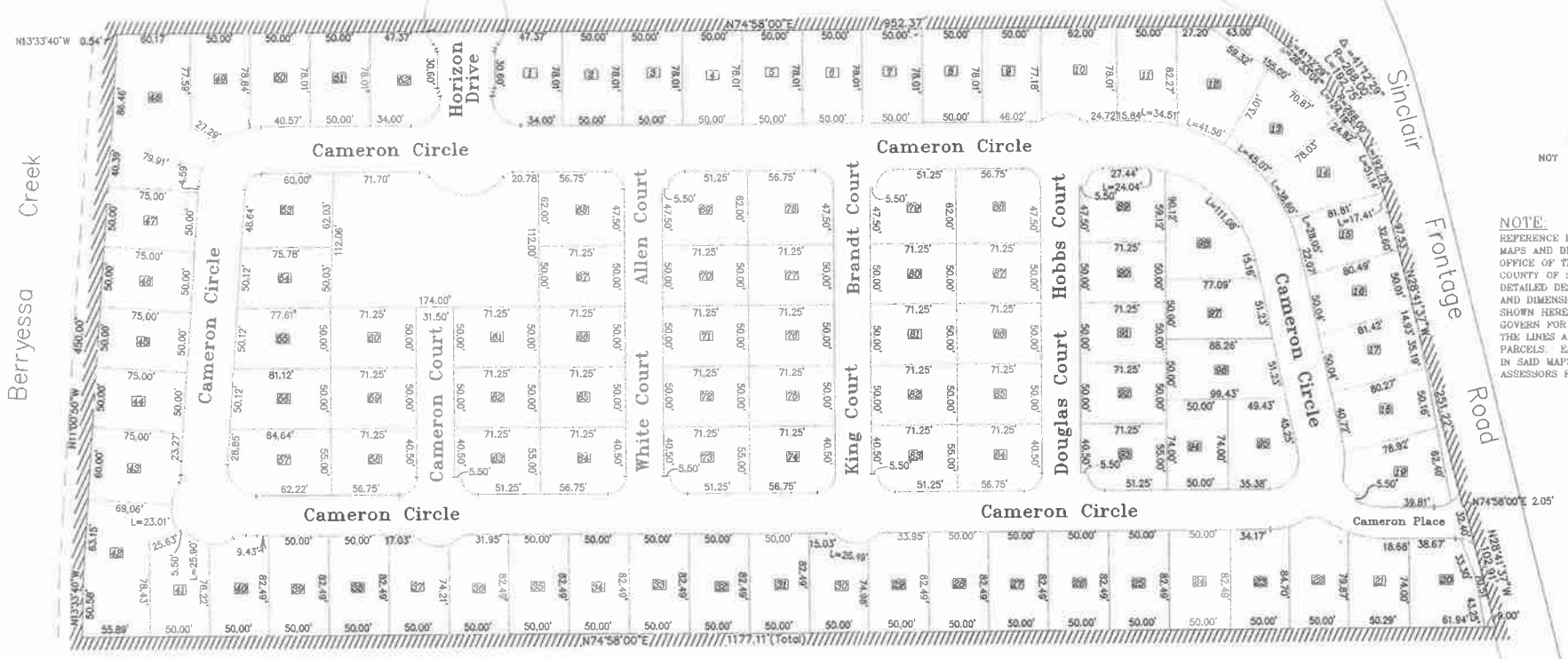
74	86-48-074	89	86-48-089
75	86-48-075	90	86-48-090
76	86-48-076	91	86-48-091
77	86-48-077	92	86-48-092
78	86-48-078	93	86-48-093
79	86-48-079	94	86-48-094
80	86-48-080	95	86-48-095
81	86-48-081	96	86-48-096
82	86-48-082	97	86-48-097
83	86-48-083	98	86-48-098
84	86-48-084		
85	86-48-085		
86	86-48-086		
87	86-48-087		
88	86-48-088		

LEGEND

[18] Assessment Parcel Numbers

District Boundary

Assessment Limits



NOTE:
REFERENCE IS HEREBY MADE TO THE MAPS AND DEEDS OF RECORD IN THE OFFICE OF THE ASSESSOR OF THE COUNTY OF SANTA CLARA FOR A DETAILED DESCRIPTION OF THE LINES AND DIMENSIONS OF ANY PARCELS SHOWN HEREIN. THOSE MAPS SHALL GOVERN FOR ALL DETAILS CONCERNING THE LINES AND DIMENSIONS OF SUCH PARCELS. EACH PARCEL IS IDENTIFIED IN SAID MAPS BY ITS DISTINCTIVE ASSESSORS PARCEL NUMBER

Figure 1

An assessment was levied by the City Council of the City of Milpitas, County of Santa Clara, State of California on the lots, pieces and parcels of land shown on this assessment diagram. Said assessment was levied on the 3rd day of June 2014, said assessment diagram and the assessment roll were recorded in the Office of the Superintendent of Streets of said City on the 3rd day of June 2014. Reference is made to the assessment roll recorded in the Office of the Superintendent of Streets for the exact amount of each assessment levied against each parcel of land shown on this assessment diagram.

Mary Lavelle
City Clerk of the City of Milpitas

Filed in the Office of the City Clerk of the City of Milpitas, County of Santa Clara, State of California this 20th day of May 2014.

Mary Lavelle
City Clerk of the City of Milpitas

Recorded in the Office of the Superintendent of Streets of the City of Milpitas, County of Santa Clara, State of California, this 3rd day of June 2014.

Superintendent of Streets
City of Milpitas

PART F

ASSESSMENT DIAGRAM
LANDSCAPING AND LIGHTING
MAINTENANCE ASSESSMENT DISTRICT
NO. 98-1

MILPITAS CALIFORNIA

June 2013

1/1

7. ASSESSMENT ROLL

The assessment roll is a listing of the proposed assessment for Fiscal Year 2021/22 apportioned to each lot or parcel, as shown on the last equalized roll of the Assessor of the County of Santa Clara. The following pages show the assessment roll for Fiscal Year 2021/22.

City of Milpitas
Landscaping and Lighting Maintenance Assessment District
No. 98-1
Fiscal Year 2021/22 Assessment Roll

APN	Assessment ID	Owner	Fiscal Year 21/22 Levy	Rounding Adj.	Fiscal Year 20/21 Total
086-48-001	1	HUYNH CONNIE C AND NGUYEN HUNG	$495.19	(0.01)	$495.18
086-48-002	2	BHAT BALASUBRAMANYA AND RAMANANDA RAMYA N	495.19	(0.01)	495.18
086-48-003	3	SANTIAGO SIMON AND RACHEL	495.19	(0.01)	495.18
086-48-004	4	GDK ENTERPRISE LLC	495.19	(0.01)	495.18
086-48-005	5	NOGUERA ALEX D AND GUTIERREZ-NOGUERA MARLI	495.19	(0.01)	495.18
086-48-006	6	KEMPIS BENJAMIN S AND EVANGELINE Q TRUSTEE	495.19	(0.01)	495.18
086-48-007	7	SHILEDAR ADITYA AND BADHE PRIYA P	495.19	(0.01)	495.18
086-48-008	8	XU JIANZHONG AND WANG XIAOMIN	495.19	(0.01)	495.18
086-48-009	9	LAM TUAN AND NGUYEN YEN N	495.19	(0.01)	495.18
086-48-010	10	VU JOSEPH ANH AND TRAN YENLINH T	495.19	(0.01)	495.18
086-48-011	11	GUTIERREZ ALEJANDRO J TRUSTEE & ET AL & GUTIERREZ-NOGUERA MARLI TRUSTEE	495.19	(0.01)	495.18
086-48-012	12	ECAL ERLINDA E AND GEORGE E	495.19	(0.01)	495.18
086-48-013	13	DELA CRUZ DALE E AND JEANETTE M	495.19	(0.01)	495.18
086-48-014	14	TRINH DANH XUAN	495.19	(0.01)	495.18
086-48-015	15	NGUYEN TUNG K AND LAC V	495.19	(0.01)	495.18
086-48-016	16	LADLE GORDON B AND MARICAR C	495.19	(0.01)	495.18
086-48-017	17	JACKSON PAUL K AND BRITTON-JACKSON VIVIAN	495.19	(0.01)	495.18
086-48-018	18	CAO MICHAEL T AND TAM VUONG	495.19	(0.01)	495.18
086-48-019	19	MIGUELINO OSCAR T JR AND JUDY Y	495.19	(0.01)	495.18
086-48-020	20	BUI THUAN AND NGUYEN HA TRUSTEE	495.19	(0.01)	495.18
086-48-021	21	TRAN KENNETH L AND LENA L TRUSTEE	495.19	(0.01)	495.18
086-48-022	22	AGBUYA ALBERT P AND AMORFINA G TRUSTEE	495.19	(0.01)	495.18
086-48-023	23	PATEL BHUSHAN AND AARTI M	495.19	(0.01)	495.18
086-48-024	24	KOH CHENG-CHEE ET AL & KOH KEWSEK	495.19	(0.01)	495.18
086-48-025	25	GADIGE BHASKAR V AND HIMABINDU	495.19	(0.01)	495.18
086-48-026	26	AGARWAL SHIV AND TAYAL MANISHA TRUSTEE	495.19	(0.01)	495.18
086-48-027	27	NARVAEZ HOWARD M TRUSTEE & ET AL & CHU FONDA W TRUSTEE	495.19	(0.01)	495.18
086-48-028	28	LEUNG PAUL K AND NANCY M	495.19	(0.01)	495.18
086-48-029	29	TRAN MICHAEL AND TIFFANY	495.19	(0.01)	495.18
086-48-030	30	WU XILONG AND YU ZHEBIN TRUSTEE	495.19	(0.01)	495.18
086-48-031	31	WONG IRENE TRUSTEE	495.19	(0.01)	495.18
086-48-032	32	BAKHRU SUDHIR AND MULLASSERY DIVYA	495.19	(0.01)	495.18
086-48-033	33	RAGHUNATHA SWAROOP AND PADUBIDRI LALITHA TR	495.19	(0.01)	495.18
086-48-034	34	GUDURI VINOD AND LAKMA SHAILAJA	495.19	(0.01)	495.18
086-48-035	35	YAU TIMOTHEUS AND PEGGY	495.19	(0.01)	495.18
086-48-036	36	VOLADRI RAMA K AND GURJAL MANI R	495.19	(0.01)	495.18
086-48-037	37	CHU WEI MUN	495.19	(0.01)	495.18
086-48-038	38	AGRAWAL RAKESH AND KANSAL ESHA TRUSTEE	495.19	(0.01)	495.18
086-48-039	39	DUNN ERIC J AND BUI TRANG THI THUY	495.19	(0.01)	495.18
086-48-040	40	MUNE DEREK AND LEE TERRI L	495.19	(0.01)	495.18
086-48-041	41	AGGARWAL RAHUL AND SHELLY	495.19	(0.01)	495.18
086-48-042	42	RAO QIZHOU AND SHAN MENGWEN	495.19	(0.01)	495.18
086-48-043	43	LOW NEE-LOONG AND OH BEE-BEE	495.19	(0.01)	495.18
086-48-044	44	VOGETY RAMANAGOPAL V AND VEDANTAM KANYALAKS	495.19	(0.01)	495.18
086-48-045	45	MAI KENNY CHI AND PAULINE	495.19	(0.01)	495.18
086-48-046	46	DO KHAN AND NGUYEN THU K TRUSTEE	495.19	(0.01)	495.18
086-48-047	47	TSAI JULIE Y ET AL & TSAI CHRISTINE P	495.19	(0.01)	495.18
086-48-048	48	GDK ENTERPRISES LLC	495.19	(0.01)	495.18
086-48-049	49	PEI NICHOLAS	495.19	(0.01)	495.18
086-48-050	50	WANG YUN AND TONG MIN	495.19	(0.01)	495.18
086-48-051	51	LY PETER T	495.19	(0.01)	495.18
086-48-052	52	WONG JAMES	495.19	(0.01)	495.18
086-48-053	53	FANG XIONG AND WANG QING	495.19	(0.01)	495.18
086-48-054	54	LAN DI AND CAO RONG TRUSTEE	495.19	(0.01)	495.18
086-48-055	55	LAM RONNY AND JULIE TRAN TRUSTEE	495.19	(0.01)	495.18
086-48-056	56	ZHOU GUO QUAN AND LIU XIN	495.19	(0.01)	495.18
086-48-057	57	LI HONG AND TU MINGHU	495.19	(0.01)	495.18
086-48-058	58	DUGYALA ANURADHA TRUSTEE	495.19	(0.01)	495.18
086-48-059	59	AU JONSON C AND OR SOPHIA YUK YU	495.19	(0.01)	495.18
086-48-060	60	TRUONG MAI C ET AL	495.19	(0.01)	495.18
086-48-061	61	BASANI SHAILESH KUMAR AND SUPRIYA TRUSTEE	495.19	(0.01)	495.18

City of Milpitas
Landscaping and Lighting Maintenance Assessment District
No. 98-1
Fiscal Year 2021/22 Assessment Roll

APN	Assessment ID	Owner	Fiscal Year 21/22 Levy	Rounding Adj.	Fiscal Year 20/21 Total
086-48-062	62	LEE ANDREW AND LIU LISA	495.19	(0.01)	495.18
086-48-063	63	AZALI ALBERTUS H AND TUNGGAL WENDA TRUSTEE	495.19	(0.01)	495.18
086-48-064	64	NIGAM AJAY AND ANJULA TRUSTEE	495.19	(0.01)	495.18
086-48-065	65	KOMATSU HIROYUKI AND MIKA	495.19	(0.01)	495.18
086-48-066	66	NAIR SEEMA	495.19	(0.01)	495.18
086-48-067	67	BIALA CHARITO M TRUSTEE & ET AL & BIALA FE T TRUSTEE	495.19	(0.01)	495.18
086-48-068	68	NITAFAN DEMETRIO B AND CECILIA C	495.19	(0.01)	495.18
086-48-069	69	NGUYEN TANYA VINH ET AL & NGUYEN STEVEN D	495.19	(0.01)	495.18
086-48-070	70	HUYNH QUANG AND VO JASMINE TRUSTEE	495.19	(0.01)	495.18
086-48-071	71	PATEL GITA V TRUSTEE	495.19	(0.01)	495.18
086-48-072	72	FENG HAIJUN AND ZHONG WEIHONG	495.19	(0.01)	495.18
086-48-073	73	XUE WEI AND SUN LI	495.19	(0.01)	495.18
086-48-074	74	GANGAIAH MAHENDRA AND VENKATARAMU CHANDRIKA	495.19	(0.01)	495.18
086-48-075	75	PRABHU VIVEK R AND PRADHU SUNITA T TRUSTEE	495.19	(0.01)	495.18
086-48-076	76	HSIAO JEFF C AND NGUYEN ANGELA T TRUSTEE &	495.19	(0.01)	495.18
086-48-077	77	CHIN MICHAEL AND MARY TRUSTEE	495.19	(0.01)	495.18
086-48-078	78	TRUONG PHILLIP TRUSTEE	495.19	(0.01)	495.18
086-48-079	79	XIONG XIANG D AND YEE VICKY TRUSTEE & ET AL	495.19	(0.01)	495.18
086-48-080	80	REDDY SAMINA AGUTHU ET AL & DESAI NIRAJ SHIRISH	495.19	(0.01)	495.18
086-48-081	81	ARUNACHALAM SARAVANAN AND KRISHNAMOORTHY SA	495.19	(0.01)	495.18
086-48-082	82	MA NAN	495.19	(0.01)	495.18
086-48-083	83	BUKIN KONSTANTIN V AND HSIEH PING	495.19	(0.01)	495.18
086-48-084	84	DESAI RAJENDRA J AND PRATIMA R	495.19	(0.01)	495.18
086-48-085	85	ZHAO QIANG JIMMY AND YUO JENNY BIN	495.19	(0.01)	495.18
086-48-086	86	TAN ALICIA SHUFANG TRUSTEE	495.19	(0.01)	495.18
086-48-087	87	PIERCE BRAD A AND KOH CHENG-CHEE TRUSTEE	495.19	(0.01)	495.18
086-48-088	88	AHUJA SUMEET AND RUCHI	495.19	(0.01)	495.18
086-48-089	89	DEVADAS MANJUNATH AND KARVETI HEMALATHA	495.19	(0.01)	495.18
086-48-090	90	LIEU TONY AND TIFFANY	495.19	(0.01)	495.18
086-48-091	91	KRISHNAN ANANTA AND KUMAR MAYA	495.19	(0.01)	495.18
086-48-092	92	LIM PERRY F AND DIXIE M TRUSTEE	495.19	(0.01)	495.18
086-48-093	93	LU COURTNIE TU TRINH	495.19	(0.01)	495.18
086-48-094	94	QUANG TONY D	495.19	(0.01)	495.18
086-48-095	95	SINGLA SANJEEV K AND ANITA	495.19	(0.01)	495.18
086-48-096	96	PAL SHIRISH C AND DAS SUJATA S	495.19	(0.01)	495.18
086-48-097	97	ANNADATA ANIL K AND VEEPURI SRAVANTHI	495.19	(0.01)	495.18
086-48-098	98	ONG PHILIP J JR AND UYEN T TRUSTEE	495.19	(0.01)	495.18
Total: 98 Parcels			**$48,528.62**	**-$0.98**	**$48,527.64**

CITY OF MILPITAS

LANDSCAPING MAINTENANCE DISTRICT (LMD) 98-1

(N.T.S.)

2021-2022 FISCAL YEAR LANDSCAPE AREA FUNDED FOR MAINTENANCE

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Conduct a Public Hearing and Adopt a Resolution Confirming the Assessment and Ordering the Levy for the Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch for Fiscal Year 2021-22**
Category:	Public Hearings-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, 408-586-3301
Recommendation:	Open the public hearing, receive any comments, and move to close the hearing following any testimony; and adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch for Fiscal Year 2021-22.

Background:
Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch (LLMD 95-1) provides for the maintenance and improvement of public landscaping, irrigation systems, pedestrian lighting, gateway columns and entry signs along portions of North McCarthy Boulevard and the Ranch Drive gateway between State Route 237 and Dixon Landing Road in the areas as shown on the attached location map.

Analysis:
On May 18, 2021, the City Council adopted Resolution No. 9064 approving the Annual Engineer's Report and adopted Resolution No. 9065 declaring its intention to levy and collect assessment for Fiscal Year 2021-22 for the Landscaping and Lighting Maintenance Assessment District No. 95-1.

A public hearing is necessary adopt a resolution confirming the assessment and ordering the levy to collect assessments in LLMD 98-1. The total assessment for fiscal year 2021-22 is $392,693.33, with an assessment rate of $0.0333 not exceeding the maximum rate per square foot of $0.0480.

Policy Alternatives:

Alternative 1:
Not approve resolution confirming the assessment and ordering the levy for LLMD 95-1.

Pros: None

Cons: The Landscaping and Lighting Act of 1972 requires the legislative body to adopt a resolution confirming the assessment and order the levy, and not adopting a resolution confirming the assessment would jeopardize the City's ability to collect assessments to fund the maintenance and improvement services for LLMD 95-1.

Reason not recommended: To allow for the continued maintenance and improvement services of LLMD 95-1, staff recommends approving the resolution confirming the assessment and ordering the levy for fiscal year 2021-22.

Fiscal Impact:
The levy and collection of annual assessments provides a funding resource for the City to improve and maintain public landscaping, irrigation systems, pedestrian lighting, gateway columns and entry signs within

LLMD 95-1. Due to the difference in the revenue assumption originally published in the initial FY 2021-22 Proposed Budget, the Budget will be updated accordingly for adoption.

California Environmental Quality Act:
The levy and collection of assessment is not considered a project under CEQA as there will be no direct or reasonably foreseeable indirect physical change in the environment.

Recommendation:
1. Open the public hearing, receive any comments, and move to close the hearing following any testimony.
2. Adopt a Resolution confirming the assessment and ordering the levy for Landscaping and Lighting Maintenance Assessment District No. 95-1, McCarthy Ranch for Fiscal Year 2021-22.

Attachments:
a) Resolution
b) Annual Engineer's Report
c) Location Map

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS CONFIRMING THE ASSESSMENT AND ORDERING THE LEVY FOR THE LANDSCAPING AND LIGHTING MAINTENANCE ASSESSMENT DISTRICT NO. 95-1 FOR FISCAL YEAR 2021-22

WHEREAS, the City Council previously completed its proceedings in accordance with and pursuant to the Landscaping and Lighting Act of 1972, Part 2, Division 15 of the California Streets and Highways Code (commencing with Section 22500) (the "Act") to establish the Landscaping and Lighting Maintenance Assessment District No. 95-1 (the "Assessment District"); and

WHEREAS, the City Council has retained NBS for the purpose of assisting with the annual levy of the Assessment District, and the preparation and filing of an Annual Report; and

WHEREAS, the City Council has, by previous resolution, declared its intention to hold a Public Hearing concerning the levy and collection of annual assessments within the Assessment District; and

WHEREAS, a Public Hearing has been held and concluded and notice thereof was duly given in accordance with Section 22626 of the Act; and

WHEREAS, at the time and place specified in the Resolution of Intention the City Council conducted such hearing and considered all objections to the assessment.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. Confirmation of Assessment and Diagram: The City Council hereby confirms the assessment and the diagram as is described in full detail in the Annual Report on file with the City Clerk.

2. Levy of Assessment: Pursuant to Section 22631 of the Act, the adoption of this Resolution shall constitute the levy of an annual assessment for the fiscal year commencing July 1, 2021, and ending June 30, 2022.

3. Ordering of the Levy: The City Council hereby orders NBS to prepare and submit the levy of annual assessments to Santa Clara County for placement on the Fiscal Year 2021-22 secured property tax roll.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

CITY OF MILPITAS

Fiscal Year 2021/22 Annual Report For:

Landscaping and Lighting Maintenance Assessment District No. 95-1

May 2021

Prepared by:

NBS
helping communities fund tomorrow

nbsgov.com

Corporate Headquarters
32605 Temecula Parkway, Suite 100
Temecula, C
Toll free: 800.6

CITY OF MILPITAS
LANDSCAPING AND LIGHTING MAINTENANCE ASSESSMENT DISTRICT NO. 95-1
455 East Calaveras Boulevard
Milpitas, California 95035
Phone (408) 586-3000

CITY COUNCIL

Rich Tran, Mayor

Carmen Montano, Vice-Mayor

Evelyn Chua, Council Member

Karina R. Dominguez, Council Member

Anthony Phan, Council Member

CITY STAFF

Steve Erickson, PE, Engineering Director/City Engineer

Lauren Lai, Finance Director

Tony Ndah, Public Works Director

NBS

Tim Seufert, Client Services Director

Adina McCargo, Project Manager

Zaire Marin, Administrator

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1. ENGINEER'S LETTER

WHEREAS, in 1995 the City Council of the City of Milpitas (the "City"), State of California, under the Landscaping and Lighting Act of 1972 (the "Act"), created the City of Milpitas Landscaping and Lighting Maintenance Assessment District No. 95-1 (the "District") in order to provide for the continued maintenance, operation, and administration of various improvements within the boundaries of the District; and

WHEREAS, the City Council has directed NBS to prepare and file a report for Fiscal Year 2021/22 in accordance with Chapter 1, Article 4 of the Act presenting plans and specifications describing the general nature, location and extent of the improvements to be maintained; an estimate of the costs to maintain, operate, and service the improvements for the District for the referenced fiscal year; a diagram for the District showing the area and properties to be assessed; and an assessment of the estimated costs to maintain and service the improvements, stating the net amount to be assessed upon all assessable lots or parcels within the District in proportion to the special benefit received.

NOW THEREFORE, the following assessments have been calculated in accordance with the assessment methodology adopted and approved by the City Council at the time of District formation, and are made to cover the portion of the estimated costs of maintenance, operation, and servicing of the improvements, to be paid by the assessable real property within the District in proportion to the special benefit received:

District	Parcels	2021/22 Maximum Assessment Rate per Lot Sq. Ft.(1)	2021/22 Actual Assessment Rate per Lot Sq. Ft.	2021/22 Net Amount to be Assessed(2)(3)
LLMAD 95-1	44	$0.0480	$0.0333	$392,693.33

(1) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated using the February 2021/22 CPI.*

(2) *Amounts placed on the tax roll include the 1% Santa Clara County Collection Fee.*

(3) *This amount is only an estimate and does not reflect the final billed amount with rounding adjustments. Refer to Section 7 for the rounded figure.*

I identified all parcels which will have a special benefit conferred upon them from the improvements described in District's Plans and Specifications section of this Engineer's Report (the "Benefited Parcels"). For particulars as to the identification of said parcels, reference is made to the Assessment Diagram, a copy of which is on file in the office of the City Clerk.

I have assessed the costs and expenses of the improvements upon the Benefited Parcels. In making such assessment:

a. The proportionate special benefit derived by each Benefited Parcel from the improvements was determined in relationship to the entirety of the maintenance costs of the improvements;

b. No assessment has been imposed on any Benefited Parcel which exceeds the reasonable cost of the proportional special benefit conferred on such parcel from the improvements; and

c. Any general benefits from the improvements have been separated from the special benefits and only special benefits have been assessed.

I, the undersigned, respectfully submit the enclosed Engineer's Report and, to the best of my knowledge, information and belief, the Engineer's Report, Assessments, and the Assessment Diagrams herein have been prepared and computed in accordance with the order of the City Council of the City of Milpitas, the Act, and Article XIIID.

Steven Erickson 5-18-21

Steven Erickson, PE
Engineering Director/City Engineer

2. PLANS AND SPECIFICATIONS

The District provides for the continued administration, maintenance, operation, and servicing of various improvements located within the public right-of-way and dedicated easements within the boundaries of the District.

2.1 Location of Improvements

The District is located on the west side of the City of Milpitas, bounded on the east by State Route 880, on the west by Coyote Creek, on the south by State Route 237, and on the north by Dixon Landing Road. The improvements maintained include public landscaping and irrigation improvements, including jogging paths, pedestrian lighting, gateway improvements, and entry signage, which are primarily situated within the public right-of-way and dedicated public easements within the District.

2.2 Landscaping Improvements

Landscaping, pedestrian lighting, gateway, and signage improvements were installed along the roadways and sidewalks within the District to enhance the overall visual appearance for adjacent parcels.

The improvements within the District consist of the maintenance and installation of any or all public landscaping and irrigation improvements adjacent to curbs of the following described streets, including jogging paths, planter walls, grass berms, pedestrian lighting and appurtenant irrigation systems, ornamental planting including lawns, shrubs, and trees; installation and maintenance of gateway columns and entry signs. Such maintenance includes all necessary repairs, replacements, water, electric current, spraying, care, supervision, debris removal and all other items of work necessary and incidental for property maintenance and operation thereof. The landscaping, irrigation, pedestrian lighting, gateway, and signage improvements are collectively referred to as “landscaping improvements”. All such work will be performed in the following areas:

2.2.1 N. MCCARTHY BOULEVARD

1. A strip of land including an earth berm approximately 50 feet in width from face of each curb line, from the southerly connection with Ranch Drive northerly 2,400 feet, more or less, to the northerly connection with Ranch Drive. A strip of land including a grass berm approximately 35 feet in width, west of the face of westerly curb, along the West Side of N. McCarthy Boulevard, from the southerly connection with Ranch Drive, northerly 2,400 feet, more or less. The initial phase includes a strip of land 6 feet wide on the west side of McCarthy Boulevard.
2. Commencing at a location approximately 2,400 feet north of State Route 237 thence proceeding north to the northern boundary of Lands of N. McCarthy, 7,800 feet more or less, a strip of land approximately 27 to 34 feet in width on each side along the east and west sides of McCarthy Boulevard between the northerly connection with Ranch Drive and Dixon Landing Road.
3. A median island from the southerly intersection with Ranch Drive northerly to the intersection with Dixon Landing Road.

4. Gateway Improvements, at the southerly intersection of N. McCarthy Boulevard and Ranch Drive and southerly of Bridge No. 1 along N. McCarthy Boulevard, including curved stone planter walls, gateway columns with entry sign appurtenant mounding ornamental plantings including flat work, trees and ground cover, irrigation systems; all as shown on landscape plans.
5. Lighting costs in the District are limited to the supplemental pedestrian lights installed on the east side of McCarthy Boulevard between the two intersections at Ranch Drive and McCarthy Boulevard. The conventional lighting along McCarthy Boulevard is not included. There also exists decorative up-lighting for the Gateway Towers in other areas near the southern Ranch Drive intersection of McCarthy.

2.2.2 MILPITAS ENTRY SIGN

1. City of Milpitas Entry Identification Sign along N. McCarthy Blvd., including walls, columns, lighting and other appurtenances.

2.2.3 RANCH DRIVE

1. Commencing at a Northerly location where the right-of-way of Ranch Drive is contiguous with the right-of-way of Interstate 880, thence southerly, a strip of land approximately 10 feet in width measured from the east face of curb of Ranch Drive, from the northerly connection with Interstate 880 and Ranch Drive, southerly 630 feet, more or less, thence 405 feet south to the southerly end of Gateway location, varying in width from 10 feet to 132 feet, more or less.
2. Gateway Improvements, at the southerly connection of Ranch Drive and Interstate 880, including curved stone planter walls, gateway columns with entry sign appurtenant mounding ornamental plantings including flat work, trees and ground cover, irrigation systems; all as shown on landscape plans (Part A), except the Shopping Center's Monument Sign. As mentioned above, there also exists decorative up-lighting for the Gateway Towers in other areas near the southern Ranch Drive intersection of McCarthy.

2.3 Capital Improvements

The City will initiate the design and construction of landscape and irrigation renovation on N. McCarthy Blvd. between State Route 237 and Dixon Landing Road and a portion of Ranch Drive in Fiscal Year 2021/22. Capital Improvements are scheduled to be complete by June 30, 2022.

2.4 Overhead

In addition to the hard costs of maintaining the improvements mentioned above, the City will incur costs for staff time and expenses related to the management and maintenance of the improvements within the District. Staff time includes oversight and coordination of both City and contractor provided services, annual tax roll preparation, and addressing property owner questions and concerns. These activities are directly related to the maintenance of the improvements, and without them the improvements could not be efficiently completed or properly maintained on an ongoing basis.

3. ESTIMATE OF COSTS

The estimated costs of maintenance and servicing of the improvements as described in the Plans and Specifications are summarized below.

3.1 District Budget

The Fiscal Year 2021/22 estimated cost budget for the maintenance and servicing of the improvements is as follows:

Description	Fiscal Year 2021/22 Budget
Maintenance Staff and Contract Services[1]	$242,000
Capital Equipment	0
Supplies	35,800
Utilities (Water, Electricity)	92,500
Reserve Fund	26,200
Capital Improvement Program	0
Maintenance Costs	**$396,500**
NBS	$11,850
City Staff District Administration	400
County Auditor-Controller Fee[2]	3,927
District Specific Costs	**$16,177**
Total District Costs	**$412,677**
General Benefit Contribution[3]	(19,984)
Operating Reserve Contribution	0
Net Amount to be Assessed	**$392,693**
Total District Square Footage[4]	11,792,520
Rate per Square Foot[5][6]	**$0.0333**
Maximum Rate Per Square Foot – 2021/22[7]	**$0.0480**

(1) *Fiscal 2021/22 Landscape Maintenance Contract Services includes Terracare and Irvine Company.*

(2) *County Auditor-Controller Fee is currently 1% of the total levy submittal.*

(3) *General Benefit Contribution is not applied to District Specific Costs as these are special benefits to the District.*

(4) *Total District Square Footage includes the 50% reduction for Parcel 5-7 (Sewer Main Pump Station) and Parcel 5-3C (Storm Pump Station).*

(5) *The Rate per Square Foot equals the Net Amount to be Assessed / Total District Square Footage.*

(6) *The assessed rate cannot exceed the maximum rate.*

(7) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated by using the February 2021/22 CPI.*

3.1.1 OPERATING RESERVE

It is the intent of the City to maintain an operating reserve which shall not exceed the estimated costs of maintenance and servicing of the improvements prior to December 10 of the fiscal year, or when the City expects to receive its apportionment of special assessments from the County, whichever is later. The operating reserve balance information for the District is as follows:

Estimated Fiscal Year Ending 6/30/2021 Operating Reserve Cash Balance	$28,000
Operating Reserve Collection for Fiscal Year 2021/22	26,200
Estimated Fiscal Year Ending 6/30/2022 Operating Reserve Cash Balance	**$54,200**

3.1.2 CAPITAL IMPROVEMENT BUDGET

The City will initiate the design and construction of landscape and irrigation renovation on N. McCarthy Blvd. between State Route 237 and Dixon Landing Road and a portion of Ranch Drive in Fiscal Year 2021/22. As of March 28, 2021, the balance available for the Capital Improvement Project was $554,436. The City will utilize these funds to finance the project.

Capital Improvements are scheduled to be complete by June 30, 2022.

4. SPECIAL AND GENERAL BENEFIT

The improvements defined in Section 2 are expected to confer certain special benefits to parcels within the District. The special benefits are described in this section. Figures in this section are derived from a Special v. General Benefit Analysis performed in Fiscal Year 2020/21.

4.1 Identification of Benefit

Section 4 of Article XIIID of the California Constitution provides that once a local agency which proposes to impose assessments on property has identified those parcels that will have special benefits conferred upon them and upon which an assessment will be imposed, the local agency must next "separate the general benefits from the special benefits conferred," and only the special benefits can be included in the amount of the assessments imposed.

4.2 Special Benefits Identified

The improvements described in Section 2 are expected to confer certain special benefits to parcels within the District. The special benefits conferred to property within the District can be grouped into three primary benefit categories: aesthetic benefit, safety benefit, and economic benefit. The three District benefit categories are further expanded upon below.

- **Improved Aesthetics:** The aesthetic benefit relates to the increase in the overall aesthetics as a result of the ongoing maintenance, servicing, and operation of the improvements within the District. The landscaping improvements enhance the overall image and desirability of the properties within the District. Street landscaping improvements improve the livability, commercial activity, appearance, and desirability for properties within the District. Regular maintenance ensures that the improvements do not reach a state of deterioration or disrepair so as to be materially detrimental to properties adjacent to or in close proximity to the improvements. The overall appeal of the District is enhanced when improvements are in place and kept in a healthy and satisfactory condition. Conversely, appeal decreases when improvements are not well-maintained, unsafe, or destroyed by the elements or vandalism. Streetscapes have a significant effect on how people view and interact with their community.[1] With streetscapes that are safe and inviting, people are more likely to walk, which can help reduce automobile traffic, improve public health, stimulate local economic activity, and attract residents and visitors to the community.[2]
- **Increased Safety:** Well maintained areas mitigate crime, especially vandalism, and enhance pedestrian safety. A recent study found that after landscape improvements were installed, there was a 46% decrease in crash rates across urban arterial and highway sites and a second study reviewed found a 5% to 20% reduction in mid-block crashes after trees and planters in urban arterial roads were put in place. In addition, there is less graffiti, vandalism, and littering in outdoor spaces with natural landscapes than in comparable plant-less spaces. [3] The Victoria

[1] *Victoria Transport Policy Institute. (2011). Community Livability. Helping to Create Attractive, Safe, Cohesive Communities. Retrieved from http://www.vtpi.org/tdm/tdm97.htm.*
[2] *Ibid.*
[3] *Wolf, Kathleen L. (2010). Safe Streets – A Literature Review. In: Green Cities: Good Health (www.greenhealth.washington.edu)*. College of the Environment, University of Washington.

Transport Policy Institute has found that streetscapes reduce traffic speeds and when combined with improved pedestrian crossing conditions can significantly reduce collisions. [4]

- **Economic Activity:** Well maintained street landscape improvements not only make adjacent properties appear more stable and prosperous but can spur investment in the property. The National Complete Streets Coalition notes that street design that is inclusive of all modes of transportation, where appropriate, not only improves conditions for existing businesses, but also is a proven method for revitalizing an area and attracting new development. [5] Landscaped sidewalks create an inviting place for customers to shop and do business. [6] Well-maintained and safe District areas will encourage an increase in the overall pedestrian activity. The area will become more pedestrian friendly, thus improving the retail environment by encouraging individuals to shop, dine, and stay within the District boundaries. The District will provide a cleaner more inviting environment to businesses and consumers which will attract, retain and expand the retail and business climate throughout. The effort will reduce vacancy rates and increase lease rates and utilization of property within the District.

4.3 General Benefits Identified

Section 4 of Article XIIID of the California Constitution provides that once a local agency which proposes to impose assessments on property has identified those parcels that will have special benefits conferred upon them and upon which an assessment will be imposed, the local agency must next "separate the general benefits from the special benefits conferred," and only the special benefits can be included in the amount of the assessments imposed.

General benefit is an overall and similar benefit to the public at large resulting from the maintenance of the District's improvements provided by the assessments levied. The improvements to be maintained by the District are located within the District boundaries only. There will be no District maintenance activities provided for improvements located outside of the District boundaries.

The ongoing maintenance of the District improvements will provide aesthetic, safety and economic activity benefits to the property within the District. However, it is recognized that the ongoing maintenance activities will also provide a level of benefit to some property within proximity to the District, as well as individuals passing through. Therefore, the general benefit created as a result of the District maintenance activities has been considered.

4.4 Quantification of Benefit

As a result of the maintenance and operation of the improvements, there will be a level of general benefit to people that do not work or intend to conduct business within the District. In order for property within the District to be assessed only for that portion of special benefits received from the district's maintenance

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[4] *Victoria Transport Policy Institute. (2011). Community Livability. Helping to Create Attractive, Safe, Cohesive Communities. Retrieved from http://www.vtpi.org/tdm/tdm97.htm.*

[5] *Pugliese, Philip. (2008). Complete Streets provide all the elements of multi-modal transportation. Retrieved from http://www.americantrails.org/resources/trans/completestreets08.html*

[6] *U.S Department of Transportation. Federal Highway Administration. (2001). Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide. Retrieved from http://www.fhwa. dot. gov/ environment/bicycle_pedestrian/publications/sidewalk2/*

activities, general benefits provided by the ongoing maintenance of the improvements needs to be quantified. The amount of general benefit that is provided from the District's maintenance activities cannot be funded via property owners' assessments.

Based upon the City's General Plan the streets within the City are classified into one of the following categories: freeway, expressway, arterial, collector or local streets. The landscaping improvements are primarily located along N McCarthy Boulevard and Ranch Drive and situated within the public rights-of-way. The portion of the maintained landscaping that is located along N McCarthy Boulevard (classified as an arterial street) provides some general benefit to pass-through traffic.

Arterial streets are intended to provide a higher degree of mobility and generally serve longer vehicle trips. The landscape improvements within the District boundaries not only serve the parcels in the immediate vicinity, but persons who live outside of the District and are passing by. The City's most recent traffic study[7] completed in 2016 does not identify the percentage of traffic, which is pass-through traffic, but it does provide an estimated number of daily trips for N McCarthy Boulevard at the entrance of the District. However, the daily trip count estimate is lower than the trip count utilized in the 2015 findings report. This would not be expected with the increase in development to this area. Therefore, In the absence of a more recent reading of traffic along N. McCarthy Boulevard, the 2015 average number of daily trips of 35,050 per the General Plan has been utilized for the base trip count.

In order to account for the estimated increase in daily average trips as a result of the increased development, the City commissioned a traffic study for each new development. Per the traffic studies, it is estimated there will be an increase of 9,156 average daily trips. Adding this increase to the 35,050 previously identified above, the estimated number of average vehicles per day is 44,206 as shown below.

Street Name	Average Number of Vehicles per Day
N McCarthy Boulevard – between SR 237 and Ranch Drive	44,206

Before the determination and allocation of the percentage of special and general benefit for the District can be made, the estimated pass-through traffic must be computed. The pass-through trips are vehicles driving along the maintained streets for a portion of their trips, but not working, shopping or conducting business in the District or benefiting from the landscaping improvements in place.

Research consistently shows that developments with multiple land uses that make walking safe and convenient and are near other development, allow residents and workers to drive significantly less if they choose. While this District is not a mixed-use development, there are multiple land uses adjacent to one another. Therefore, treating this development area as though the uses were separated and accessible only by car would result in inflated trip counts in comparison to conventional, single-use developments.

In lieu of having a comprehensive traffic study that identifies the pass-through traffic, the estimated number of special benefit trips for each parcel has been determined using the average daily trips according

[7] *City of Milpitas. (2016 Traffic Study). Retrieved from City's Assistant Traffic Engineer*

to the ITE Trip Generation Report, 9th Edition[8] and the 2010 NCHRP Report 684 Enhancing Trip Capture Estimation for Mixed-use Developments[9].

Utilizing the ITE Trip Generation Report, each parcel within the District was assigned an average daily number of special benefit trips using the parcel's land use, building size or number of units. Further, to ensure the number of trips generated by the parcels has not been overstated, the percentage of total trips that are made internally within the development has been considered. Using the 2010 NCHRP Report 684 Enhancing Trip Capture Estimation for Mixed-Use Developments, the total special benefit trips have been reduced by approximately 31% (19,258 trips) to account for internal trips between the various businesses within the District. The total number of special benefit trips is therefore 42,864 as shown below.

[8] *Trip Generation, 9th Edition: An Informational Report of the Institute of Transportation Engineers. (2012) Washington, DC: Institute of Transportation Engineers.*

[9] *Bochner, Brian S., Hooper, Kevin, Sperry, Benjamin and Dunphy, Robert. National Cooperative Highway Research Program, Transportation Research Board of National Academies (2011). NCHRP Report 684 Enhancing Trip Capture Estimation for Mixed-Use Developments. Retrieved from onlinepubs.trb.org/onlinepubs/nchrp/nchrp_*rpt_*684*.pdf

Property Type	Combined Trip Generations
Retail (ITE Land Uses 815, 820, 869)	24,978.76
Office (ITE Land Uses 710, 714, 750)	15,832.41
Industrial/Warehousing (ITE Land Uses 140, 150, 151)	8,660.43
Fast-Food Restaurant w/ drive thru (ITE Land Use 934)	3,925.30
Gas Station (ITE Land Use 945)	3,758.16
Restaurant (ITE Land Uses 931, 932)	3,710.03
Hotel (ITE Land Use 310)	1,256.82
Total Trips	**62,121.92**
Internal Trip Reduction[1]	(19,257.79)
Total Adjusted Special Benefit Trips	**42,864.12**

(1) The internal trip rate percentage was calculated by using the NCHRP 684 Internal Rate Capture Estimation Tool.[10]

The total of all special benefit trips was removed from the average number of vehicles per day traveling within the District to estimate the number of pass-through trips daily.

Street Name	Average Number of Vehicles per Day	Less: Estimated Special Benefit Trips	Estimated Number of Pass Through Trips	Estimated % General Benefit
McCarthy Blvd.	44,206	42,864	1,342	3.04%

Based on the above calculations, the general benefit portion of the improved aesthetics, increased safety, and economic activity benefits resulting from the landscaping improvements is estimated to be 3.04%.

Pass-thru Vehicle General Benefit	3.04%

The commonly accepted distance people will walk for public transportation, goods and services is one-quarter mile.[11] However, based on the location of the District, and given that it is bounded by State Route 880 and 237, and Coyote Creek, there is not an efficient or practical means of walking into the District. Although unlikely, a person may decide to use the paths within the District, and as such the general benefit portion of the improved aesthetics, increased safety, and economic activity benefits resulting from the landscaping improvements is estimated to be 1.00%.

Pass-thru Walking General Benefit	1.00%

An estimated 1% of all US trips are made by bicycle[12]. Although the District is bounded by State Route 880 and 237, and Coyote Creek, there is a bike lane on N McCarthy Boulevard and a bike path along Coyote

[10] *Ibid.*

[11] *Walkscore. (2014). Walk Score Methodology. Retrieved from http://www.walkscore.com/methodology.shtml*

[12] *U.S Department of Transportation. Federal Highway Administration. (2011). Summary of Travel Trends: 2009 National Household Travel Survey. (Report No. FHWA-PL-11-022). Retrieved from http://nhts.ornl.gov*

Creek[13]. According to the National Household Travel Surveys, 49% of bike trips are for recreation, exercise, and sports[14]. As result of the District maintenance activities, there will be a level of general benefit to bicycle traffic that is not associated with property in the District. As such the general benefit portion of the improved aesthetics, increased safety, and economic activity benefits resulting from the landscaping improvements is estimated to be .50%, rounded up to 1.00%.

Pass-thru Biking General Benefit	1.00%

Collective District-Wide General Benefit

Since the District is comprised of improved aesthetics, safety, and economic activity benefits resulting from the collective landscaping improvements, the activity of both pedestrians and vehicles must be addressed in a collective form rather than independently. The sum of the calculated general benefits is the total general benefit related to vehicle, walking, and biking pass-thru traffic. This general benefit result is provided in the table below:

Pass-thru Vehicle General Benefit	3.04%
Pass-thru Walking General Benefit	1.00%
Pass-thru Biking General Benefit	1.00%
Total General Benefit	**5.04%**

The general benefit, which is the percentage of the total budget that must be funded through sources other than assessments, is 5.04%. The special benefit then, which is the percentage of the budget that may be funded by assessments, is 95.00%. **This general benefit percentage is in line with the level of general benefit determined by the assessment engineer at formation of the District (less than 10%).**

4.5 Special Benefit Trips

The detailed breakdown of the estimated special benefit trips for each parcel in the District is shown in the following table.

[13] *City of Milpitas. (2002). General Plan. Retrieved from http://www.ci.milpitas.ca.gov*

[14] Pucher, J., Buehler R., Meron, F., and Bauman, A. American Journals of Public Health, Supplement 1, Vol 101, No S1 (2011). Walking and Cycling in the United States, 2001-2009: Evidence from the National Household Travel Surveys. *Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/21551387*

Assmt ID	Assessor's Parcel Number	Land Use Description	Acreage	Gross Leasable Area	Average Trip Rate[1]	Estimated # of Daily Special Benefit Trips[2]
1-1A-1	022-54-016	710 - General office	1.05	8,500	11.03	93.76
1-1A-2	022-54-017[(3)]	310 – Hotel	3.29	83,310	8.17	680.64
1-1A-3	022-54-018[(3)]	310 – Hotel	2.31	70,524	8.17	576.18
1-1A-4	022-54-019	934 - Fast Food	0.19	0.00	496.12	0.00
1-1B	022-54-008	934 - Fast Food	0.78	2,912	496.12	1,444.70
1-2	022-54-002	820 - Shopping Center	0.58	5,600	42.70	239.12
1-3	022-54-003	932 - High Vol. Restaurant	1.02	5,465	127.15	694.87
1-4A	022-54-009	869 - Home Superstore	8.47	86,250	20.00	1,725.00
1-4B	022-54-012	820 - Shopping Center	3.02	15,000	42.70	640.50
1-4C	022-54-013	820 - Shopping Center	0.23	10,000	42.70	427.00
1-4D	022-54-015	931 - Quality Restaurant	1.78	8,285	89.95	745.24
1-4E	022-54-014	932 - High Vol. Restaurant	0.64	3,710	127.15	471.73
1-4F	022-54-011	820 - Shopping Center	1.31	9,100	42.70	388.57
1-4G	022-54-010	931 - Quality Restaurant	1.03	7,476	89.95	672.47
2-1	022-53-001	931 - Quality Restaurant	0.75	6,500	89.95	584.68
2-2	022-53-002	820 - Shopping Center	1.23	15,020	42.70	641.35
2-3	022-53-003	820 - Shopping Center	0.76	12,000	42.70	512.40
2-4	022-53-004	934 - Fast Food	0.6	2,000	496.12	992.24
2-5	022-53-005	934 - Fast Food	0.74	3,000	496.12	1,488.36
2-6	022-53-006	820 – Shopping Center	1.19	51,250	45.04	2,308.30
2-7	022-53-007	820 - Shopping Center	21.92	187,134	42.70	7,990.62
3	022-29-016	815 - Discount Superstore	14.56	125,000	50.75	6,343.75
4-1A-1	022-56-005	714 - Corp Headquarters	2.04	115,753	7.98	923.71
4-1A-2	022-56-006	714 - Corp Headquarters	2.06	174,483	7.98	1,392.37
4-1A-3	022-56-007	714 - Corp Headquarters	2.07	174,483	7.98	1,392.37
4-1A-4	022-56-008	Undeveloped	34.52	-	-	-
4-1A-5	022-56-009	Parking Lot	24.32	-	-	-
4-1B	022-29-037	Undeveloped	6	-	-	-
5-1A-1	022-29-034	750 - Office Park	36.49	572,660	11.42	6,539.78
5-2A-1	022-29-035	750 - Office Park	31.31	480,772	11.42	5,490.42
5-3A-1	022-29-040	150 – Warehousing/710 General Office	15.55	313,978	8.87	2,784.67
5-3A-2	022-29-041	931 – Quality Restaurant	0.14	6,015	89.95	541.05
5-3A-3	022-29-042	150 – Warehousing/710 General Office	6.94	136,632	8.87	1,211.79
5-3A-4	022-29-043	150 – Warehousing/710 General Office	7.36	122,208	8.87	1,083.86
5-3A-5	022-29-044	140 - Manufacturing and 710 General Office	7.73	131,331	8.87	1,164.77
5-3B-1A	022-30-054	140 - Manufacturing and 710 General Office	5.63	99,576	8.87	883.14
5-3B-2	022-30-038	Undeveloped	10	-	-	-
5-3B-3	022-30-039	Undeveloped	5	-	-	-
5-3C	022-30-035[4]	Pump Station	0.19	-	-	1.00
5-5A-1	022-30-055	815 - Discount Superstore	5.6	74,131	50.75	3,762.15
5-5A-2	022-30-056	915 – Gasoline/Service Station	0.59	3,182	1,181.07	3,758.16
5-5A-3	022-30-057	151 – Mini-Warehouse	3.15	114,707	13.34	1,530.19
5-6	022-30-041	Open Space	0	-	-	-
5-7	022-30-049[4]	Sewer Pump Station	9.12	8,500	11.03	1.00

Total Estimated Daily Special Benefit Trips	62,121.92
Internal Trip Reduction[5]	(19,257.79)
Total Special Benefit Trips	**42,864.12**

(1) Average Trip Rate per Day is from the Institute of Traffic Engineer's, Trip Generation Report. [15]
(2) Average Number of Special Benefit Trips per Day is the Average Trip Rate times each 1,000 square feet of gross leasable area.
(3) Average Number of Special Benefit Trips per Day is the Average Trip Rate times number of hotel rooms for this parcel.
(4) Pump Station trips are an estimate.
(5) The internal trip rate percentage was calculated by using the NCHRP 684 Internal Rate Capture Estimation Tool. [16]

[15] *Trip Generation, 9th Edition: An Informational Report of the Institute of Transportation Engineers. (2012) Washington, DC: Institute of Transportation Engineers.*

[16] *Bochner, Brian S., Hooper, Kevin, Sperry, Benjamin and Dunphy, Robert. National Cooperative Highway Research Program, Transportation Research Board of National Academies (2011). NCHRP Report 684 Enhancing Trip Capture Estimation for Mixed-Use Developments. Retrieved from* onlinepubs.trb.org/onlinepubs/*nchrp/nchrp*_rpt_*684*.pdf

5. METHOD OF ASSESSMENT

5.1 Introduction

The special benefits that accrue to the properties in the District are limited to those properties that abut an improved public street or which have been obligated by issuance of bonds for necessary public improvements (the "Benefited Parcels"). Other properties in the District receive only a general benefit from the work of the improvements, and there is also some general benefit that accrues to the community as a whole. As outlined in Section 4, the total amount of general benefit from the improvements is determined to be 5.04%.

The Benefited Parcels receive a special benefit proportionate to their net acreage and thus they are assessed on the basis of total net acreage for all costs associated with the maintenance and installation of the District's improvements, with the following exceptions:

- Of the 9.12 acres of parcel 022-30-049 (sewer pump station), 5.51 acres is the pump station and is not assessable. The remaining 3.61 acres does not benefit from landscaping as much as other Benefited Parcels because it is dedicated to municipal sanitary sewer and storm facilities use and will not otherwise be developed. Therefore, it is assigned a special benefit equal to 50% of other Benefited Parcels.
- Parcel 022-30-035 (storm pump station) does not benefit from landscaping as much as other Benefited Parcels because it is dedicated to municipal sanitary sewer and storm facilities use and will not otherwise be developed. Therefore, it is assigned a special benefit equal to 50% of other Benefited Parcels.
- Parcel 022-29-037 and parcel 022-30-041 are dedicated to open space and therefore do not receive special benefit from the maintenance and improvements.

5.2 Method of Assessment Spread

The amount of assessment levied on each Benefited Parcel in the District, for Fiscal Year 2021/22, is $0.0333 per square foot. The assessment rate was determined by taking the Fiscal Year 2021/22 Net Amount to be assessed ($392,693) divided by the total net square footage of the District (11,792,520 sq. ft.).

The maximum assessment rate for Fiscal Year 2021/22 is approximately $0.0480, which is a preliminary number. Each year the maximum assessment rate per square foot is increased by the percentage change from April 1st of the prior year to April 1st of the current year in the U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Indexes, Pacific Cities and U.S. City Average, San Francisco-Oakland-Hayward. The April 1, 2021 CPI was not available at the time of writing of this Report. For purposes of this report, the CPI increase was estimated by using the February 2021/22 CPI.

5.3 Maximum Assessment Rates

The following table provides the historical maximum assessment rate for Fiscal Year 2001/02 through the current fiscal year:

Fiscal Year	CPI	Percentage Increase[1]	Assessment Rate Range[2]	
2001/02	189.1	N/A	$0.0120	$0.0300
2002/03	193.0	2.06%	0.0122	0.0306
2003/04	197.3	2.23%	0.0125	0.0313
2004/05	198.3	0.51%	0.0126	0.0315
2005/06	202.5	2.12%	0.0129	0.0321
2006/07	208.9	3.16%	0.0133	0.0331
2007/08	215.842	3.32%	0.0137	0.0342
2008/09	222.074	2.89%	0.0141	0.0352
2009/10	223.854	0.80%	0.0142	0.0355
2010/11	227.697	1.72%	0.0144	0.0361
2011/12	234.121	2.82%	0.0149	0.0371
2012/13	238.985	2.08%	0.0152	0.0379
2013/14	244.675	2.38%	0.0155	0.0388
2014/15	251.495	2.79%	0.0160	0.0399
2015/16	257.622	2.44%	0.0163	0.0409
2016/17	264.565	2.70%	0.0168	0.0420
2017/18	274.589	3.79%	0.0174	0.0436
2018/19	283.422	3.22%	0.0180	0.0450
2019/20	294.801	4.01%	0.0187	0.0468
2020/21	298.074	1.11%	0.0189	0.0473
2021/22	304.387	1.57%[3]	0.0192	0.0480

(1) *Percentage increase from April 1 of the prior year to April 1 of the current year in the US Department of Labor, Bureau of Labor Statistics, Consumer Price Indexes, Pacific Cities and US City Average, San Francisco-Oakland-Hayward.*

(2) *The left and right column indicate the minimum and maximum assessment rate, respectively.*

(3) *The April 1, 2021 CPI was not available at the time of writing of this Report. The Fiscal Year 2021/22 CPI increase was estimated using the February 2021/22 CPI.*

5.4 Appeals

Any property owner who feels that the amount of their assessment is in error as a result of incorrect information being used to apply the foregoing method of spread may file an appeal with the Finance Director of the City. Any such appeal is limited to the correction of an assessment during the current or, if before July 1, the upcoming fiscal year. Upon the filing of any such appeal, the Finance Director shall promptly review the information provided by the property owner and if he/she finds that the assessment should be modified, he/she shall have the authority to make the appropriate changes in the assessment roll. If any such changes are provided after the assessment roll has been filed with the County for collection, the Finance Director is authorized to refund to the property owner the amount of any approved reduction.

6. ASSESSMENT DIAGRAM

The following page provides a copy of the assessment diagram of the District.

An assessment was levied by the City Council of the City of Milpitas, County of Santa Clara, State of California on the lots, pieces and parcels of land shown on this assessment diagram. Said assessment was levied on the 3rd day of June 2014 ; said assessment diagram and the assessment roll were recorded in the Office of the Superintendent of Streets of said City on the 3rd day of June 2014. Reference is made to the assessment roll recorded in the Office of the Superintendent of Streets for the exact amount of each assessment levied against each parcel of land shown on this assessment diagram.

Mary Lavelle
City Clerk of the City of Milpitas

Filed in the Office of the City Clerk of the City of Milpitas, County of Santa Clara, State of California this 20th day of May 2014.

Mary Lavelle
City Clerk of the City of Milpitas

Recorded in the Office of the Superintendent of Streets of the City of Milpitas, County of Santa Clara, State of California, this 3rd day of June 2014.

Superintendent of Streets
City of Milpitas

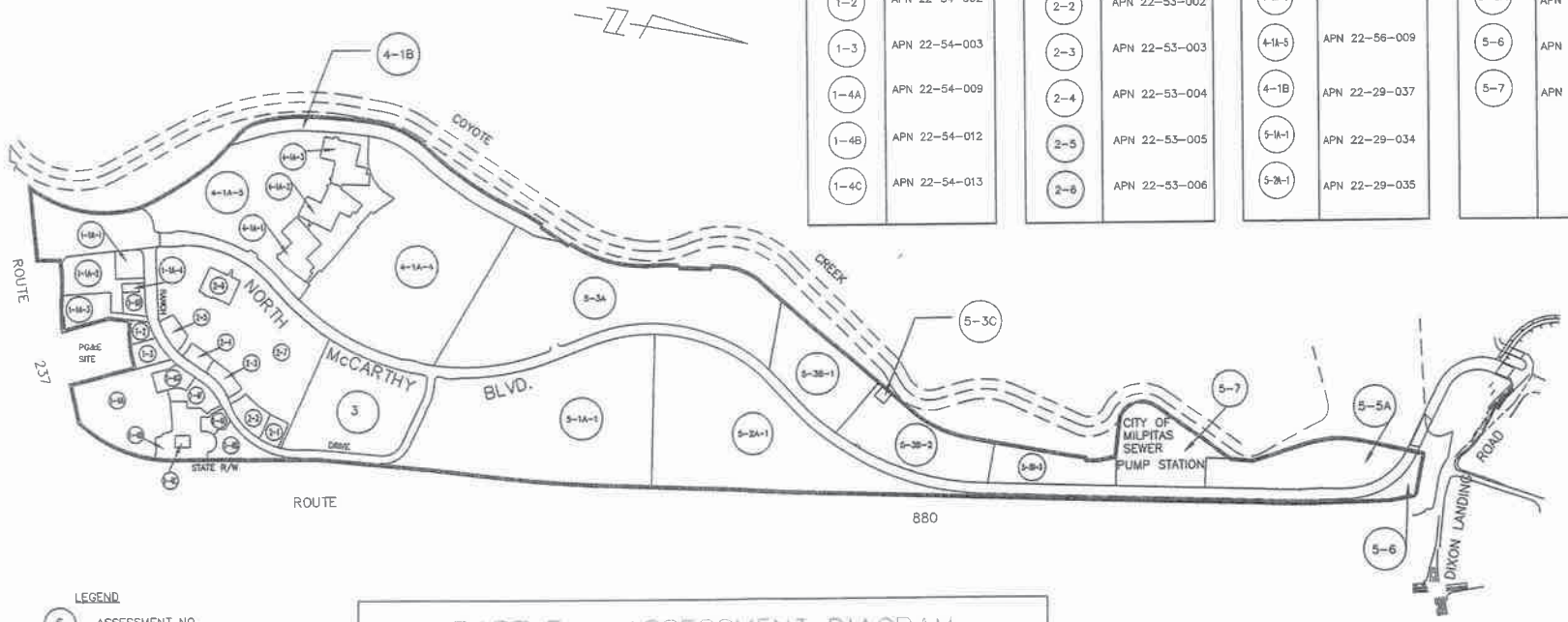
Figure 1

ASSESSMENT NO.	ASSESSOR'S PARCEL NO.
1-1A-1	APN 22-54-016
1-1A-2	APN 22-54-017
1-1A-3	APN 22-54-018
1-1A-4	APN 22-54-019
1-1B	APN 22-54-008
1-2	APN 22-54-002
1-3	APN 22-54-003
1-4A	APN 22-54-009
1-4B	APN 22-54-012
1-4C	APN 22-54-013

ASSESSMENT NO.	ASSESSOR'S PARCEL NO.
1-4D	APN 22-54-015
1-4E	APN 22-54-014
1-4F	APN 22-54-011
1-4G	APN 22-54-010
2-1	APN 22-53-001
2-2	APN 22-53-002
2-3	APN 22-53-003
2-4	APN 22-53-004
2-5	APN 22-53-005
2-6	APN 22-53-006

ASSESSMENT NO.	ASSESSOR'S PARCEL NO.
2-7	APN 22-53-007
3	APN 22-29-016
4-1A-1	APN 22-56-005
4-1A-2	APN 22-56-006
4-1A-3	APN 22-56-007
4-1A-4	APN 22-56-008
4-1A-5	APN 22-56-009
4-1B	APN 22-29-037
5-1A-1	APN 22-29-034
5-2A-1	APN 22-29-035

ASSESSMENT NO.	ASSESSOR'S PARCEL NO.
5-3A	APN 22-29-036
5-3B-1	APN 22-30-037
5-3B-2	APN 22-30-038
5-3B-3	APN 22-30-039
5-3C	APN 22-30-035
5-5A	APN 22-30-048
5-6	APN 22-30-041
5-7	APN 22-30-049



LEGEND

6 ASSESSMENT NO.

BOUNDARY DISTRICT

ASSESSMENT LIMIT

PART F - ASSESSMENT DIAGRAM

LANDSCAPING & LIGHTING & MAINTENANCE ASSESSMENT DISTRICT NO. 95-1

OF

CITY OF MILPITAS

COUNTY OF SANTA CLARA - STATE OF CALIFORNIA

Note:
Reference is hereby made to the maps and deeds of record in the Office of the Assessorof the County of Santa Clara for a detailed description of the lines and dimensions of anyparcels shown hereon. Those maps shall govern for all details concerning the lines anddimension of such parcels. Each parcel is identified in said maps by its distinctive Assessors Parcel Number.

1/1

7. ASSESSMENT ROLL

The assessment roll is a listing of the proposed assessment for Fiscal Year 2021/22 apportioned to each lot or parcel, as shown on the last equalized roll of the Assessor of the County of Santa Clara. The following page shows the assessment roll for Fiscal Year 2021/22.

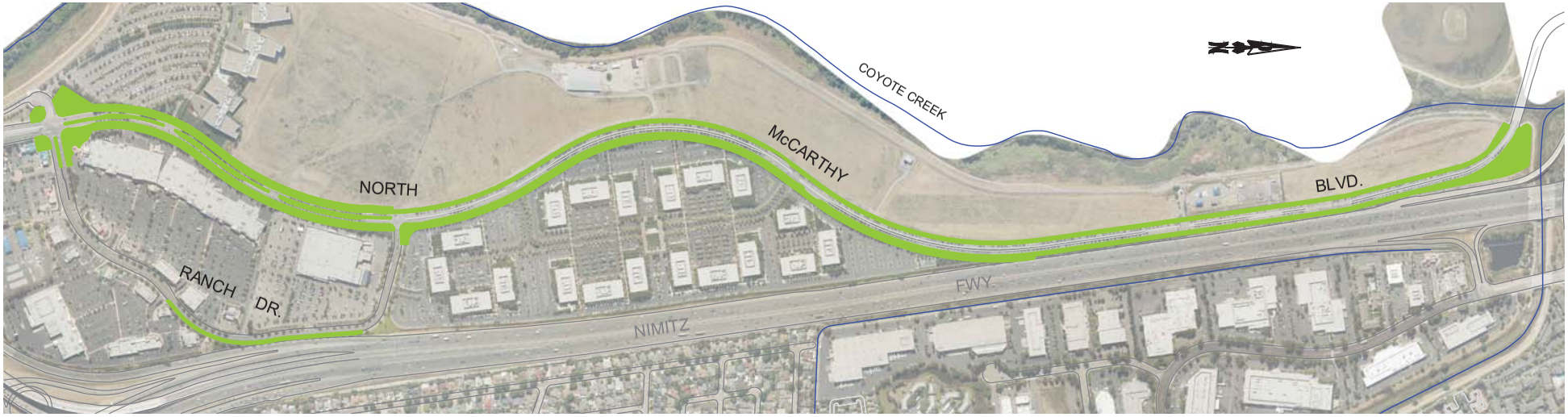
City of Milpitas
Landscaping and Lighting Maintenance Assessment District
No. 95-1
Fiscal Year 2021/22 Assessment Roll

APN	Owner	Net Sq. Ft.	Fiscal Year 21/22 Levy	Rounding Adj.	Fiscal Year 21/22 Total
022-29-016	WAL-MART REAL ESTATE	634,233.60	$21,120.11	($0.01)	$21,120.10
022-29-034	MCCARTHY CENTER HOLDINGS LLC	1,589,504.40	52,930.82	0.00	52,930.82
022-29-035	MCCARTHY CENTER HOLDINGS LLC	1,363,863.60	45,416.94	0.00	45,416.94
022-29-037	CITY OF SAN JOSE	0.00	0.00	0.00	0.00
022-29-040	CREEKSIDE MILPITAS LLC	677,532.24	22,561.96	0.00	22,561.96
022-29-041	CREEKSIDE MILPITAS LLC	43,690.68	1,454.91	(0.01)	1,454.90
022-29-042	CREEKSIDE MILPITAS LLC	302,349.96	10,068.32	0.00	10,068.32
022-29-043	CREEKSIDE MILPITAS 2 LLC	320,732.28	10,680.45	(0.01)	10,680.44
022-29-044	CREEKSIDE MILPITAS 2 LLC	336,544.56	11,207.00	0.00	11,207.00
022-30-035	MILPITAS CITY OF	4,138.20	137.80	0.00	137.80
022-30-038	NEW TREND TECH INC	435,600.00	14,505.57	(0.01)	14,505.56
022-30-039	MCCARTHY RANCH LP	217,800.00	7,252.78	0.00	7,252.78
022-30-041	CITY OF MILPITAS	0.00	0.00	0.00	0.00
022-30-049	MILPITAS SANITARY DIST	78,625.80	2,618.26	0.00	2,618.26
022-30-054	CREEKSIDE MILPITAS 2 LLC	245,329.92	8,169.54	0.00	8,169.54
022-30-055	SPRIG CENTER LLC	243,936.00	8,123.12	0.00	8,123.12
022-30-056	SPRIG CENTER LLC	25,874.64	861.63	(0.01)	861.62
022-30-057	SPRIG CENTER LLC	137,039.76	4,563.45	(0.01)	4,563.44
022-53-001	HAM JAYNE Y	32,670.00	1,087.92	0.00	1,087.92
022-53-002	TMS MCCARTHY LP	53,578.80	1,784.19	(0.01)	1,784.18
022-53-003	TMS MCCARTHY LP	33,105.60	1,102.42	0.00	1,102.42
022-53-004	HSC ASSOCIATES LP	26,136.00	870.33	(0.01)	870.32
022-53-005	HSC ASSOCIATES LP	32,234.40	1,073.41	(0.01)	1,073.40
022-53-006	TMS MCCARTHY LP	51,836.40	1,726.16	0.00	1,726.16
022-53-007	TMS MCCARTHY LP	954,835.20	31,796.21	(0.01)	31,796.20
022-54-002	FIRST CREEKSIDE ASSOC	25,264.80	841.32	0.00	841.32
022-54-003	LOO YUK LUN TRUSTEE & ET AL & LOO MEI FONG TRUSTEE	44,431.20	1,479.57	(0.01)	1,479.56
022-54-008	IN N OUT BURGERS	33,976.80	1,131.43	(0.01)	1,131.42
022-54-009	MCCARTHY SHOPPING CTR LP	368,953.20	12,286.22	0.00	12,286.22
022-54-010	H & Y NORTHERN CALIFORNIA LLC	44,866.80	1,494.07	(0.01)	1,494.06
022-54-011	FIRST CREEKSIDE ASSOC	57,063.60	1,900.23	(0.01)	1,900.22
022-54-012	F&M SORCI LAND COMPANY INC	131,551.20	4,380.68	0.00	4,380.68
022-54-013	F&M SORCI LAND COMPANY INC	10,018.80	333.63	(0.01)	333.62
022-54-014	J N C INTERNATIONAL ENTPRS LLC	27,878.40	928.36	0.00	928.36
022-54-015	PACIFIC MERITAGE LLC	77,536.80	2,581.99	(0.01)	2,581.98
022-54-016	HOURET FAM LP	46,173.60	1,537.59	(0.01)	1,537.58
022-54-017	BRE SELECT HOTELS PROPERTIES LLC	143,312.40	4,772.33	(0.01)	4,772.32
022-54-018	LL MILPITAS, L P	100,623.60	3,350.79	(0.01)	3,350.78
022-54-019	IN N OUT BURGERS	8,276.40	275.61	(0.01)	275.60
022-56-005	HUDSON CAMPUS CENTER LLC	88,426.80	2,944.63	(0.01)	2,944.62
022-56-006	HUDSON CAMPUS CENTER LLC	89,733.60	2,988.15	(0.01)	2,988.14
022-56-007	HUDSON CAMPUS CENTER LLC	90,169.20	3,002.65	(0.01)	3,002.64
022-56-008	HUDSON CAMPUS CENTER LLC	1,503,691.20	50,073.23	(0.01)	50,073.22
022-56-009	HUDSON CAMPUS CENTER LLC	1,059,379.20	35,277.55	(0.01)	35,277.54
Total: 44 Parcels		**11,792,519.64**	**$392,693.33**	**(0.25)**	**$392,693.08**

CITY OF MILPITAS

LANDSCAPING MAINTENANCE DISTRICT (LMD) 95-1

(N.T.S.)



2021-2022 FISCAL YEAR LANDSCAPE AREA FUNDED FOR MAINTENANCE

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Conduct a Public Hearing to Approve an Amendment to the FY19-20 Annual Action Plan, Approve the Funding Allocations for FY21-22 Community Development Block Grant (CDBG), Adopt the Annual Action Plan for the Corresponding Year, and Consider an Amendment to the Citizen Participation Plan**
Category:	Public Hearings-Community Development
Meeting Date:	6/15/2021
Staff Contact:	Sharon Goei, 408-586-3260; Robert Musallam, 408-586-3275
Recommendation:	1. Open the public hearing, hear testimony, then move to close the public hearing. 2. Approve the amendment to the FY19-20 Annual Action Plan. 3. Adopt the FY21-22 Annual Action Plan with recommended allocation amounts. 4. Authorize the City Manager, or designee, to make any necessary changes to the approved FY21-22 Annual Action Plan as needed to comply with CDBG submission guidelines. 5. Authorize the City Manager, or designee, to execute CDBG agreements with the approved subrecipients, and amend the CDBG agreements as needed to comply with CDBG guidelines. 6. Approve an amendment to the Citizen Participation Plan. 7. Authorize the City Manager, or designee, to make any necessary changes to the Citizen Participation Plan as needed to comply with CDBG submission guidelines.

Background:

The U.S. Department of Housing and Urban Development (HUD) provides annual grants through the Community Development Block Grant (CDBG) program to local entitlement cities and counties. The CDBG program provides resources to the most vulnerable low- and moderate-income communities to address a wide range of community development needs through investment in capital projects and public services. The amount of funds that Milpitas receives is determined by a formula based on population and other factors.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law in response to the growing public health and resulting economic crisis. This $2 trillion stimulus measure provided widespread relief for the private and public sector, including individual Americans. The CARES Act allocated an additional $5 billion in Community Development Block Grant Coronavirus (CDBG-CV) funds to prevent, prepare for, and respond to coronavirus. Of this amount, $2 billion (tranche 1) was allocated to entitlement grantees using the same allocation formula as the FY20-21 funds, $1 billion (tranche 2) was allocated to states and insular areas, and the remaining $2 billion (tranche 3) was allocated at the discretion of the Secretary of Housing and Urban Development (HUD) based on need and other factors.

On June 23, 2020, the City Council allocated $676,413 in FY20-21 formula funding, $397,911 in CDBG-CV tranche 1 funding, and $290,039 in unused funding from prior years.

On June 30, 2020, the City Council approved a substantial amendment to the Consolidated Plan and the Citizen Participation Plan. The changes to the Consolidated Plan amended the Community Services/Public Services goal to specify more clearly the City's priorities in assisting victims of domestic violence, seniors, children and youth, residents at risk of eviction, as well as adding an economic development goal of assisti microenterprises and small businesses. The amendments to the Citizen Participation Plan improved the

method and level of outreach to the community that is required for the various CDBG documents, such as an Annual Action Plan, and provided the City more flexibility in administering the CDBG program.

On January 5, 2021, at the request of the Mayor, the City Council discontinued the CDBG Subcommittee. Staff will prepare an amendment to the Citizen Participation Plan to reflect this change.

Of the CDBG-CV tranche 3 funding, HUD announced that Milpitas would receive $582,236 (CDBG-CV3). On February 25, 2021, HUD announced that the City of Milpitas would receive an allocation of $673,059 in FY21-22 formula funds.

On January 18, 2021, Building Safety and Housing staff launched a CDBG community needs survey to gauge the community's response to how the CDBG funds should be allocated. The survey was distributed to the community via social media, direct email, and through Milpitas Unified School District (MUSD). A summary of the community needs survey is presented in the analysis section below. The results of the CDBG community needs survey are available as **Attachment B**.

On January 22, 2021, the City announced that the application period for FY21-22 applications would be open from February 8, 2021 through March 21, 2021. Staff also designed a simplified application to streamline and increase efficiency of the process. Twenty-seven (27) simplified applications with requests totaling $1,807,771.02 were received during the application period. A full breakdown of these simplified applications is provided in the analysis section below.

Community Advisory Commission (CAC)
At the April 7 CAC meeting, the CAC received a staff presentation on the results of the CDBG community needs survey, as well an overview of the 27 applications received for CDBG funding. The Commission heard comments from all of the applicants. Each Commissioner then provided their feedback on priorities and goals the Council should consider funding with CDBG funds.

On April 19, 2021, Building Safety and Housing staff returned to the CAC for a Special Meeting to review and approve the staff's summary of the CAC's priorities feedback and recommendation. The CAC voted to approve staff's summary, which is provided in the analysis section below.

City Council
On May 4, 2021, the City Council moved to continue the public hearing to May 7, 2021 at 3pm.

On May 7, 2021, the City Council conducted the public hearing and heard testimony. The City Council accepted staff recommendations on the proposed FY21-22 CDBG and CDBG-CV allocations and approved an amendment to the FY20-21 Annual Action Plan to reallocate $30,000 in unused FY20-21 funding to the Milpitas Senior Center to fund additional meals. Council directed staff to return in June with the final FY21-22 Annual Action Plan and an amendment to the FY19-20 Annual Action Plan to allocate the CDBG formula and CDBG-CV funding, per HUD's requirements. Council also directed staff to explore the use of American Rescue Plan or alternate sources of funding for the CDBG applicants that were not funded using CDBG formula or CDBG-CV funding.

Analysis:

Eligible and Ineligible Uses
HUD sets restrictions on how CDBG and CDBG-CV funds can be used even with flexibilities from the CARES Act. CDBG activities must be on HUD's list of eligible uses. A summary of eligible and ineligible activities is included as **Attachment A**.

Meeting National Objectives
In addition, CDBG activities must meet one of the following National Objectives:

1. Provides a benefit to low- and moderate-income persons;
2. Eliminates or prevents slum or blight; or

3. Meets other community development needs having an urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community and other financial resources are not available to meet such needs, often referred to as “urgent need.”

HUD has given clear guidance that National Objective #3 cannot be applied to CDBG-CV funding as it is typically reserved for natural disaster response efforts. The City of Milpitas has historically used its CDBG allocation to benefit low- and moderate-income persons. To meet the slum or blight National Objective, the City would have to identify areas of the City that meet the definition of a slum, blighted, deteriorated or deteriorating area under state or local law. Milpitas has not identified significantly blighted conditions within its boundaries. As such, all CDBG-CV, CDBG formula, and prior year formula funds must be used to benefit low- and moderate-income persons.

CARES Act Flexibility and CDBG-CV Funding

HUD sets caps on the proportion of annual formula CDBG funds that can be spent on different types of activities. Capital projects are capped at 65%, public services at 15%, and administration at 20%. The CARES Act has modified the caps on CDBG-CV funds to allow for greater flexibility in responding to the COVID-19 pandemic. Specifically, there is no Public Services cap for COVID-19 related activities.

This means the City Council could allocate more of its formula funding, which would typically be reserved for capital improvement projects, to COVID-19 related activities within the fiscal year. This funding flexibility only applies if the allocations are used for COVID-19 related activities. If funds are allocated to a non-COVID-19 related activity, those funds must conform to the standard CDBG caps of 15% for public services and 65% for capital projects.

Community Outreach – Community Needs Survey

For the first time, Housing staff created and conducted a Community Needs Survey to identify community priorities within the constraints of eligible uses of CDBG funds. The online survey was available for approximately 2 months (from January 19 – March 21) and had 87 responses. The April 7 Community Advisory Commission meeting had a total of 61 attendees and 6 Commissioners who participated in discussions regarding community needs.

Below is a brief description of each activity category as well as the key takeaways from the community’s response. The CDBG Community Needs Survey results are available as **Attachment B**.

- Housing: HUD programs may support homeless and supportive housing initiatives, housing rehabilitation, home ownership and affordability, housing accessibility for all persons and housing for persons with specific needs

- Public Services: HUD programs may fund programming for community needs, seniors and youths, health services, fair housing advocacy, services for persons with needs related to age, medical, income, or situational status (i.e., in-crisis, drugs or alcohol, etc.).

- Economic Development: HUD programs may fund business assistance to create jobs and undertake building improvements.

- Public Improvements/Community Facilities: HUD programs may fund streetscape, physical improvements in the community, and accessibility improvements. HUD programs may also fund parks, facilities development, and accessibility improvements.

- COVID-19 Response: Activity that prevents, prepares for, and/or responds to the Coronavirus.

Key takeaways from the community’s response:

- Housing: There should be more housing/shelter options for individuals experiencing homelessness.
- Public Services: Our most vulnerable populations need more support and easier access to services.
- Economic Development: There should be more support for small businesses.
- Public Improvements/Community Facilities: Public spaces should be cleaner and more sanitary.

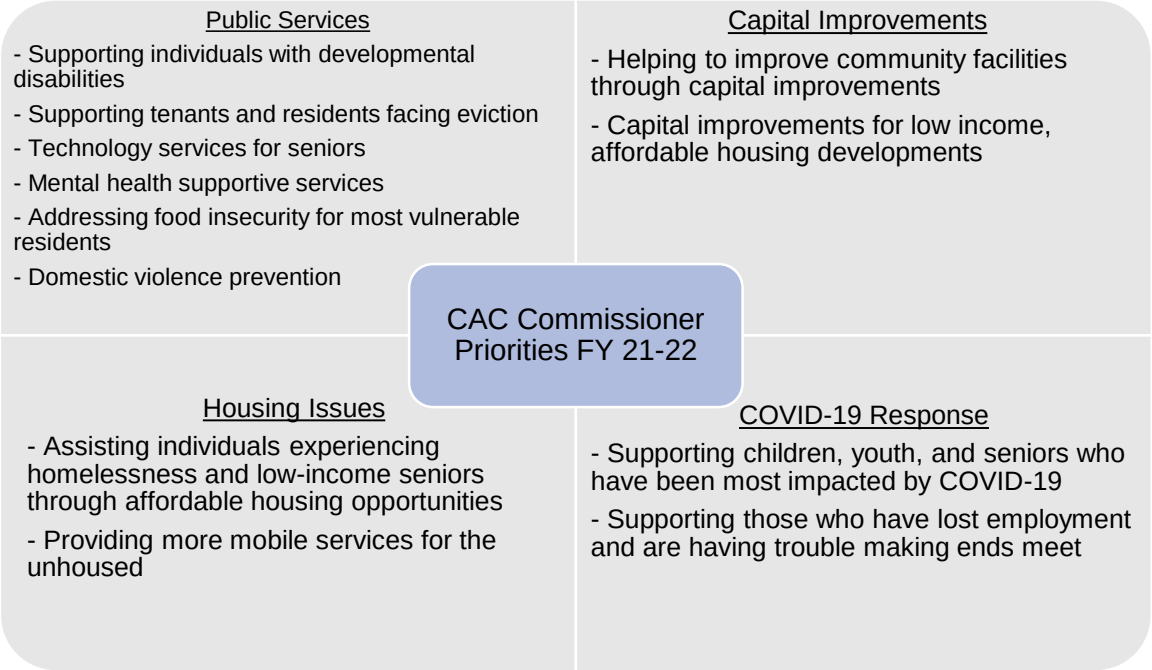
- COVID-19 Response: There should be more help for those who test positive for COVID-19 or who are high risk. Children, youth, and seniors have been greatly affected.

Housing staff reviewed the open-ended comments from the survey and categorized them based on common themes. See **Attachment B** for a summary of needs identified by the community during this outreach process.

Community Advisory Commission (CAC) Feedback

At the April 7, 2021 Community Advisory Commission meeting, Commissioners heard comments from the prospective FY21-22 CDBG applicants. A total of 24 comments were provided, with at least one commenter from each applicant organization describing their proposed project and how it will benefit the residents of Milpitas.

Commissioners provided verbal feedback on what priorities/areas they believe the City Council should focus on funding. A few Commissioners' priorities were captured solely through the CDBG Community Needs Survey. Public services, capital improvements, housing needs, and COVID-19 response were among the top priorities of the Commissioners. A broader summary of the Commissioners' priorities is provided below:



The Commissioners recognized that proposed projects would greatly benefit the most vulnerable residents of Milpitas.

Available Funds

On May 14, 2021, HUD announced an increase to the Milpitas CDBG allocation from $673,059 to $682,977, representing an increase of $9,918. Based on the City Council's feedback at the May 7, 2021 public hearing, staff has recommended allocating the additional funds to SVILC for the rent relief program.

The City has received a CDBG-CV3 allocation of $582,236 and a FY21-22 formula allocation of $682,977. As of the preparation of this report, staff has determined that $47,027.45 in unused, prior year funds are also available to reallocate. However, as previously noted, the City Council approved the reallocation of $30,000 unused FY20-21 funding to the Milpitas Senior Center at the May 7, 2021 City Council meeting. Therefore, the total funding available to allocate is $1,282,240.45.

Each funding allocation will require staff to submit a separate HUD approved Action Plan and each funding allocation will have a different timeframe for availability. See the table below for a breakdown of the available funding, the action required to receive these allocations per HUD guidance, and the approximate time it will take to receive the funding.

Funding Amount	Funding Year	Action Required	Eligible Use	Approximate Time to Receive Funding
$682,977.00	FY 21-22 Formula Funds	Prepare New FY21-22 Annual Action Plan	Can be used for COVID-19 or other activities	Late 2021
$582,236.00	CDBG-CV Funds	Amend FY19-20 Annual Action Plan	Must be used for COVID-19 activities	3 Months from submission date
$17,027.45	FY19-20 Unused Funds	Amend FY19-20 Annual Action Plan	Must be used for COVID-19 activities	3 Months from submission date
$1,282,240.45	**Total**			

Final Allocations

A total of 27 applications from 19 applicants were received. Four (4) of the applicants are new organizations that have not been funded by the City in recent years. Fourteen applications (14) were identified as having a goal to prevent, prepare for, and respond to COVID-19. The combined total of all requests is $1,807,771.02, with the breakdown of the applications as follows:

- Public Service Requests = $1,212,551.02
- Capital Improvement Requests = $323,930
- Economic Development Requests = $215,000
- Program Administration = $56,290

The City received requests for funding that exceeded the available amount it has to allocate. As such, some of the applicants did not receive an allocation. For applicants that have the potential for alternate sources of funding, the City Council directed staff to not utilize CDBG funding and pursue the American Rescue Plan funding or other funding sources. These applicants include the Milpitas Senior Center (lunch program), India Community Center, Enterprise Foundation, and Milpitas Unified School District.

The following is a summary of the City Council feedback from the May 7 public hearing:

- Not utilizing CDBG funding for applications that have the potential for alternate sources of funding
- Considering domestic violence related applications as CV applications in order to fund all formula public service applications under the 15% cap
- Allocating unused formula capital funding to CV applications
- Funding applicants and services that the City previously funded
- Supporting and increasing funding for domestic violence supportive services

The CDBG allocations resulting from the Council feedback are summarized below. These final allocations are listed on the subsequent pages.

- The applications that have the potential for alternate sources of funding are not being allocated CDBG funding.
- All other applications, including current service providers and new applicants, are being allocated the amount they requested.
- For Next Door Solutions to Domestic Violence and YWCA-Domestic Violence Services, each application is being allocated $16,158 above the requested amount.

In accordance with HUD guidance, the $17,027.45 amount in unused FY19-20 funds is being reallocated along with the $582,236 amount in CDBG-CV funds, as both will require an amendment to the FY19-20 Annual Action Plan. As discussed previously, in order to allocate the CDBG-CV funding, the City is required to amend the FY19-20 Annual Action Plan. The full amendment to the FY19-20 Annual Action Plan can be found as **Attachment C.** The FY21-22 Annual Action Plan can be found as **Attachment D.**

	Applicant Organization	Brief Project Description	Proposed FY 21-22
Public Services	Catholic Charities	Funding for the Long Term Care Ombudsman Program to facilitate visits to long-term care facilities.	$20,500.00
	Child Advocates of Silicon Valley	Recruit, train, and assign Court Appointed Special Advocate (CASA) volunteers for children.	$12,500.00
	Senior Adults Legal Assistance	Provide free legal assistance that includes legal services to Milpitas seniors 62 or older.	$12,000.00
	Silicon Valley Independent Living Center	Provide comprehensive Housing Assistance Services for low to very-low income persons with disabilities.	$12,716.00
	YWCA - MUSD	Ensure that students in the Milpitas Unified School District (MUSD) receive primary intimate partner violence and sexual assault prevention education.	$40,000.00
	Subtotal		**$97,716.00**
Capital Projects	LifeMoves	Performing repairs to the exterior of the LifeMoves Villa Shelter.	$100,000.00
	Next Door Solutions to Domestic Violence	Replacement of flooring throughout the Shelter Next Door facility.	$23,960.00
	Rebuilding Together	Funding to providing home repairs, rehabilitation, accessibility and mobility services work to low-income homeowners in Milpitas.	$173,970.00
	Terrace Gardens - Kitchenette	Rehab the existing kitchenette at Terrace Gardens.	$11,000.00
	Subtotal		**$308,930.00**
Program Admin	Project Sentinel	Fair housing education, counseling, investigation and enforcement services to 320 Milpitas residents.	$56,290.00
	Program Administration	Staff time in administering the program, including all public noticing and publishing.	$78,321.80
	Subtotal		**$134,611.80**

	Applicant Organization	Brief Project Description	Proposed FY 21-22
Public Services - CDBG-CV	LifeMoves	Assist with serving meals during the pandemic at their five shelters in Santa Clara County that serve Milpitas residents.	$40,000.00
	Lighthouse of Hope Counseling Center	Provide counseling, psychological support, and education to the Milpitas community	$5,000.00
	YWCA - Domestic Violence Services	Provide residents of the City of Milpitas domestic violence supportive services.	$26,158.23
	Milpitas Senior Center - Technology	Assist members of the Milpitas Senior Center age 62+ who are needing continued support and education on technology	$10,000.00
	Next Door Solutions to Domestic Violence	Provide Support Services for Survivors of Domestic Violence by providing emergency shelter, crisis counseling, safety strategies, community and systems advocacy, support groups, and case management.	$36,681.22
	Pragnya	Support children, youth and adults from the Special Needs community by creating social emotional connections and preventing further isolation due to COVID-19.	$40,000.00
	Sourcewise - Meals on Wheels	Provide vulnerable seniors age 60 and older who have been impacted by the pandemic nutritious home-delivered meals.	$39,000.00
	SVILC - Rent Relief	Provide rent relief for residents who are struggling to locate and secure affordable, accessible housing, or to retain the housing they currently have.	$327,696.00
	Terrace Gardens - Meal Delivery	Sustain meal delivery to residents due to the closing of the resident dining room because of COVID-19.	$65,000.00
	The Health Trust	Ensure critical, ongoing meal services and Wellness Checks for Milpitas older adults residents who are low-income.	$20,000.00
	Subtotal		**$609,535.45**
Economic Development	Filipino American Chamber of Commerce	Provide hands on training for small business owners on how to create and/or revamp their websites, and create marketing strategies.	$15,000.00
	Subtotal		**$15,000.00**
Program Admin	Program Administration	Staff time in administering the program, including all public noticing and publishing.	$116,447.20
	Subtotal		**$116,447.20**

Amendment to the Citizen Participation Plan

The Citizen Participation Plan details the City's effort to provide opportunities for public participation during the CDBG grant making process. While there is no requirement for the Citizen Participation Plan to be updated regularly, cities amend their Citizen Participation Plans periodically as HUD updates its guidelines. The current Citizen Participation Plan was approved on June 30, 2020. On June 30, 2020, the City Council authorized an amendment of the Citizen Participation Plan allowing for changes to the application process and for the CDBG Subcommittee to become the primary reporting body to the City Council. Since the CDBG Subcommittee was dissolved, staff is proposing to make an amendment to the Citizen Participation Plan. Instead of any other body, the City Council will hold two public hearings to discuss and allocate CDBG funding every fiscal year. The amendment to the Citizen Participation Plan can be found as **Attachment E.**

Fiscal Impact:

Since the City received FY21-22 formula allocation of $682,977 and CDBG-CV tranche 3 funding of $582,236, the FY21-22 Operating Budget reflects the total of $1,265,213.

California Environmental Quality Act:

The actions being considered have no potential for causing a significant effect on the environment and are exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3). Further, this action does not meet the definition of a project under CEQA Guideline 15378 as it is a government fiscal activity which does not commit to any project that would result in a potentially significant impact on the environment.

Recommendations:

1. Open the public hearing, hear testimony, then move to close the public hearing.
2. Approve the amendment to the FY19-20 Annual Action Plan.
3. Adopt the FY21-22 Annual Action Plan with recommended allocation amounts.
4. Authorize the City Manager, or designee, to make any necessary changes to the approved FY21-22 Annual Action Plan as needed to comply with CDBG submission guidelines.
5. Authorize the City Manager, or designee, to execute CDBG agreements with the approved subrecipients, and amend the CDBG agreements as needed to comply with CDBG guidelines.
6. Approve an amendment to the Citizen Participation Plan.
7. Authorize the City Manager, or designee, to make any necessary changes to the Citizen Participation Plan as needed to comply with CDBG submission guidelines.

Attachments:

A. Eligible and Ineligible CDBG Activities
B. Community Needs Survey Results
C. FY19-20 Annual Action Plan Amendment
D. FY21-22 Annual Action Plan
E. Citizen Participation Plan Amendment

Attachment A: CDBG Eligible and Ineligible Activities

Eligible CDBG Activities

1. Acquisition of Real Property
2. Disposition
3. **Public Facilities and Improvements***
4. Clearance and Remediation
5. **Public Services***
6. **Interim Assistance***
7. Relocation
8. Loss of Rental Income
9. Housing Services
10. Privately-Owned Utilities
11. **Rehabilitation and preservation***
12. Construction of Housing
13. Code Enforcement
14. **Special Economic Development Activities***
15. **Microenterprise Assistance***
16. Special Activities by Community-Based Development Organizations
17. Homeownership Assistance
18. Planning and Capacity Building
19. **Program Administration Costs***
20. Miscellaneous Other Activities

*The City has received applications related to these activities.

Ineligible CDBG Activities

1. **Buildings or portions thereof, used for the general conduct of government may not be assisted with CDBG funds.** This does not include, however, the removal of architectural barriers involving any such building, which may be assisted under the category of Public Facilities and Improvements.

2. **General government expenses.** Expenses required to carry out the regular responsibilities of the unit of general local government are not eligible for assistance under this part.

3. **Political activities**. CDBG funds may not be used to finance the use of facilities or equipment for political purposes or to engage in other partisan political activities, such as candidate forums, voter transportation, or voter registration.

4. **Purchase of equipment**. The purchase of equipment with CDBG funds is generally ineligible – construction equipment, fire protection equipment, furnishings and personal property.

5. **Operating and maintenance expenses**. The general rule is that any expense associated with repairing, operating, or maintaining public facilities, improvements, and services is ineligible.

6. **New housing construction**.

7. **Income payments**. The general rule is that CDBG funds may not be used for income payments.

Adapted from HUD booklet, Community Development Block Grant Program; A guide to National Objectives & Eligible Activities for Entitlement Communities.

Survey Results

Who Completed the Survey?

	Response Percent	Response Count
Milpitas Resident	89.7%	78
Milpitas Business Owner	3.4%	3
Non-profit Service Provider	2.3%	2
Community Advisory Commissioner (CAC)	4.6%	4

The Community Development Block Grant Program may allocate available funding into the five broad categories listed below. Please rate those categories from most important to least

Average priorities over 87 responses

1. Public Services
2. Economic Development
3. Public Improvements
4. Community Facilities
5. Housing

Housing Issues

Average priorities over 87 responses

1. Maintain and preserve existing housing
2. Affordable housing rental rehabilitation
3. Construct new affordable housing

Public Services

Average priorities over 87 responses

1. Services and Programs for Children and Youth
2. Services for low- and moderate-income residents at risk of eviction
3. Services and Programs for Seniors
4. Services and Programs for Victims of Domestic Violence
5. Other community funding/public services for low- and moderate-income residents

Economic Development

Average priorities over 87 responses

1. Job creation and retention
2. Small business loans to new and existing businesses
3. Micro-enterprise development

Community Facilities

Average priorities over 87 responses

1. Parks and Recreational Facilities
2. Senior center / teen center
3. Community Center and other similar facilities
4. Accessibility Improvements

Public Improvements

Average priorities over 87 responses

1. Street and sidewalk improvements
2. Streetscape improvements including lighting
3. Accessibility Improvements

The following categories represent categories in which funds can be used, should the City continue to receive extra CDBG-CV funds to prevent, prepare for, and respond to coronavirus. Please rate the funding activities in order of importance.

Average priorities over 87 responses

1. Food distribution
2. Services for isolated seniors
3. Rent relief assistance
4. Sanitation services for the unhoused (hand-washing, mobile showers, laundry services)
5. PPE and safety supplies
6. Domestic violence prevention and response

Summary of Community Needs Survey Written Responses

Housing Issues: • Provide housing for the homeless • Overnight warming/cooling centers and/or shelter • More affordable housing	**Community Facilities:** • Trail maintenance • Develop more recreational facilities (ex. softball fields)
Public Services: • More services for individuals with developmental disabilities • Assistance for residents facing eviction • After school programs, childcare, and food for our families • Internet access and Wi-Fi for low-income residents • Technology for seniors (digital divide) • Ensure basic needs are met for unhoused residents • Safe parking for unhoused • City-supported maker space • Partner with Scouts/Eagles • Increase access to food and clothing • Mental health supportive services • Domestic Violence prevention • Racial justice/implicit bias awareness and training • Immigration/citizenship assistance • Foster children advocacy and assistance programs • Public safety/crime prevention	**Public Improvements:** • Neighborhood Beautification • Improve Main Street • More bike lanes • Plant more trees
Economic Development: • Support small businesses	**COVID-19 Response:** • Increase access to PPE • Increase COVID testing sites • More help for those who test positive or are high risk

Executive Summary

AP-05 Executive Summary - 24 CFR 91.200(c), 91.220(b)

1. Introduction

The City of Milpitas will receive a Community Development Block Grant (CDBG) entitlement amount of $608,734. To comply with the Citizen Participation Plan the initial funding recommendation made by the Community Advisory Commission (CAC) used an estimated funding allocation of $450,000. The City Council is responsible for making the final allocation amounts.

HUD allows up to 15% of the allocation for public services, 20% for general administration and a 65% for capital projects.

The CAC recommended the full 15% of the CDBG funding, or a total of $91,310, be allocated for public services. The CAC recommended funding to 7 different public service providers. These public services include various programs such as: supportive services to domestic violence victims, supplemental supplies of food, housing assistance for persons with disabilities, youth and senior services, legal assistance, and fair housing services.

With regards to capital project activities, the CAC recommended allocating 65% of the overall amount, or approximately $395,677, to three different organizations for five different capital projects. These projects include: (1) replacing the boiler, (2) replacing the commercial ice machine and (3) replacing the community room carpet at the Terrace Gardens Senior Housing apartment complex; additional capital projects include (4) improving the quality of life for low-income, aging, and/or physically challenged adults via Rebuilding Together Silicon Valley; and (5) providing much need capital repairs to the Georgia Travis Center, a women and children's shelter in San Jose that benefits Milpitas residents.

The remaining 20% of the CDBG funding, or $121,747 will be for planning and administration. Please note that $10,000 of the administrative funding will be used for fair housing services through Project Sentinel.

Due to the Federal budget uncertainty, the entire CDBG allocation process has been delayed. However, the Citizen Participation Plan proceeded on schedule. Per Notice CPD-19-01, HUD requires each jurisdiction to submit its draft Action Plan at least 45 days prior to the start of its program year. Additionally, HUD modified its process to require that all jurisdictions wait until the funding allocation has been announced to submit their Annual Action Plans. And since jurisdictions must wait until the funding allocation has been announced, jurisdictions will now have 60 days after the allocation is announced to submit their Annual Action Plans. The actual funding allocation was distributed on April 12, 2019, therefore the City's deadline to submit the Annual Action Plan is June 12, 2019.

Given the actual funding allocation, the CAC directed staff to proportionately revise the public service recommended funding allocation based on HUD's actual allocation amount. The CAC directed staff to approve the amended applications of the Capital Project applications.

The 30-day public review period was held on the draft Annual Action Plan from May 3, 2019 to June 3, 2019. The Milpitas Citizens Advisory Commission held a public hearing on the CDBG funding on March 28, 2019, received an update on the CDBG allocations on May 1, 2019 and forwarded its recommendation to the Milpitas City Council thereafter. The Milpitas City Council held a public hearing and after requiring further discussion, they moved the public hearing to June 11, 2019. On June 11, 2019, the City Council approved the CDBG funding and the Annual Action Plan.

Community Development Block Grant funds will be provided to all segments of the Milpitas population including geographical areas with high minority concentrations within the community.

In March 2020, the declaration of the pandemic outbreak of COVID-19, and subsequent shelter in place orders, would require City staff to deviate from standard CDBG operating procedures. Specifically, HUD notified all grantees that additional funding would soon be available, with more flexible guidelines for their use, and with guidance as to how to quickly distribute those funds.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law in response to the growing public health and resulting economic crisis. This $2 trillion stimulus measure provided widespread relief for the private and public sector, including individual Americans. The CARES Act allocated an additional $5 billion in Community Development Block Grant Coronavirus (CDBG-CV) funds to prevent, prepare for, and respond to coronavirus. Of this amount, $2 billion (tranche 1) was allocated to entitlement grantees using the same allocation formula as the FY20-21 funds, $1 billion (tranche 2) was allocated to states and insular areas, and the remaining $2 billion (tranche 3) will be allocated at the discretion of the Secretary of Housing and Urban Development (HUD) based on need and other factors.

On April 2, 2020, HUD announced that Milpitas would receive $397,911 in CDBG-CV funds (from tranche 1). Additionally, the CARES Act provides new flexibility for entitlement Cities such as Milpitas to use formula CDBG and CDBG-CV funds and authorized HUD to grant waivers to approve the expenditure of these funds.

On June 23, 2020, the Milpitas City Council approved the allocation of $397,911 in CDBG-CV funds to be allocated to Silicon Valley Independent Living Center to administer the City's Rent Relief Program and program administration. The City also reallocated $290,039 in unused prior year funding to the Enterprise Foundation & Kiva to administer a Small Business Loan Program, to Project Sentinel for additional Rent Relief assistance, and to Rebuilding Together Silicon Valley for a Capital Project.

2. Summarize the objectives and outcomes identified in the Plan

This could be a restatement of items or a table listed elsewhere in the plan or a reference to another location. It may also contain any essential items from the housing and homeless needs assessment, the housing market analysis or the strategic plan.

The objectives and outcomes identified in this Consolidated Plan to allocate CDBG funds and action taken by Annual Action Plan will be directed towards accomplishing the following priority housing and community development needs in Milpitas:

- Affordable Housing Development and Preservation
- Maintain and preserve existing housing
- Support public services that serve lower income persons that include these groups:
    - The homeless
    - Children and youth
    - Special needs populations
    - Seniors
- Public Improvements including increasing accessibility and improving public facilities.

3. Evaluation of past performance

City of Milpitas has had successful implementation of all projects included in the plan. The projects have met all timeliness deadlines and have benefitted low and moderate income residents.

4. Summary of Citizen Participation Process and consultation process

A public notice was published in the Milpitas Post on May 3, 2019 notifying the public of the 30-day public comment period. In addition, the draft Annual Action Plan was sent to a distribution list and posted electronically on the City's website, and a copy was also provided to the Milpitas Public Library and City Hall's Public Information Desk. In addition, public had the opportunity to submit public comments to the Housing Department and were notified of public hearings prior to the City Council's consideration of the recommended CDBG allocations.

<u>June 2020</u>

Given the expedient need for the CDBG-CV funds to be allocated, HUD has lowered the threshold for community noticing and public comment to at least 5 days prior to a public hearing. Additionally, each grantee will determine what constitutes reasonable public notice and outreach to justify sufficient noticing. On June 16, 2020, the City of Milpitas submitted their request for a waiver to their Citizen Participation Plan to the San Francisco HUD field office. On June 18, 2020, the City posted the public hearing notice on its website, sent an email to all known interested community members, CDBG applicants, the Community Advisory Commission, and other agencies or individuals who can further Citizen Participation.

The Public Hearing to determine the allocation of CDBG-CV funds and the reallocation of the unused prior year funds was held virtually on June 23, 2020.

CDBG-CV3

The City held a public meeting with the Community Advisory Commission (CAC) on April 7, 2021 to review applications and hear applicant presentations. The CAC made their recommendations for funding to the City Council. Twenty-four public comments were heard from prospective applicants summarizing their proposed activities and how their activities would benefit Milpitas residents.

On April 28, 2021, the City submitted a waiver to HUD to reduce the opportunity for Citizen Participation and opportunity to comment down to five days. Public notice was provided on April 30, 2021 via the City's website. Included on the website was a link to the documents and instructions on how to attend the public hearing. The City also placed an advertisement in the Milpitas post with the same information.

On May 7, 2021, the City Council held a public hearing to discuss the allocation of CDBG funding for FY21-22 and for CDBG-CV3. Twenty-two public comments were heard, 21 of which were from prospective applicants summarizing their proposed activities and how their activities would benefit Milpitas residents. One member of the community expressed their opinion on community priorities the Council should focus on with the funding.

On May 14, 2021, the City posted the draft amendment to the FY19-20 Annual Action Plan on it's website to provide opportunities for public comment. The documents were posted at this url: http://www.ci.milpitas.ca.gov/milpitas/departments/federalprogram-community-development-block-grant-cdbg/

-5. Summary of public comments

This could be a brief narrative summary or reference an attached document from the Citizen Participation section of the Con Plan.

Eleven total public comments: Nine made by nine of the applicants as to why they should receive the funds they are requesting. Two by members of the community expressing support in seeing additional non-profits applying for funding.

At the June 23, 2020 public hearing, there were four public comments made. Two comments were from applicants urging the Council to consider their request. One was from a member of the community expressing support for the allocation recommendations. And one was not relevant to the public hearing.

At the May 7, 2021 City Council study session, 22 public comments were heard during the public hearing. Twenty-one were from prospective FY21-22 CDBG applicants who gave comments to the City Council to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas. One comment was from a member of the public who expressed their opinion on community priorities in the City of Milpitas.

6. Summary of comments or views not accepted and the reasons for not accepting them

n/a

7. Summary

Following the requirements of the Citizen Participation Plan, the CAC made their estimated funding recommendations to the City Council on March 28, 2019. The CAC updated their funding recommendations to the City Council on May 1, 2019. The draft Annual Action Plan and funding recommendations were released to the public for a 30-day review period beginning May 3, 2019. The Milpitas City Council held a public hearing and approved the CDBG funding and the Annual Action Plan on June 11, 2019. All HUD requirements including citizen participation have been met.

PR-05 Lead & Responsible Agencies – 91.200(b)

1. Agency/entity responsible for preparing/administering the Consolidated Plan

Describe the agency/entity responsible for preparing the Consolidated Plan and those responsible for administration of each grant program and funding source.

Agency Role	Name	Department/Agency
CDBG Administrator	MILPITAS	Housing Division

Table 1 – Responsible Agencies

Narrative (optional)

The City of Milpitas – Housing Division is the lead agency for the United States Department of Housing and Urban Development (HUD) entitlement program, Community Development Block Grant (CDBG).

Pursuant to the Department of Housing and Urban Development (HUD) funding requirements and in conformance with 24 CFR Part 91, Consolidated Submission for Community Planning and Development Programs, City of Milpitas has prepared and adopted the 2019-2020 Annual Action Plan. The Action Plan is submitted annually and describes the eligible programs, projects and activities to be undertaken with funds that are expected to be made available during the fiscal year 2019-2020 and their relationship to the City's priorities and needs for housing, homelessness and community development laid out in the Five-Year Consolidated Plan.

In 2017, City of Milpitas submitted its Five-Year Consolidated Plan (2017-2022) to HUD. The Milpitas Consolidated Plan has been reviewed and approved by HUD. The Consolidated Plan identifies the long-term goals and objectives achieved and consistent with the annual Action Plan Report. Included with the submission of the Action Plan is the Standard Form 424, Proposed Projects and Certifications as required the by Community Development Block Grant (CDBG) Program regulations. The goals and objectives identified in the Milpitas Action Plan are in full compliance with the approved and adopted policies and procedures outlined in the Milpitas CDBG Citizen Participation Plan.

The public review and comments period for the Draft Annual Action Plan is May 3 - June 3, 2019. The City Council reviewed the Consolidated Plan and adopted it on June 11, 2019.

The City of Milpitas has updated its Analysis of Impediments (AI) to Fair Housing Choice Report in 2016 in anticipation of the preparation for the future Consolidated Plan (2018-2023). The previous AI Report was adopted in 2011.

In May 2015, City of Milpitas General Plan Housing Element (2015-2023) was certified by State of California Department of Housing and Community Development (HCD). The Milpitas City Council reviewed and adopted its Housing Element on April 28, 2015.

Consolidated Plan Public Contact Information

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AP-10 Consultation – 91.100, 91.200(b), 91.215(l)

1. Introduction

The City of Milpitas requested a number of consultations with a multitude of stakeholders in the development of the Annual Action Plan. The City of Milpitas solicited comments and public input for 30 days for the draft Annual Action Plan. In addition, public notices were sent out notifying the public hearings for the CAC funding recommendations and at the City Council public hearing. Lastly, the inputs and comments the Consolidated Plan directed the Annual Action Plan funding priorities.

Provide a concise summary of the jurisdiction's activities to enhance coordination between public and assisted housing providers and private and governmental health, mental health and service agencies (91.215(l))

The City participates in a quarterly meeting with all local jurisdictions, including the Housing Authority and HUD to discuss housing cooperation. City staff continues to maintain dialogue with all service providers, public and private to enhance services or if the City can connect service providers for better coordination of service deliveries. Also regionally, housing coordinators attend a weekly call to share information, seek assistance of housing issues not limited to CDBG and HOME.

Describe coordination with the Continuum of Care and efforts to address the needs of homeless persons (particularly chronically homeless individuals and families, families with children, veterans, and unaccompanied youth) and persons at risk of homelessness.

The Santa Clara County Continuum of Care (CoC) is a multi-sector group of stakeholders guiding the implementation of the County's housing and service system to meet the need and prevent and end homelessness. The CoC includes: 1) permanent housing, 2) emergency shelter with outreach and assessment services, 3) transitional housing with support services, and 4) prevention services. In 2015, the City of Milpitas participated in the preparation of the Community Plan to End Homelessness in Santa Clara County. The Plan identifies strategies to address the needs of homeless persons in the county.

Describe consultation with the Continuum(s) of Care that serves the jurisdiction's area in determining how to allocate ESG funds, develop performance standards for and evaluate outcomes of projects and activities assisted by ESG funds, and develop funding, policies and procedures for the operation and administration of HMIS

The City of Milpitas does not receive Emergency Shelter Grant (ESG) funding however the City participates with the CoC to address homeless issues.

2. Describe Agencies, groups, organizations and others who participated in the process and describe the jurisdiction's consultations with housing, social service agencies and other entities

Table 2 – Agencies, groups, organizations who participated

1	**Agency/Group/Organization**	Project Sentinel
	Agency/Group/Organization Type	Service-Fair Housing
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Fair Housing
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Project Sentinel attended a community meeting to voice the needs on behalf the community and seek continued support for fair housing and tenant landlord mitigation services. The City will continue to support fair housing services.
2	**Agency/Group/Organization**	Catholic Charities of Santa Clara County Long Term Care Ombudsman Program
	Agency/Group/Organization Type	Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Catholic Charities attended to voice the need for those living in long term care.
3	**Agency/Group/Organization**	Child Advocates of Silicon Valley
	Agency/Group/Organization Type	Services-Children
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs

	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Child Advocates attended to voice the need for the children in the foster care system.
4	**Agency/Group/Organization**	Next Door Solutions to Domestic Violence
	Agency/Group/Organization Type	Services - Victims
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Next Door Solutions to Domestic Violence attended to voice the need for services for families experience abuse.
5	**Agency/Group/Organization**	Senior Adults Legal Assistance (SALA)
	Agency/Group/Organization Type	Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from SALA attended to voice the need for continuing legal services for senior persons.
6	**Agency/Group/Organization**	Silicon Valley Independent Living Center
	Agency/Group/Organization Type	Housing Services – Housing Services – Elderly Person Services – Persons with Disabilities Services – Homeless
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Homeless Needs - Chronically homeless Homeless Needs - Families with children Homelessness Needs - Veterans

	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from SVILC attended to voice the need for services for housing needs and referrals.
7	**Agency/Group/Organization**	The Health Trust
	Agency/Group/Organization Type	Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from The Health Trust attended to voice the need for to continue services for Meals on Wheels.
8	**Agency/Group/Organization**	YWCA
	Agency/Group/Organization Type	Services - Victims
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from YWCA attended to voice the need for continued services for persons experiencing domestic abuse.
9	**Agency/Group/Organization**	Rebuilding Together Silicon Valley
	Agency/Group/Organization Type	Services - Housing
	What section of the Plan was addressed by Consultation?	Housing Need Assessment
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Rebuilding Together Silicon Valley attended to voice the need for continued services for low-income home repairs.
10	**Agency/Group/Organization**	Terrace Gardens Senior Housing, Inc.
	Agency/Group/Organization Type	Housing Services - Housing Services-Elderly Persons

	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Terrace Gardens attended to voice the need for services for senior person(s).
11	**Agency/Group/Organization**	LifeMoves
	Agency/Group/Organization Type	Housing Services - Housing Services - Homeless housing need assessment
	What section of the Plan was addressed by Consultation?	Homeless Needs - Chronically homeless Homeless Needs - Families with children Homeless Needs - Veterans
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from LifeMoves attended to voice the need for continued services for the homeless populations they serve.

Identify any Agency Types not consulted and provide rationale for not consulting

The City did not consult with nearby correctional facility or child welfare entities. The organization has various partnerships with the County and the City works with those organizations indirectly through the several partnerships through the County and sub-recipients funded and outlined in this Action Plan.

Other local/regional/state/federal planning efforts considered when preparing the Plan

Name of Plan	Lead Organization	How do the goals of your Strategic Plan overlap with the goals of each plan?
Continuum of Care	Regional Continuum of Care Council	The Continuum of Care works to alleviate the impact of homelessness in the community through the cooperation and collaboration of social service providers. This effort aligns with the Strategic Plan's goal to support activities to prevent and end homelessness.

Name of Plan	Lead Organization	How do the goals of your Strategic Plan overlap with the goals of each plan?
City of Milpitas Housing Element	City of Milpitas	The Housing Element serves as a policy guide to help the City meet its existing and future housing needs. This effort aligns with the Strategic Plan's goal to assist in the creation and preservation of affordable housing.

Table 3 – Other local / regional / federal planning efforts

Narrative (optional)

AP-12 Participation – 91.105, 91.200(c)

1. Summary of citizen participation process/Efforts made to broaden citizen participation Summarize citizen participation process and how it impacted goal-setting

The Annual Action Plan is the implementation tool from the Consolidated Plan. The Annual Action Plan funding is guided by the goals and priorities from the Consolidated Plan. The Consolidated Plan went through the Citizen Participation Plan.

Prior to starting the Consolidated Plan update process, the City revised its Citizen Participation Plan. The citizen participation process included holding several public community meetings and workshops for maximum citizen participation. Also, City staff worked closely with the City's Community Advisory Commission (CAC) as they are the recommending body to the City Council in the CDBG allocation process. The CAC has held a number of meetings (listed below) to discuss the Consolidated Plan.

The City conducted 5 community forums throughout the City in different times, different days and different areas in the City. Notices in English, Spanish and Vietnamese were prepared and posted in the local paper announcing the community forums. The notices were also sent via electronic mail to over 125 organizations inviting them to participate and provide comments or suggestion regarding the City's Consolidated Plan and Annual Action Plan update process. Over 75 individuals, local groups, agencies, non-profit and organizations were involved in the development of the Milpitas Consolidated Plan. A listing of these individuals, groups and organizations who participated in the preparation and development of the plan is included along with citizen comments received during the public hearing process.

On June 16, 2020, the City submitted a waiver to HUD to reduce the opportunity for Citizen Participation and opportunity to comment down to five days. Public notice was provided on June 18, 2020 at 10am via the City's website, social media pages, and by emailing our Housing interest parties list. Included in these communications was a link to the documents, instructions on how to attend the public hearing, and how to provide electronic comment via email. The opportunity to comment expired on June 23, 2020 at 6pm, exceeding the five-day threshold.

Public comments could be made by going to this URL: http://www.ci.milpitas.ca.gov/spcomment/

The documents were posted at this url: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

For Public Hearing Agenda Item only, voicemail message comments may be submitted to telephone number 408-586-3010 until 2:30 PM on June 23. Please note, public comments via email were accepted until a motion to close the public hearing was passed.

Four total comments were heard. The first comment was from Rebuilding Together Silicon Valley, who wanted to express support for their application to receive CBDG funding for FY 2020. The second comment was from LifeMoves, who wanted to understand why their application was not being considered by the City Council, and if there was still an option, they would like to have revised activities considered so they can continue funding the homeless population in Milpitas. The third comment was from a community member expressing support for the recommended allocations and all of the work the applicants do in the community. The final comment was not relevant to the public hearing in that it was a personal attack on one of the councilmembers. As such, this public comment was not accepted.

Citizen Participation Outreach

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/ attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
1	News-paper ad	Non-targeted/broad community	No comments were received	No comments were received	n/a	
2	Public Meeting	Non-targeted/broad community	No comments were received	No comments were received	n/a	
3	News-paper ad	Non-targeted/broad community	No comments were received	No comments were received	n/a	
4	Public Hearing	Non-targeted/broad community	No comments were received	No comments were received	n/a	
5	Public Meeting	Non-targeted/broad community	No comments were received	No comments were received	n/a	
6	News-paper ad	Non-targeted/broad community	Posting the Draft Annual Action Plan			
7	Public Hearing	Non-targeted/broad community	3 comments received	Each was to pledge support for their applicants funding request		http://www.ci.milpitas.ca.gov/community-development-block-grant-cdbg-allocations-draft-annual-action-plan-fy-2019-2020/
8	Ad Hoc CDBG Subcommittee Meeting	Non-targeted/broad community	7 comments received	Each was to pledge support for their applicants funding request	n/a	http://www.ci.milpitas.ca.gov/_pdfs/subcommittee/cdbg/2019/061019/agenda.pdf

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/ attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
9	Re-open Public Hearing	Non-targeted/broad community	8 comments received	2 comments requesting more outreach, remaining comments was to pledge support for their applicants funding request	n/a	http://www.ci.milpitas.ca.gov/_pdfs/council/2019/061119/Agenda.pdf
10	Virtual Public Meeting	Non-targeted/broad community	No comments were received	No comments were received		http://www.ci.milpitas.ca.gov/_pdfs/Commissions/cac/2020/040120/Minutes.pdf
11	CDBG Subcommittee Meeting	Non-targeted/broad community	No comments were received	No comments were received		http://www.ci.milpitas.ca.gov/_pdfs/subcommittee/cdbg/2020/052120/Minutes.pdf
12	CDBG Subcommittee Meeting	Non-targeted/broad community	No comments were received	No comments were received		
13	Public Hearing Waiver sent to HUD on 6/16/2020	Non-targeted/broad community	Public Comment period from 6/18/20 through 6/23/20 4 comments received	Two urging support for their application. One from the community expressing support for all the applications. And one not relevant to the public hearing.	One not accepted as it was not relevant to the public hearing	
CDBG-CV3						
1	News-paper ad	Non-targeted/broad community	Opening the application period	No comments were received	n/a	
2	Application Workshop	Non-targeted/broad community	30 Attendees	General comments & questions about the CDBG application and process.	n/a	

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/ attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
3	Public Meeting (CAC)	Non-targeted/broad community	10 Attendees	General comments & questions about the CDBG application and process.	n/a	
4	Public Meeting (CAC)	Non-targeted/broad community	24 comments were received/40 Attendees	Prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.	n/a	
5	News-paper ad	Non-targeted/broad community	City Council CDBG Study Session	No comments were received	n/a	
6	City Council CDBG Study Session Virtual Public Hearing	Non-targeted/broad community	22 comments were received/50 Attendees	Prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.		
7	News-paper ad	Non-targeted/broad community	City Council Meeting	No comments were received		

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/ attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
8	City Council Meeting Virtual Public Hearing	Non-targeted/broad community				

Table 4 – Citizen Participation Outreach

Expected Resources

AP-15 Expected Resources – 91.220(c)(1,2)

Introduction

The City of Milpitas will receive $608,734 for fiscal year 2019-2020 in CDBG funds.

Anticipated Resources

Program	Source of Funds	Uses of Funds	Expected Amount Available Year 1				Expected Amount Available Remainder of ConPlan	Narrative Description
			Annual Allocation	Program Income	Prior Year Resources	Total		
CDBG	public - federal	Acquisition Admin and Planning Economic Development Housing Public Improvements Public Services	$608,734	$8,959	$521,182	$1,138,875	$2,434,936	The expected remainder amount is calculated on the total amount in Year 1 multiplied by 4 years.

CDBG-CV	public - federal	The CARES Act created a supplemental funding of CDBG-CV dollars that must be used to prevent, prepare for, and respond to covid-19. CDBG-CV funds cannot be used for other purposes.	$397,911				$397,911	
CDBG	Public - federal	Prior year unused funds from FY14-18			$290,039		$290,039	COVID economic development activities
CDBG-CV3	Public - federal	The CARES Act created a supplemental funding of CDBG-CV dollars that must be used to prevent, prepare for, and respond to covid-19. CDBG-CV funds cannot be used for other purposes.	$582,236				$582,236	
CDBG	public - federal	Acquisition Admin and Planning Economic Development Housing Public Improvements Public Services			$17,027.45		$17,027.45	Unused funding from PY20

Table 5 - Expected Resources – Priority Table

Explain how federal funds will leverage those additional resources (private, state and local funds), including a description of how matching requirements will be satisfied

Not applicable, the City does not match federal funds.

If appropriate, describe publically owned land or property located within the jurisdiction that may be used to address the needs identified in the plan

There are two parcels controlled by the City. One parcel, located at 1432 S. Main Street, is owned by Milpitas Housing Authority and is approximately 0.9 acres in size. Currently the parcel is occupied by commercial tenants but the land is zoned as high density multi-family residential. The other parcel, approximately 1.7 acres, is located adjacent to the Milpitas Housing Authority property and is owned by the City of Milpitas. That City parcel is also occupied by commercial business but is also zoned for multi-family residential use. The City is currently working on a partnership with the County of Santa Clara to potentially develop both parcels for affordable housing units. The City hopes to sell these parcels to the County by the end of 2019.

Discussion

Please see discussion above.

Annual Goals and Objectives

AP-20 Annual Goals and Objectives

Goals Summary Information

Sort Order	Goal Name	Start Year	End Year	Category	Geographic Area	Needs Addressed	Funding	Goal Outcome Indicator
1	Maintain and Preserve Existing Housing	2017	2022	Affordable Housing Non-Homeless Special Needs	Citywide	Affordable Housing Development and Preservation	CDBG: $175,000	Homeowner Housing Rehabilitated: 46 Household Housing Unit
2	Fair Housing	2017	2022	Affordable Housing Non-Housing Community Development	Citywide	Community Services	CDBG: $10,000 Housing Authority: $40,000	Public service activities for Low/Moderate Income Housing Benefit: 320 Households Assisted
3	Public Services for Seniors	2017	2022	Non-Homeless Special Needs Non-Housing Community Development	Citywide	Community Services	CDBG: $~~50~~184,517	Public service activities other than Low/Moderate Income Housing Benefit: ~~182~~ 460 Persons Assisted
4	Public Services for Children and Youth	2017	2022	Non-Homeless Special Needs Non-Housing Community Development	Citywide	Community Services	CDBG: $10,000	Public service activities other than Low/Moderate Income Housing Benefit: 25 Persons Assisted
5	Affordable Housing Rental Rehabilitation	2017	2022	Affordable Housing	Citywide	Affordable Housing Development and Preservation	CDBG: $84,000 CDBG-Prior Year: $46,533	Rental units rehabilitated: 184 Household Housing Unit + New capital project at TBRA apartment complex

Sort Order	Goal Name	Start Year	End Year	Category	Geographic Area	Needs Addressed	Funding	Goal Outcome Indicator
6	Community Funding/Public Services	2017	2022	Homeless Non-Homeless Special Needs Non-Housing Community Development	Citywide	Community Services	CDBG: $~~30~~178,~~253~~092.45	Public service activities other than Low/Moderate Income Housing Benefit: ~~70~~ 568 Persons Assisted
7	Public Improvements including accessibility and improving public facilities	2017	2022	Homeless	Citywide	Homelessness	CDBG: $~~136~~153,~~677~~704.45	Help rehabilitate homeless shelter overnight. Homeless persons overnight shelter: 12~~40~~
8	Public services for low- and moderate-income residents at risk of eviction	2020	2021	Homeless Non-Homeless Special Needs	Citywide	Community Services	CDBG-CV: $~~318~~487,~~329~~278.35 CDBG-Prior Year $43,506	Provide ~~50~~ 84 LMC households with up to $5,000 in rental assistance Project Sentinel to assist an additional 20 LMC households with rental assistance
9	Assist Microenterprises ~~and Small Business~~	2020	2021	Non-Housing Community Development	Citywide	Economic Development	CDBG-Prior Year: $~~150~~215,000	Assist ~~29~~ 38 LMC microenterprise owners with $5,000 loans Assist 15 microenterprises with marketing training
~~10~~	~~Assist Microenterprises and Small Business~~	~~2020~~	~~2021~~	~~Non-Housing Community Development~~	~~Citywide~~	~~Economic Development~~	~~CDBG-Prior Year: $50,000~~	~~Assist 9 small businesses with $5,000 loans to retain LMC jobs~~

Table 6 – Goals Summary

Goal Descriptions

1	**Goal Name**	Maintain and Preserve Existing Housing
	Goal Description	Rental units rehabilitated: 0 units, however, capital improvements are being made to the apartment complex; Homeowner Housing Rehabilitated: 46
2	**Goal Name**	Fair Housing
	Goal Description	Promote fair housing choice.
3	**Goal Name**	Public Services for Seniors
	Goal Description	Support activities that provide community services to low income and special needs households.
4	**Goal Name**	Public Services for Children and Youth
	Goal Description	Support activities that provide community services to low income and special needs households.
5	**Goal Name**	Affordable Housing Rental Rehabilitation
	Goal Description	Assist in the creation and preservation of affordable housing opportunities for low income and special needs households
6	**Goal Name**	Public Improvements including accessibility and improving public facilities
	Goal Description	Support activities that provide community services to low income and special needs households.
7	**Goal Name**	Public services for low- and moderate-income residents at risk of eviction
	Goal Description	Support activities that provide interim assistance to low- and moderate-income households at risk of being evicted due to a COVID-19 related hardship.
8	**Goal Name**	Assist Microenterprise and Small Business
	Goal Description	Support activities that provide loans to microenterprises experiencing hardships due to COVID-19.
9	**Goal Name**	Assist Microenterprise and Small Business
	Goal Description	Support activities that provide loans to small businesses experiencing hardships due to COVID-19.

Projects

AP-35 Projects – 91.220(d)

Introduction

The City of Milpitas only receives Community Development Block Grant (CDBG) funding. If available and recommended in certain circumstances, the City Council may also augment the funds and contribute from local funds, such as the Community Promotion Fund (CPF). All the funds mentioned, are in efforts

to serve and improve the lives of low and moderate income persons in Milpitas.

Projects

#	Project Name
1	Catholic Charities of Santa Clara County
2	Child Advocates of Silicon Valley
3	Next Door Solutions to Domestic Violence
4	Senior Adults Legal Assistance (SALA)
5	Silicon Valley Independent Living Center (SVILC)
6	The Health Trust
7	YWCA Silicon Valley
8	Project Sentinel
9	LifeMoves
10	Rebuilding Together Silicon Valley
11	Terrace Gardens –Carpet Replacement
12	Terrace Gardens – Boiler Replacement
13	Terrace Gardens – Ice Machine Replacement
14	Silicon Valley Independent Living Center (Rent Relief Program)
15	Enterprise Foundation & Kiva (Microenterprise)
16	Project Sentinel (Rental Assistance)
17	Rebuilding Together Silicon Valley (Sunnyhills)
18	Next Door Solutions to Domestic Violence (CDBG-CV3)
19	YWCA Silicon Valley (CDBG-CV3)
20	Next Door Solutions to Domestic Violence (CDBG-CV3)
21	LifeMoves (CDBG-CV3)
22	Lighthouse of Hope Counseling Center (CDBG-CV3)
23	Sourcewise Meals on Wheels (CDBG-CV3)
24	Milpitas Senior Center (CDBG-CV3)
25	Pragnya (CDBG-CV3)
26	Terrace Gardens - Meal Delivery (CDBG-CV3)
27	Filipino American Chamber of Commerce (CDBG-CV3)
28	The Health Trust (CDBG-CV3)
29	Silicon Valley Independent Living Center (CDBG-CV3)
30	Program Administration (CDBG-CV3)

Table 7 - Project Information

Describe the reasons for allocation priorities and any obstacles to addressing underserved needs

Allocation priorities are derived through qualitative research such as surveys, public meetings, public hearings and other avenues of resident input. The research has also impacted the priority needs that address the most vulnerable population in our communities. The City Council has established the

priorities every two years to address those underserved needs.

The City Council reaffirmed their CDBG priorities as follows:

Public Service Priorities:

1. Senior Services
2. Youth and Teen Services
3. Homeless services/shelters
4. Child care
5. Domestic violence prevention and supportive services/shelters
6. Code enforcement

Capital Project Priorities

1. Home repair/rehabilitation
2. Affordable housing
3. Rental apartment rehabilitation
4. Historic preservation

AP-38 Project Summary

Project Summary Information

1	**Project Name**	Catholic Charities of Santa Clara County
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $20,523
	Description	Investigate and resolve complaints for seniors and disabled adults in long term care facilities.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Catholic Charities' Long Term Care Ombudsman Program expects to help approximately 92 Milpitas residents. The Long Term Care Ombudsman will make visits at all long-term care facilities to ensure all clients are safe and properly cared for.
	Location Description	All long term care facilities in Milpitas.
	Planned Activities	Site visits to long term care facilities and nursing homes and provide with case management for those clients with open cases.
	Project Name	Child Advocates of Silicon Valley

2	**Target Area**	Citywide
	Goals Supported	Public Services for Children and Youth
	Needs Addressed	Community Services
	Funding	CDBG: $10,000
	Description	Provides court appointed youths with volunteers to maintain life-long mentorship and guidance.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Child Advocates of Silicon Valley expects to serve 25 Milpitas foster children.
	Location Description	Milpitas, CA
	Planned Activities	Organization will recruit, train more volunteers and providing essential mentor and guidance for youth.
3	**Project Name**	Next Door Solutions to Domestic Violence
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $20,523
	Description	Next Door Solutions to Domestic Violence is a nonprofit, multi-cultural agency dedicated to providing proactive and progressive solutions to domestic violence. Next Door Solutions provides peer counseling, advocacy, legal help and support groups. Additionally, Next Door Solutions to Domestic Violence provides safe emergency shelter to victims of domestic violence and their children within a confidential and protected environment.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Next Door Solutions to Domestic Violence proposes to serve 58 Milpitas residents.
	Location Description	The office is located in San Jose.
	Planned Activities	Activities include emergency shelter, basic needs, including food and clothing, case management, and safety.

4	**Project Name**	Senior Adults Legal Assistance (SALA)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $7,000
	Description	Legal services in the form of advice/referrals, consultations/brief service, and legal representation will be provided to Milpitas elders in areas of law common to SALA's target population including, but not limited to, the following: Public Benefits (Social Security, SSI, Medicare, and Medi-Cal); Nursing Homes and Alternatives to Institutionalization (including Advance Directives); Elder Abuse; Housing Law, Consumer Problems; and Personal Affairs (including Simple Wills through SALA's No Fee Wills Panel). SALA will provide services through on-site appointments scheduled at intake days at least once a month at the Barbara Lee (Milpitas) Senior Center. Home visits will be made to elders in Milpitas who are homebound or who reside in nursing homes. Milpitas residents with urgent problems will also be served on an emergency basis by telephone. Milpitas residents who appear at SALA intake sites in other cities will also be served. SALA will also conduct one community education presentation annually for the participants at the Milpitas Senior Center. All services described herein will be provided by one of the attorneys on SALA's staff, a pro bono (volunteer) attorney, or a paralegal (either paid staff or volunteer).
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Senior Adults Legal Assistance (SALA) expects to serve 30 Milpitas clients.
	Location Description	At their San Jose office, Milpitas Senior Center and Milpitas Library.
	Planned Activities	Legal assistance, including advising and counseling on basic rights. Facilitation access to public benefits to meet basic life needs and legal planning.
5	**Project Name**	Silicon Valley Independent Living Center (SVILC)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services Public Services for Seniors
	Funding	CDBG: $7,264

	Description	Silicon Valley Independent Living Center (SVILC) is a nonprofit, non-residential organization which serves all people with all types of disabilities, including seniors with disabling conditions, who live in Santa Clara County. SVILC provides residents with support tools and resources needed to live interdependently, and advocates for policies that ensure equal access and opportunity for all. SVILC is a peer-driven agency run by and for people with disabilities. As one of 28 independent living centers across the State of California, SVILC is committed to the principles of self-advocacy, personal empowerment and independent living.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	The project expects to serve 44 Milpitas residents with disabilities.
	Location Description	San Jose
	Planned Activities	Assist low-income residents with disabilities in their search for affordable and accessible housing. Provide education and training workshops on how to conduct a housing search to transition from homelessness, from a health care facility, unstable or to permanent housing.
6	**Project Name**	The Health Trust
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $16,000
	Description	The Health Trust Meals On Wheels program serves physically challenged, home-bound individuals, whether they are elderly, are recuperating after a recent hospitalization, or have disabilities confining them to a wheelchair. Trained drivers, most of whom are volunteers, deliver hot, nutritious meals five days a week along with frozen meals for preparation over the weekend. Drivers also provide daily wellness checks, making sure that clients are safe, alert and cared for. This service provides peace of mind not only to the clients, but also to their families.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Meals on Wheels plans to serve 16 Milpitas residents.
	Location Description	At each of the client's home.

	Planned Activities	Provide seniors with daily healthy, hot meals.
7	**Project Name**	YWCA Silicon Valley
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $10,000
	Description	The mission of the YWCA Support Services is to empower our diverse community to live free from domestic violence through the provision of safety, support services and self-empowerment.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	YWCA Silicon Valley expects to serve 12 Milpitas residents.
	Location Description	At YWCA and undisclosed emergency shelters.
	Planned Activities	Activities include emergency shelter, basic needs, including food and clothing, case management, and safety.
8	**Project Name**	Project Sentinel
	Target Area	Citywide
	Goals Supported	Fair Housing
	Needs Addressed	Community Services
	Funding	CDBG: $10,000 Milpitas Housing Authority: $40,000

	Description	Project Sentinel is a private nonprofit agency providing fair housing, tenant-landlord counseling and dispute resolution services to the City of Milpitas. In addition to counseling and case intake, education and outreach activities will be ongoing. Outreach activity includes: the publication of Rent Watch, a rental housing advice column; distribution of brochures, radio public service announcements and public presentations and workshops. Presentations and workshops are provided to a wide spectrum of the community: ESL classes at local schools; civic groups like the Rotary and Lions; social service agencies like Catholic Charities and Next Door Solutions; municipal offices such as the Senior Center and Community Center; housing provider associations such as the Apartment Owners Association (AOA). Program services are delivered by designated staff in the agency's Fremont office using a local Milpitas phone line and by staff in the agency's main office at 1490 El Camino Real, Santa Clara. Office hours for counseling and case intake are from 9:00 am to 4:00 pm, Monday through Friday. Evening and week-end appointments are provided when necessary. Tenant-Landlord counseling/Dispute Resolution includes all areas of concern in rental housing; however, evictions and substandard housing complaints receive priority attention. Mediations and conciliations are conducted by trained staff and volunteers. Services are delivered in a neutral, unbiased manner to all parties engaged in the rental housing relationship. Fair Housing services of community education, and complaint investigation are provided from the corporate office and other public facilities within the City of Milpitas (library, community center). HUD-certified mortgage default counseling and First Time Homebuyer workshops are open to Milpitas residents. These services are provided from Project Sentinel's office at the Milpitas Sobrato Center.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	Project Sentinel will provide service for 320 Milpitas residents.
	Location Description	At various venues in Milpitas and also their Santa Clara office.
	Planned Activities	Provide educational presentations, outreach, and brochures at a variety of venues. Provide information and referral services and investigate cases of alleged discrimination.
9	**Project Name**	LifeMoves
	Target Area	Citywide
	Goals Supported	Homelessness
	Needs Addressed	Homeless
	Funding	CDBG: $136,677
	Description	LifeMoves will make high-priority repairs to Georgia Travis Center. The Georgia Travis Center provides emergency and transitional housing for homeless women and children in Santa Clara County.
	Target Date	6/30/2020

	Estimate the number and type of families that will benefit from the proposed activities	LifeMoves proposed to serve 120 Milpitas clients.
	Location Description	Georgia Travis Center
	Planned Activities	Funding will be used for emergency repairs for the homeless shelter.
10	**Project Name**	Rebuilding Together Silicon Valley
	Target Area	Citywide
	Goals Supported	Affordable Housing
	Needs Addressed	Affordable Housing
	Funding	CDBG: $175,000
	Description	Rebuilding Together will preserve and maintain affordable housing and provide a safe and secure living environment for very low and low-income households through housing rehabilitation
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	46 low income, owner occupied housing units will be repaired.
	Location Description	Various homes throughout Milpitas.
	Planned Activities	Low to moderate income owner-occupied, minor and emergency housing rehabilitation.
11	**Project Name**	Terrace Gardens Senior Housing, Inc.- Community Room Carpet
	Target Area	Citywide
	Goals Supported	Affordable Housing
	Needs Addressed	Affordable Housing
	Funding	CDBG: $15,000
	Description	The project will replace the carpeting in their community room.
	Target Date	6/30/2020

	Estimate the number and type of families that will benefit from the proposed activities	184 residents will benefit.
	Location Description	186 Beresford Court
	Planned Activities	The project will replace the carpeting in their community room, which is used on a daily basis for Resident events.
12	**Project Name**	Terrace Gardens Senior Housing, Inc.– Commercial Ice Machine Replacement
	Target Area	Citywide
	Goals Supported	Affordable Housing
	Needs Addressed	Affordable Housing
	Funding	CDBG: $7,000
	Description	The project proposed will replace their commercial ice machine.
	Target Date	6/30/2020
	Estimate the number and type of families that will benefit from the proposed activities	184 residents will benefit.
	Location Description	186 Beresford Court
	Planned Activities	Funding will be used for the replacement of the commercial ice machine, which is used daily for meal services and events.
13	**Project Name**	Terrace Gardens Senior Housing, Inc.- Boiler in Community Building
	Target Area	Citywide
	Goals Supported	Affordable Housing
	Needs Addressed	Affordable Housing
	Funding	CDBG: $62,000
	Description	Replace the boiler in the Community building.
	Target Date	6/30/2020

	Estimate the number and type of families that will benefit from the proposed activities	184 residents will benefit.
	Location Description	186 Beresford Court
	Planned Activities	Funding will be used for the replace the boiler in the Community building, used daily for providing meal services and events to residents.
14	**Project Name**	Silicon Valley Independent Living Center (CDBG-CV)
	Target Area	Citywide
	Goals Supported	Public services for low- and moderate-income residents at risk of eviction
	Needs Addressed	Community Services
	Funding	CDBG-CV: $318,329
	Description	This project will assist low and moderate-income households experiencing a COVID-19 related hardship and who are at risk of being evicted due to non-payment of rent.
	Target Date	6/30/2021
	Estimate the number and type of families that will benefit from the proposed activities	An estimated 50 low and moderate-income households will benefit from the proposed activities.
	Location Description	At various homes throughout Milpitas
	Planned Activities	Funding will be used to provide interim rental assistance
15	**Project Name**	Enterprise Foundation & Kiva – Microenterprise
	Target Area	Citywide
	Goals Supported	Assist Microenterprises and Small Business
	Needs Addressed	Economic Development
	Funding	CDBG-Prior Year: $~~150~~200,000
	Description	This project will provide loans to support activities to microenterprises experiencing hardships due to COVID-19.
	Target Date	6/30/2021

	Estimate the number and type of families that will benefit from the proposed activities	Funding will be used to assist ~~29~~ 38 LMC microenterprise owners with $5,000 loans
	Location Description	At various microenterprises located in the City of Milpitas
	Planned Activities	Funding will be used to provide additional financial support to microenterprises experiencing hardships due to COVID-19
~~16~~	~~**Project Name**~~	~~Enterprise Foundation & Kiva – Small Business~~
	~~**Target Area**~~	~~Citywide~~
	~~**Goals Supported**~~	~~Assist Microenterprises and Small Business~~
	~~**Needs Addressed**~~	~~Economic Development~~
	~~**Funding**~~	~~CDBG-Prior Year: $50,000~~
	~~**Description**~~	~~This project will provide loans to support LMC job creation and job retention activities to small businesses experiencing hardships due to COVID-19.~~
	~~**Target Date**~~	~~6/30/2021~~
	~~**Estimate the number and type of families that will benefit from the proposed activities**~~	~~Funding will be used to assist 9 small businesses with $5,000 loans to create or retain LMC jobs~~
	~~**Location Description**~~	~~At various small businesses located in the City of Milpitas~~
	~~**Planned Activities**~~	~~Funding will be used by small businesses experiencing hardships due to COVID-19 to create or retain LMC jobs.~~
~~17~~16	**Project Name**	Project Sentinel
	Target Area	Citywide
	Goals Supported	Public services for low- and moderate-income residents at risk of eviction
	Needs Addressed	Community Services
	Funding	CDBG-Prior Year: $43,506
	Description	It Takes a Village Program: Provide wraparound rent relief/reduction services involving all parties in the process, including the tenant, property owner, mortgage holder, and mediators
	Target Date	6/30/2021

	Estimate the number and type of families that will benefit from the proposed activities	Project Sentinel will provide service for 20 Milpitas households.
	Location Description	Various households throughout Milpitas
	Planned Activities	To provide wraparound rent relief/reduction services involving all parties in the process, including the tenant, property owner, mortgage holder, and mediators
~~18~~17	**Project Name**	Rebuilding Together Silicon Valley (Sunnyhills)
	Target Area	Citywide
	Goals Supported	Affordable Housing Rental Rehabilitation
	Needs Addressed	Affordable Housing Development and Preservation
	Funding	CDBG-Prior Year: $46,533
	Description	Rebuilding Together will preserve and maintain affordable housing and provide a safe and secure living environment for very low and low-income households through a roof replacement project on the existing buildings at the Sunnyhills TBRA apartment complex
	Target Date	6/30/2021
	Estimate the number and type of families that will benefit from the proposed activities	4 roofs will be replaced with these funds. Occupants of these buildings are 95% LMC.
	Location Description	Sunnyhills TBRA apartment complex
	Planned Activities	Rebuilding Together will preserve and maintain affordable housing and provide a safe and secure living environment for very low and low-income households through a roof replacement project on the existing buildings at Sunnyhills. Goal is to replace 4 roofs with these funds.
18	**Project Name**	Next Door Solutions to Domestic Violence (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG-CV3: $36,681.22

	Description	Next Door Solutions to Domestic Violence is a nonprofit, multi-cultural agency dedicated to providing proactive and progressive solutions to domestic violence. Next Door Solutions provides peer counseling, advocacy, legal help and support groups. Additionally, Next Door Solutions to Domestic Violence provides safe emergency shelter to victims of domestic violence and their children within a confidential and protected environment.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Next Door Solutions to Domestic Violence proposes to serve 50 Milpitas residents.
	Location Description	The office is located in San Jose.
	Planned Activities	Activities include emergency shelter, basic needs, including food and clothing, case management, and safety.
19	**Project Name**	YWCA Silicon Valley (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $26,158.23
	Description	Provide residents of the City of Milpitas domestic violence supportive services.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	YWCA Silicon Valley expects to serve 25 Milpitas residents
	Location Description	YWCA Office in San Jose
	Planned Activities	Activities include emergency shelter, basic needs, including food and clothing, case management, and safety.
20	**Project Name**	Next Door Solutions to Domestic Violence (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services

	Needs Addressed	Public Improvements including accessibility and improving public facilities
	Funding	CDBG: $17,027.45
	Description	Next Door Solutions to Domestic Violence is a nonprofit, multi-cultural agency dedicated to providing proactive and progressive solutions to domestic violence. Next Door Solutions provides peer counseling, advocacy, legal help and support groups. Additionally, Next Door Solutions to Domestic Violence provides safe emergency shelter to victims of domestic violence and their children within a confidential and protected environment.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Next Door Solutions to Domestic Violence proposes to serve 50 Milpitas residents.
	Location Description	The office is located in San Jose.
	Planned Activities	Replacement of flooring throughout the Shelter Next Door facility.
21	**Project Name**	LifeMoves (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $40,000
	Description	Assist with serving meals during the pandemic at their five shelters in Santa Clara County that serve Milpitas residents.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	LifeMoves expects to serve 73 homeless residents of Milpitas
	Location Description	The five shelters are located throughout Santa Clara County
	Planned Activities	Meal support to homeless residents of Milpitas at each of the five shelters in Santa Clara County.
22	**Project Name**	Lighthouse of Hope Counseling Center (CDBG-CV3)

	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $5,000
	Description	Provide counseling, psychological support, and education to the Milpitas community
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	The activity expects to serve 45 Milpitas residents.
	Location Description	Throughout Milpitas
	Planned Activities	Provide counseling, psychological support, and education to the Milpitas community
23	**Project Name**	Sourcewise - Meals on Wheels (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $39,000
	Description	Provide vulnerable seniors age 60 and older who have been impacted by the pandemic nutritious home-delivered meals.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Meals on Wheels plans to serve 80 Milpitas residents.
	Location Description	At each of the client's home.
	Planned Activities	Provide seniors with daily healthy, hot meals.
24	**Project Name**	Milpitas Senior Center (CDBG-CV3)

	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $10,000
	Description	Assist members of the Milpitas Senior Center age 62+ who are needing continued support and education on technology
	Target Date	6/30/2021
	Estimate the number and type of families that will benefit from the proposed activities	The Technology for Seniors Program will serve approximately 30 qualifying Milpitas resident seniors (ages 62+).
	Location Description	455 E Calaveras Blvd
	Planned Activities	Funding will be used to provide technology education for seniors to help counter social isolation and improve access to information due to COVID-19.
25	**Project Name**	Pragnya (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $40,000
	Description	Funds will be used to support children, youth and adults from the Special Needs community by creating social emotional connections and preventing further isolation due to COVID-19.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	This activity will aim to serve approximately 300 Milpitas residents
	Location Description	1917 Concourse Drv, San Jose CA 95131
	Planned Activities	Support children, youth and adults from the Special Needs community by creating social emotional connections and preventing further isolation due to COVID-19.

26	**Project Name**	Terrace Gardens Senior Housing (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $65,000
	Description	The project proposed will provide meal delivery to residents, rather than dinner being held in the dining room. Additionally, cleaning supplies and PPE will be purchased to keep up with necessary sanitation practices for our at risk seniors
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	184 low and very low income seniors will benefit from this funding.
	Location Description	186 Beresford Court
	Planned Activities	Funding will be used for meal delivery to residents, rather than dinner being held in the dining room, to keep proper social distancing. Cleaning supplies and PPE will be purchased to keep up with necessary sanitation practices
27	**Project Name**	Filipino American Chamber of Commerce (CDBG-CV3)
	Target Area	Microenterprise Assistance
	Goals Supported	Microenterprise Assistance
	Needs Addressed	Microenterprise Assistance
	Funding	CDBG: $15,000
	Description	Provide hands on training for microenterprise owners on how to create and/or revamp their websites, and create marketing strategies.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	This activity expects to serve 15 Milpitas microenterprises.
	Location Description	Filipino American Chamber of Commerce

	Planned Activities	Provide hands on training for small business owners on how to create and/or revamp their websites, and create marketing strategies.
28	**Project Name**	The Health Trust (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $20,000
	Description	The Health Trust Meals On Wheels program serves physically challenged, home-bound individuals, whether they are elderly, are recuperating after a recent hospitalization, or have disabilities confining them to a wheelchair. Trained drivers, most of whom are volunteers, deliver hot, nutritious meals five days a week along with frozen meals for preparation over the weekend. Drivers also provide daily wellness checks, making sure that clients are safe, alert and cared for. This service provides peace of mind not only to the clients, but also to their families.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Meals on Wheels plans to serve 20 Milpitas residents.
	Location Description	At each of the client's home.
	Planned Activities	Provide seniors with daily healthy, hot meals.
29	**Project Name**	Silicon Valley Independent Living Center - Rent Relief (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	$168,949.35
	Description	Direct aid to the Rent Relief Program
	Target Date	6/30/2022

	Estimate the number and type of families that will benefit from the proposed activities	SVILC expects to serve approximately 135 LMC residents
	Location Description	Throughout Milpitas
	Planned Activities	Providing rental assistance to LMC Milpitas residents at risk of eviction due to COVID-19.
30	**Project Name**	Program Administration (CDBG-CV3)
	Target Area	Citywide
	Goals Supported	Program Administration
	Needs Addressed	Program Administration
	Funding **Description**	CDBG: $116,447.20 Program Administration
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Program Administration
	Location Description	Milpitas, CA
	Planned Activities	Program Administration

AP-50 Geographic Distribution – 91.220(f)

Description of the geographic areas of the entitlement (including areas of low-income and minority concentration) where assistance will be directed

Not applicable. The City of Milpitas does not set geographic concentration areas for assistance. Instead the City helps fund organizations that provide supportive services to low and moderate income individuals throughout the City.

Geographic Distribution

Target Area	Percentage of Funds

Table 8 - Geographic Distribution

Rationale for the priorities for allocating investments geographically

Not applicable

Discussion

Not applicable

Affordable Housing

AP-55 Affordable Housing – 91.220(g)

Introduction

The City adopted Affordable Housing Ordinance No. 297 on June 12, 2018. The Affordable Housing Ordinance requires that all new developments over 10 units requires 15% affordable units. The Ordinance On March 5, 2019, the City established residential and non-residential affordable housing fees.

One Year Goals for the Number of Households to be Supported	
Homeless	0
Non-Homeless	200
Special-Needs	1,500
Total	1,700

Table 9 - One Year Goals for Affordable Housing by Support Requirement

One Year Goals for the Number of Households Supported Through	
Rental Assistance	0
The Production of New Units	112
Rehab of Existing Units	43
Acquisition of Existing Units	50
Total	205

Table 10 - One Year Goals for Affordable Housing by Support Type

Discussion

The high cost of land has been an obstacle in developing affordable housing projects. The City has committed $6,500,000 to fund a 100% affordable housing building complete with 101 deeply affordable units and one above moderate managers unit. Additionally, the City has received City Council approval to modify our loan agreement on the MonteVista apartments, which will deed restrict 50 previously market rate units at 80% AMI for 40 years.

AP-60 Public Housing – 91.220(h)

Introduction

The City of Milpitas currently does not have any public housing. However, there is one Project-based Section 8 property in the City, the Sunnyhills Apartments. The Sunnyhills Apartments is a 171-unit development in which 149 units receive project-based Section 8 vouchers. The Project-based Section 8 vouchers provides rental assistance for each unit between the Department of Housing and Urban Development (HUD) established Fair Market Rent (FMR) for the area and what the tenant can afford to pay. Its aim is to be competitive with the local market thus incentivizing the owner to rent to low income households. The City has agreed to extend the HUD contract for another five years.

Actions planned during the next year to address the needs to public housing

This is not applicable to the City of Milpitas as there are no public housing units owned or managed by the Housing Authority of the County of Santa Clara in the City.

Actions to encourage public housing residents to become more involved in management and participate in homeownership

Not applicable. There are no public housing units in the City of Milpitas.

If the PHA is designated as troubled, describe the manner in which financial assistance will be provided or other assistance

Not applicable.

Discussion

Not applicable.

AP-65 Homeless and Other Special Needs Activities – 91.220(i)

Introduction

The County of Santa Clara and the City have designated homelessness as a critical issue. Although the total homeless population is declining as a whole, there still remains 7,394 homeless persons. In Santa Clara County's 2017 Point-in-Time Census & Survey Comprehensive Report, the survey identified a total of 66 unsheltered homeless persons in Milpitas. Notably, there was a decrease by 46% unsheltered homeless persons in Milpitas. Given the complexity of homelessness, interagency and interregional collaboration is crucial in solving the homeless issue. The City is gearing up for the next Point-in-Time Census & Survey and will work with the County.

Describe the jurisdictions one-year goals and actions for reducing and ending homelessness including reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

The City of Milpitas partners with Santa Clara County Continuum of Care to conduct the bi-annual Homeless Point in Time survey. In January 2017, Point-in-Time Count was conducted by the County of Santa Clara, the City of San Jose and Applied Survey Research for the 2017 Santa Clara County's biennial Point-in-Time count of homeless persons as required by the U.S. Department of Housing and Urban Development (HUD). The group, along with volunteers, did a physical count of those individuals residing outside a sheltered home i.e. parks, vehicles, highways, creeks etc. The survey and count was crucial as it is used for important qualitative and quantitative data as a representative sample to understand where they resided and respond to any immediate needs. The homeless were surveyed about a variety of issues including shelter, services and assistance. Staff will also participate in the preparation of the upcoming 2019 bi-annual Santa Clara Homeless Census Survey.

Addressing the emergency shelter and transitional housing needs of homeless persons

The City of Milpitas will address emergency shelter and transitional housing needs of homeless persons by continuing to fund organizations that provide emergency housing. In the upcoming year, the City provided over $30,253 to organizations that provided emergency shelter to homeless individuals or at-risk, which includes victims of domestic violence and an additional $136,677 in emergency shelter repairs. The organizations that have provide emergency shelter include Next Door Solutions to Domestic Violence, YWCA and LifeMoves.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families

OMB Control No: 2506-0117 (exp. 06/30/2018)

experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again.

On February 2, 2016, City Council members adopted Resolution No. 8523, finding that the problem of homelessness constitutes a crisis and consider policy options for funding affordable housing to house homeless people. The City will continue to fund and participate in the County Point-in-Time Census to identify all unsheltered persons.

CDBG Funded

- Next Door Solutions to Domestic Violence: Next Door Solutions to Domestic Violence provides client-centered, community-based supportive services for victims of domestic violence and his/her children. The organization also provides undisclosed emergency shelter when requested and needed by the individual and/or family.
- YWCA Silicon Valley (YWCA): YWCA Silicon Valley empowers women and her children to end racism and violence through offering supportive services for self-improvement and undisclosed emergency shelter for short-term to a longer amount of time if needed. YWCA also provides clients referrals to permanent housing if possible, and available.
- LifeMoves: LifeMoves provides emergency, interim and permanent supportive housing. Clients are provided with shelter, food, clothing, intensive case management, and intensive supportive services.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

The City of Milpitas is involved and participates in the Santa Clara County Continuum of Care that is dedicated to ending and preventing homelessness in the County. The Santa Clara County Continuum of Care has community-wide efforts to end homelessness through fostering relationships, program and systematic changes.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); or, receiving assistance from public or private

agencies that address housing, health, social services, employment, education, or youth needs.

As mentioned in the previous paragraph of CDBG funded programs related to emergency shelter, the City also funds organizations that take proactive measures in helping individuals in need of legal help, youth needs and concerns and fair housing so that he/she can become informed of his or her rights before the individual is forced into homelessness.

CDBG and City Local Funds

- Child Advocates of Silicon Valley: Child Advocates connect court appointed special advocates (CASAs) to foster children. These volunteers must make a commitment to the children for a long-term, many for his or her entire life. The consistent support of the CASA is often the only adult has steadily remain with them providing crucial mentorship. In foster children, according to a HUD's report, "Housing for Youth Aging out of Foster Care," found that as high as thirty-seven percent (37%) will enter homelessness at one point as youths and an addition fifty percent (50%) will face unstable housing after transition. By providing a CASA, this will be one stable support in his or her life which has spastically proven to develop productive individuals. Many of the children with CASAs, have higher rates of high school graduation then the national average. The program provides essential holistic approach to help these children to become successful and prevent homelessness.
- Seniors Adults Legal Assistance (SALA): SALA is committed to providing free-legal services to seniors. Legal services that SALA provides ranges from: public benefits, long-term care, alternatives to institutionalization, elder abuse, long-term care insurance, incapacity planning, probate, simple wills and housing – related to Landlord-Tenant issues. Often, many seniors do not know his or her housing rights or sign over the will of their house without knowing, and with fixed income, many are unable to provide legal help. SALA provides legal help free of charge for these low to extremely-low income seniors.

Discussion

Please see discussion above.

AP-75 Barriers to affordable housing – 91.220(j)

Introduction:

Along with other jurisdictions in Santa Clara County, the City of Milpitas is facing many obstacles in creating more affordable housing. The many constraints that the City is facing is the limited amount of developable land, government constraints, infrastructure and public facilities constraints, environmental, housing for persons with disabilities, and financing and construction costs.

Actions it planned to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment

Resolution No. 8523

The City adopted Resolution No. 8523 on February 2, 2016, which recognizes homelessness as a crucial problem in the County and will help contribute to future affordable housing projects that will house homeless.

Affordable Housing Ordinance

On June 12, 2018, the City Council adopted an Affordable Housing Ordinance No. 297 which requires that any new developments with projects of ten (10) or more units must include fifteen percent (15%) of very-low or low-income units for rental and 15% of moderate income units for ownership. The units should be affordable for over 55 years.

Density Bonus Ordinance

To attract developers to build affordable units, the Density Bonus Ordinance will allow developers the ability to build above their permitted densities in permitted zoning districts in exchange for the construction of affordable units.

Below Market Rate Ownership

The City manages a Below Market Rate (BMR) Ownership program for first-time, income-qualified homebuyers. Once a unit from the current BMR housing stock becomes available, a qualified applicant from the waiting list will have the ability to purchase a home in Milpitas at one of the various developments throughout the City from one to three bedrooms. For qualified very-low to low income

households, the City also provides a deferred, 3% loan of up to $50,000.

Fair Housing

Milpitas provides CDBG and Housing Authority funds to Project Sentinel. Project Sentinel is a reputable organization that provides expertise in fair housing and tenant-landlord dispute. Services include information, referrals, community outreach and education in several languages other than English, investigation, and resolving fair housing complaints. In addition, they provide education and outreach to property owners, and property management to become proactive in their housing policies.

Discussion:

Please see discussion above.

AP-85 Other Actions – 91.220(k)

Introduction:

The most significant obstacle to addressing the underserved needs for fiscal year 2019-2020 is the lack of sufficient federal, state, and local funds to carry out all the necessary programs, activities and projects.

Actions planned to address obstacles to meeting underserved needs

The diminishing amount of funds continues to be the most significant obstacle to addressing the needs of underserved populations. To address this, the City supplements its CDBG funding with other resources and funds, such as:

• The City of Milpitas Affordable Housing Fund is used primarily to increase the number of new affordable housing units. It is funded through the mitigation fees required from developers of resident projects.

The City recently adopted the Affordable Housing Ordinance which requires that any new developments with projects of ten (10) or more units must include fifteen percent (15%) of very-low or low-income units for rental and 15% of moderate income units for ownership.

• The City's provides loans on an ongoing, as qualified basis for BMR applicants to qualify for purchasing an available BMR unit.

• Rehabilitation Loan Program provides deferred, low-interest loans for rehabilitation and preservation of the City's stock of BMR ownership units.

• The County distributes federal McKinney Homeless Assistance funds to organizations in the county that provide services to homeless persons and persons at-risk of homelessness.

• The California Tax Credit Allocation Committee (CTCAC) holds two application cycles for Low Income Housing Tax Credits each year. Local non-profits apply directly to the CTCAC for these funds when they have identified a project.

• The Housing Trust Silicon Valley is a nonprofit organization that combines private and public funds to support affordable housing activities in the County, including assistance to developers and homebuyers.

• The Mortgage Credit Certificate (MCC) Program provides assistance to first-time homebuyers by allowing an eligible purchaser to take 20 percent of their annual mortgage interest payment as a tax credit against federal income taxes. The County administers the MCC Program on behalf of the jurisdictions in the County, including the City.

Measure A Affordable Housing Bond was approved by voters in November 2016 that approved $950 million dollars for the County to address housing needs for the most vulnerable residents, those in the extremely low-income households.

Actions planned to foster and maintain affordable housing

The City has taken proactive steps to help decrease the barriers in affordable housing through the following ordinances:

Resolution No. 8523

The City adopted Resolution No. 8523 on February 2, 2016, which recognizes homelessness as a crucial problem in the County and will consider contributing to future affordable housing projects that will house the homeless.

Affordable Housing Ordinance

On June 12, 2018, the City Council adopted an Affordable Housing Ordinance which requires that any new developments with projects of ten (10) or more units must include fifteen percent (15%) of very-low or low-income units for rental and 15% of moderate income units for ownership. The units should be affordable for over 55 years.

Density Bonus Ordinance

To attract developers to build affordable units, the Density Bonus Ordinance will allow developers the ability to build above their permitted densities in permitted zoning districts in exchange for the provision of affordable units in the development.

Below Market Rate Ownership

The City manages a Below Market Rate (BMR) Ownership program for first-time, income-qualified homebuyers. Once a unit from the current BMR housing stock becomes available, the homebuyer will have the ability to purchase a home in Milpitas at one of the various developments throughout the City from one to three bedrooms. For qualified very-low to low income households, the City also provides a loan of up to $50,000.

Housing Trust Silicon Valley

Housing Trust Silicon Valley provided financial support for 86 affordable housing projects of $55.7 million, which funded over 5,059 affordable rental units. In addition made 2,306 loans to homebuyers,

totaling over $44.9 million. Lastly, Housing Trust of Silicon Valley provided homeless grants of over $3.4 million to assist over 5,954 individuals.

Fair Housing

Project Sentinel is an organization that provides expertise in fair housing and tenant-landlord dispute. Services include information, referrals, community outreach and education in several languages other than English, investigation, and resolving fair housing complaints.

Actions planned to reduce lead-based paint hazards

The County of Santa Clara has received funding from State's Department of Health Service and Federal Government for Center for Disease Control to implement a Childhood Lead Poisoning Prevention Program. The funded programs include: community outreach screen, case management and public education to inform low-to-moderate income and older communities. The project will then follow up with environmental testing, lead-based education, blood-lead testing for children, hazard reduction grants and follow up with monitoring and testing.

Milpitas has adopted a Lead-Based Paint Management Plan which complies with HUD Based Paint regulations, which outlines the required states of abatement and remediation for rehabilitation projects. In addition the City publicize and identifies lead-based hazards and older residential projects through its Code Enforcement Division and Building Department. In addition, projects undergoing rehabilitation, under the City's Rehabilitation, provides technical assistance and abatement of lead based paints.

Actions planned to reduce the number of poverty-level families

- As stated prior, the City of Milpitas will follow these actions:
- Work with non-profit housing developers to fund and provide more affordable housing opportunities to address the homeless problem and needs of very low and low-income households.
- Provide funding and supportive services to prevent very low-income persons and families from becoming homeless and assist them in ending the cycle of homelessness.
- Address the employment and income needs of individuals and families who are economically disadvantaged, including persons who are homeless, who have disabilities, and those who are participating in the County of Santa Clara Welfare-to-Work Programs.

- Provide funding for a variety of services and referrals to assist people in obtaining access to public assistance to prevent poverty.
- Per Section 3, if there are HUD funded projects that can create direct economic opportunities must take every effort to recruit, target and directed towards low and very low income residents and businesses.

Actions planned to develop institutional structure

The City is striving to improve intergovernmental and private sector cooperation to synergize efforts and resources and develop new revenues for community service needs and the production of affordable housing. Collaborative efforts include:

- Regular quarterly meetings between entitlement jurisdictions at the CDBG Coordinators Meeting and Regional Housing Working Group
- Joint jurisdiction Request for Proposals and project review committees
- Coordination on project management for projects funded by multiple jurisdictions. Recent examples include the effort by the County to create a regional affordable housing fund, using former redevelopment funds that could be returned to the County to use for affordable housing. Another effort underway involves the possible use of former redevelopment funds to create a countywide pool for homeless shelters and transitional housing. These interactions among agencies generate cohesive discussion and forums for bridging funding and service gaps on a regional scale.

Actions planned to enhance coordination between public and private housing and social service agencies

The City benefits from a strong jurisdiction and region-wide network of housing and community development partners, such as the County and the CoC. To improve intergovernmental and private sector cooperation, the City will continue to participate with other local jurisdictions and developers in sharing information and resources.

Discussion:

Please see discussion above.

Program Specific Requirements

AP-90 Program Specific Requirements – 91.220(l) (1, 2, 4)

Introduction:

The City of Milpitas only receives CDBG funds and will receive the following program income for FY19-20.

Community Development Block Grant Program (CDBG)
Reference 24 CFR 91.220(l)(1)

Projects planned with all CDBG funds expected to be available during the year are identified in the Projects Table. The following identifies program income that is available for use that is included in projects to be carried out.

1. The total amount of program income that will have been received before the start of the next program year and that has not yet been reprogrammed	$8,959
2. The amount of proceeds from section 108 loan guarantees that will be used during the year to address the priority needs and specific objectives identified in the grantee's strategic plan.	0
3. The amount of surplus funds from urban renewal settlements	0
4. The amount of any grant funds returned to the line of credit for which the planned use has not been included in a prior statement or plan	0
5. The amount of income from float-funded activities	0
Total Program Income:	**$8,959**

Other CDBG Requirements

1. The amount of urgent need activities	0
2. The estimated percentage of CDBG funds that will be used for activities that benefit persons of low and moderate income. Overall Benefit - A consecutive period of one, two or three years may be used to determine that a minimum overall benefit of 70% of CDBG funds is used to benefit persons of low and moderate income. Specify the years covered that include this Annual Action Plan.	0.00%

Executive Summary

AP-05 Executive Summary - 24 CFR 91.200(c), 91.220(b)

1. Introduction

The City of Milpitas received an initial Community Development Block Grant (CDBG) entitlement grant of $682,977. In January 22, 2021, the City announced that the application period for Program Year 2022 applications would be open from February 8, 2021 through March 21, 2021. The City is also allocating $582,236 in CDBG-CV3 funds and $17,027.45 in prior year unused funding. However, it will do so via an amendment to the Program Year 2020 Annual Action Plan.

The City Council recommended allocating a total of $256,462.55 to public services. These public services are for activities such as the Milpitas Rent Relief Program, housing search assistance for persons with disabilities, as well as general youth and senior services.

The City Council recommended allocating $291,902.65 in CDBG formula funds to four different organizations for capital projects. These projects include: (1) replacing the kitchenette at Terrace Gardens, (2) performing repairs to the exterior of the LifeMoves Villa homeless shelter; (3) funding to provide home repairs, rehabilitation, accessibility and mobility services work to low-income homeowners; and (4) replacing the flooring throughout the Next Door Solutions to Domestic Violence shelter facility.

The City Council allocated $78,321.80 to planning and administration and $56,290 for fair housing services through Project Sentinel.

2. Summarize the objectives and outcomes identified in the Plan

This could be a restatement of items or a table listed elsewhere in the plan or a reference to another location. It may also contain any essential items from the housing and homeless needs assessment, the housing market analysis or the strategic plan.

The objectives and outcomes identified in this Consolidated Plan to allocate CDBG funds and action taken by Annual Action Plan will be directed towards accomplishing the following priority housing and community development needs in Milpitas:

- Maintain and Preserve Existing Housing
- New Affordable Housing
- Affordable Housing Rental Rehabilitation
- Community Funding/Public Services
- Public services for low- and moderate-income residents at risk of eviction

- Fair Housing
- Public Services for Children and Youth
- Public Services for Seniors
- Public Services for Domestic Violence support
- Public Improvements including accessibility and improving public facilities
- Assist Microenterprises and Small Businesses
- Explore the use of HUD Section 108 Loan Guarantee Program

3. Evaluation of past performance

City of Milpitas has had successful implementation of all projects included in the plan. The projects have met all timeliness deadlines and have benefitted low- and moderate-income residents.

4. Summary of Citizen Participation Process and consultation process

The City held a public meeting with the Community Advisory Commission (CAC) on April 7, 2021 to review applications and hear applicant presentations. The CAC made their recommendations for funding to the City Council. Twenty-four public comments were heard from prospective applicants summarizing their proposed activities and how their activities would benefit Milpitas residents.

On April 28, 2021, the City submitted a waiver to HUD to reduce the opportunity for Citizen Participation and opportunity to comment down to five days. Public notice was provided on April 30, 2021 via the City's website. Included on the website was a link to the documents and instructions on how to attend the public hearing. The City also placed an advertisement in the Milpitas post with the same information.

On May 7, 2021, the City Council held a public hearing to discuss the allocation of CDBG funding for FY21-22 and for CDBG-CV3. Twenty-two public comments were heard, 21 of which were from prospective applicants summarizing their proposed activities and how their activities would benefit Milpitas residents. One member of the community expressed their opinion on community priorities the Council should focus on with the funding.

On May 14, 2021, the City posted the draft amendment to the FY21-22 Annual Action Plan on its website to provide opportunities for public comment. The documents were posted at this url: http://www.ci.milpitas.ca.gov/milpitas/departments/federalprogram-community-development-block-grant-cdbg/

5. Summary of public comments

This could be a brief narrative summary or reference an attached document from the Citizen Participation section of the Con Plan.

At the February 3, 2021 Community Advisory Commission meeting, one member of the public emphasized the need for the following as it relates to COVID-19: increased testing capacity, exposure notifications, health checks, education to seniors and youth, and increased vaccination capacity throughout the City.

At the April 7, 2021 Community Advisory Commission meeting, 24 prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.

At the May 7, 2021 City Council study session, 22 public comments were heard during the public hearing. Twenty-one were from prospective FY21-22 CDBG applicants who gave comments to the City Council to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas. One comment was from a member of the public who expressed their opinion on community priorities in the City of Milpitas.

6. Summary of comments or views not accepted and the reasons for not accepting them

N/A

7. Summary

Following the requirements of the Citizen Participation Plan, the CAC made their estimated funding recommendations to the City Council on April 7, 2021. On May 7, 2021, at a public hearing held by the City Council during a study session on the CDBG funding allocations, the City Council provided direction to staff and directed them to return to Council on June 15, 2021 with the draft Annual Action Plan.

On May 14, 2021, the City posted the draft amendment to the FY21-22 Annual Action Plan on its website to provide opportunities for public comment. The documents were posted at this url: http://www.ci.milpitas.ca.gov/milpitas/departments/federalprogram-community-development-block-grant-cdbg/

PR-05 Lead & Responsible Agencies – 91.200(b)

1. Agency/entity responsible for preparing/administering the Consolidated Plan

Describe the agency/entity responsible for preparing the Consolidated Plan and those responsible for administration of each grant program and funding source.

Agency Role	Name	Department/Agency
CDBG Administrator	MILPITAS	Building Safety & Housing

Table 1 – Responsible Agencies

Narrative (optional)

The City of Milpitas – Building Safety & Housing Department is the lead agency for the United States Department of Housing and Urban Development (HUD) entitlement program, Community Development Block Grant (CDBG).

Pursuant to the Department of Housing and Urban Development (HUD) funding requirements and in conformance with 24 CFR Part 91, Consolidated Submission for Community Planning and Development Programs, City of Milpitas has prepared and adopted the 2021-2022 Annual Action Plan. The Action Plan is submitted annually and describes the eligible programs, projects and activities to be undertaken with funds that are expected to be made available during the fiscal year 2021-2022 and their relationship to the City's priorities and needs for housing, homelessness and community development laid out in the Five-Year Consolidated Plan.

In 2017, City of Milpitas submitted its Five-Year Consolidated Plan (2017-2022) to HUD. The Milpitas Consolidated Plan has been reviewed and approved by HUD. The Consolidated Plan identifies the long-term goals and objectives achieved and consistent with the annual Action Plan Report. Included with the submission of the Action Plan is the Standard Form 424, Proposed Projects and Certifications as required the by Community Development Block Grant (CDBG) Program regulations. The goals and objectives identified in the Milpitas Action Plan are in full compliance with the approved and adopted policies and procedures outlined in the Milpitas CDBG Citizen Participation Plan.

The public review and comments period for the Draft Annual Action Plan is May 14 - June 15, 2021. The City Council reviewed the Consolidated Plan and adopted it on June 15, 2021.

The City of Milpitas has updated its Analysis of Impediments (AI) to Fair Housing Choice Report in 2016 in anticipation of the preparation for the future Consolidated Plan (2018-2023). The previous AI Report was adopted in 2011.

In May 2015, City of Milpitas General Plan Housing Element (2015-2023) was certified by State of California Department of Housing and Community Development (HCD). The Milpitas City Council reviewed and adopted its Housing Element on April 28, 2015.

Consolidated Plan Public Contact Information

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AP-10 Consultation – 91.100, 91.200(b), 91.215(l)

1. Introduction

The City of Milpitas requested a number of consultations with a multitude of stakeholders in the development of the Annual Action Plan. The City of Milpitas solicited comments and public input for 10 days for the draft Annual Action Plan. In addition, the City posted the public hearing notice on its website, sent an email to all CDBG applicants, the Community Advisory Commission, and other agencies or individuals who can further Citizen Participation. Public notices were sent out notifying the public hearings for the CAC funding recommendations and at the City Council virtual public hearing. Additionally, an advertisement was posted in the Milpitas Post.

Provide a concise summary of the jurisdiction's activities to enhance coordination between public and assisted housing providers and private and governmental health, mental health and service agencies (91.215(l))

The City participates in a quarterly meeting with all local jurisdictions, including the Housing Authority and HUD to discuss housing cooperation. City staff continues to maintain dialogue with all service providers, public and private to enhance services or if the City can connect service providers for better coordination of service deliveries. Regionally, housing coordinators attend a weekly call to share information, seek assistance of housing issues not limited to CDBG and HOME.

Describe coordination with the Continuum of Care and efforts to address the needs of homeless persons (particularly chronically homeless individuals and families, families with children, veterans, and unaccompanied youth) and persons at risk of homelessness.

The Santa Clara County Continuum of Care (CoC) is a multi-sector group of stakeholders guiding the implementation of the County's housing and service system to meet the need and prevent and end homelessness. The CoC includes: 1) permanent housing, 2) emergency shelter with outreach and assessment services, 3) transitional housing with support services, and 4) prevention services. In 2020, the City of Milpitas participated in the preparation of the Community Plan to End Homelessness in Santa Clara County. The Plan identifies strategies to address the needs of homeless persons in the county. On October 6, 2020, the City Council endorsed the 2020-2025 Santa Clara County Community Plan to End Homelessness.

Describe consultation with the Continuum(s) of Care that serves the jurisdiction's area in determining how to allocate ESG funds, develop performance standards for and evaluate outcomes of projects and activities assisted by ESG funds, and develop funding, policies and procedures for the operation and administration of HMIS

The City of Milpitas does not receive Emergency Shelter Grant (ESG) funding however the City participates with the CoC to address homeless issues.

2. Describe Agencies, groups, organizations and others who participated in the process and describe the jurisdiction's consultations with housing, social service agencies and other entities

Table 2 – Agencies, groups, organizations who participated

1	**Agency/Group/Organization**	Project Sentinel
	Agency/Group/Organization Type	Service-Fair Housing
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Fair Housing
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Project Sentinel attended a community meeting to voice the needs on behalf the community and seek continued support for fair housing and tenant landlord mitigation services. The City will continue to support fair housing services.
2	**Agency/Group/Organization**	Catholic Charities of Santa Clara County Long Term Care Ombudsman Program
	Agency/Group/Organization Type	Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Catholic Charities attended to voice the need for those living in long term care.
3	**Agency/Group/Organization**	Child Advocates of Silicon Valley
	Agency/Group/Organization Type	Services-Children
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Child Advocates attended to voice the need for the children in the foster care system.
4	**Agency/Group/Organization**	Next Door Solutions to Domestic Violence
	Agency/Group/Organization Type	Services - Victims
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs

	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Next Door Solutions to Domestic Violence attended to voice the need for services for families experience abuse.
5	**Agency/Group/Organization**	Senior Adults Legal Assistance (SALA)
	Agency/Group/Organization Type	Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from SALA attended to voice the need for continuing legal services for senior persons.
6	**Agency/Group/Organization**	Silicon Valley Independent Living Center
	Agency/Group/Organization Type	Housing Services – Interim Assistance (Rent Relief) Services – Elderly Person Services – Persons with Disabilities Services – Homeless
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Homeless Needs - Chronically homeless Homeless Needs - Families with children Disproportionately Greater Need: Housing Cost Burdens
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from SVILC attended to voice the need for providing additional rent relief services as well as other housing needs and referrals to partner organizations.
7	**Agency/Group/Organization**	YWCA
	Agency/Group/Organization Type	Services - Children
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from YWCA attended to voice the need for continued services for persons experiencing domestic abuse.
8	**Agency/Group/Organization**	Rebuilding Together Silicon Valley
	Agency/Group/Organization Type	Services - Housing
	What section of the Plan was addressed by Consultation?	Housing Need Assessment

	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Rebuilding Together Silicon Valley attended to voice the need for continued services for low-income home repairs.
9	**Agency/Group/Organization**	Terrace Gardens Senior Housing, Inc.
	Agency/Group/Organization Type	Housing Services - Housing Services-Elderly Persons
	What section of the Plan was addressed by Consultation?	Non-Homeless Special Needs
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from Terrace Gardens attended to voice the need for services for senior person(s).
10	**Agency/Group/Organization**	LifeMoves
	Agency/Group/Organization Type	Housing Services - Housing Services - Homeless housing need assessment
	What section of the Plan was addressed by Consultation?	Homeless Needs - Chronically homeless Homeless Needs - Families with children Homeless Needs - Veterans
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	The surrounding organizations were contacted via email, Milpitas Post and City's website. A staff member from LifeMoves attended to voice the need for continued services for the homeless populations they serve.

Identify any Agency Types not consulted and provide rationale for not consulting

The City did not consult with nearby correctional facility or child welfare entities. The organization has various partnerships with the County and the City works with those organizations indirectly through the several partnerships through the County and sub-recipients funded and outlined in this Action Plan.

Other local/regional/state/federal planning efforts considered when preparing the Plan

Name of Plan	Lead Organization	How do the goals of your Strategic Plan overlap with the goals of each plan?
Continuum of Care	Regional Continuum of Care Council	The Continuum of Care works to alleviate the impact of homelessness in the community through the cooperation and collaboration of social service providers. This effort aligns with the Strategic Plan's goal to support activities to prevent and end homelessness.
City of Milpitas Housing Element	City of Milpitas	The Housing Element serves as a policy guide to help the City meet its existing and future housing needs. This effort aligns with the Strategic Plan's goal to assist in the creation and preservation of affordable housing.

Table 3 – Other local / regional / federal planning efforts

Narrative (optional)

AP-12 Participation – 91.105, 91.200(c)

1. Summary of citizen participation process/Efforts made to broaden citizen participation Summarize citizen participation process and how it impacted goal setting

The citizen participation process includes holding several public community meetings and workshops for maximum citizen participation. City staff worked closely with the City's Community Advisory Commission (CAC) holding two informational sessions for the Commission and community to understand and participate in the CDBG process. The CAC held a public meeting to discuss the allocations for FY21-22 and CDBG-CV funds.

The City conducted 5 total meetings to discuss CDBG allocations, 2 of which were public hearings. Noticing for the public hearings were done in accordance with the Citizen Participation Plan, which has been amended in accordance with HUD guidelines.

At the February 3, 2021 Community Advisory Commission meeting, one member of the public emphasized the need for the following as it relates to COVID-19: increased testing capacity, exposure notifications, health checks, education to seniors and youth, and increased vaccination capacity throughout the City.

At the April 7, 2021 Community Advisory Commission meeting, 24 prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.

At the May 7, 2021 City Council study session, 22 public comments were heard during the public hearing. Twenty-one were from prospective FY21-22 CDBG applicants who gave comments to the City Council to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas. One comment was from a member of the public who expressed their opinion on community priorities in the City of Milpitas.

On May 14, 2021, the City posted the draft amendment to the FY21-22 Annual Action Plan on its website to provide opportunities for public comment. The documents were posted at this url: http://www.ci.milpitas.ca.gov/milpitas/departments/federalprogram-community-development-block-grant-cdbg/

Citizen Participation Outreach

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/ attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
1	News-paper ad	Non-targeted/broad community	Opening the application period	No comments were received	n/a	
2	Application Workshop	Non-targeted/broad community	30 Attendees	General comments & questions about the CDBG application and process.	n/a	
3	Public Meeting (CAC)	Non-targeted/broad community	10 Attendees	General comments & questions about the CDBG application and process.	n/a	
4	Public Meeting (CAC)	Non-targeted/broad community	24 comments were received/40 Attendees	Prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.	n/a	
5	News-paper ad/website	Non-targeted/broad community	City Council CDBG Study Session	No comments were received	n/a	
6	City Council CDBG Study Session Virtual Public Hearing	Non-targeted/broad community	22 comments were received/50 Attendees	Prospective FY21-22 CDBG applicants gave comments to the Commission to provide information about their organization, their proposed project, and how it will benefit the residents of Milpitas.		
7	Website	Non-targeted/Broad community	Draft AAP	No comments were received		
8	News-paper ad	Non-targeted/broad community	City Council Meeting	No comments were received		
9	City Council Meeting Virtual Public Hearing	Non-targeted/broad community				

Table 4 – Citizen Participation Outreach

Expected Resources

AP-15 Expected Resources – 91.220(c)(1,2)

Introduction

The City of Milpitas will receive $682,977 for Program Year 2022 in CDBG funds.

Anticipated Resources

Program	Source of Funds	Uses of Funds	Expected Amount Available Year 1				Expected Amount Available Remainder of ConPlan	Narrative Description
			Annual Allocation	Program Income	Prior Year Resources	Total		
CDBG	public - federal	Acquisition Admin and Planning Economic Development Housing Public Improvements Public Services	$682,977	$8,959	$0	$691,936	$682,977	

Table 5 - Expected Resources – Priority Table

Explain how federal funds will leverage those additional resources (private, state and local funds), including a description of how matching requirements will be satisfied

Not applicable, the City does not match federal funds.

If appropriate, describe publicly owned land or property located within the jurisdiction that may be used to address the needs identified in the plan

There are two parcels controlled by the City. One parcel, located at 1432 S. Main Street, is owned by Milpitas Housing Authority and is approximately 0.9 acres in size. Currently the parcel is occupied by commercial tenants, but the land is zoned as high-density multi-family residential. The other parcel, approximately 1.7 acres, is located adjacent to the Milpitas Housing Authority property and is owned by the City of Milpitas. That City parcel is also occupied by commercial business but is also zoned for multi-family residential use. The City is currently working on a partnership with the County of Santa Clara to

potentially develop both parcels for affordable housing units.

Discussion

Please see discussion above.

Annual Goals and Objectives

AP-20 Annual Goals and Objectives

Goals Summary Information

Sort Order	Goal Name	Start Year	End Year	Category	Geographic Area	Needs Addressed	Funding	Goal Outcome Indicator
1	Maintain and Preserve Existing Housing	2017	2022	Affordable Housing Non-Homeless Special Needs	Citywide	Affordable Housing Development and Preservation	$173,970.00	Maintain and preserve exisitng housing for 42 units
2	New Affordable Housing	2017	2022	Affordable Housing	Citywide	Availability/Accessibility	N/A	N/A
3	Affordable Housing Rental Rehabilitation	2017	2022	Non-Housing Community Development	Citywide	Affordable Housing Development and Preservation	$11,000.00	Affordable housing rehabilitation to benefit 149 LMI units
4	Community Funding/Public Services	2017	2022	Homeless Non-Homeless Special Needs	Citywide	Community Services	N/A	N/A
5	Public services for low- and moderate-income residents at risk of eviction	2020	2022	Homeless Non-Homeless Special Needs	Citywide	Community Services	$158,746.65	Provide 125 LMC individuals with up to $5,000 in rental assistance
6	Fair Housing	2017	2022	Affordable Housing Non-Homeless Special Needs	Citywide	Community Services	$56,290.00	Provide fair housing services to benefit 320 LMI individuals
7	Public Services for Children and Youth	2017	2022	Non-Homeless Special Needs Non-Housing Community Development	Citywide	Community Services	$52,500.00	Provide public services activities to 407 children
8	Public Services for Seniors	2017	2022	Non-Homeless Special Needs Non-Housing Community Development	Citywide	Community Services	$45,216.00	Provide public services activities for 85 seniors

9	Public Services for Domestic Violence support	2020	2022	Non-Homeless Special Needs	Citywide	Community Services	N/A	N/A
10	Public Improvements including accessibility and improving public facilities	2017	2022	Non-Housing Community Development	Citywide	Community Services	$106,932.55	Provide public improvements to assist 77 LMI individuals
11	Assist Microenterprises and Small Businesses	2020	2022	Non-Housing Community Development	Citywide	Economic Development	CDBG: $0	N/A
12	Explore the use of HUD Section 108 Loan Guarantee Program	2020	2022	Affordable Housing Non-Housing Community Development	Citywide	Community Services Economic Development	CDBG: $0	N/A

Table 6 – Goals Summary

Goal Descriptions

1	**Goal Name**	Maintain and Preserve Existing Housing
	Goal Description	Maintain and preserve existing housing for 42 Households
2	**Goal Name**	New Affordable Housing
	Goal Description	Availability/Accessibility
3	**Goal Name**	Affordable Housing Rental Rehabilitation
	Goal Description	Affordable housing rehabilitation to benefit 149 LMI households
4	**Goal Name**	Community Funding/Public Services
	Goal Description	Support public services activities to benefit members of the community
5	**Goal Name**	Public services for low- and moderate-income residents at risk of eviction
	Goal Description	Provide 125 LMC individuals with up to $5,000 in rental assistance
6	**Goal Name**	Fair Housing
	Goal Description	Provide fair housing services to benefit 320 LMI individuals
7	**Goal Name**	Public Services for Children and Youth
	Goal Description	Provide public services activities to 407 children
8	**Goal Name**	Public Services for Seniors

	Goal Description	Provide public services activities for 85 seniors
9	**Goal Name**	Public Services for Domestic Violence support
	Goal Description	Support public services activities to benefit LMI individuals
10	**Goal Name**	Public Improvements including accessibility and improving public facilities
	Goal Description	Provide accessibility and access to public facilities such as homeless and domestic violence shelters to benefit 77 LMI individuals
11	**Goal Name**	Assist Microenterprises and Small Businesses
	Goal Description	Support activities that support microenterprises and small businesses with loan funds to benefit LMI households
12	**Goal Name**	Explore the use of HUD Section 108 Loan Guarantee Program
	Goal Description	Support activities that assist in addressing the Affordable Housing Development and Preservation& Economic Development goals with the use of Section 108 funds.

Projects

AP-35 Projects – 91.220(d)

Introduction

The City of Milpitas only receives Community Development Block Grant (CDBG) funding. If available and recommended in certain circumstances, the City Council may also augment the funds and contribute from local funds, such as the Community Promotion Fund (CPF). All the funds mentioned, are in efforts to serve and improve the lives of low- and moderate-income persons in Milpitas.

Projects

#	Project Name
1	Catholic Charities of Santa Clara County
2	Child Advocates of Silicon Valley
3	Senior Adults Legal Assistance
4	Silicon Valley Independent Living Center
5	YWCA Silicon Valley
6	LifeMoves
7	Next Door Solutions to Domestic Violence
8	Rebuilding Together Silicon Valley
9	Terrace Gardens
10	Silicon Valley Independent Living Center (COVID-19)
11	Project Sentinel (Fair Housing)
12	Program Administration

Table 7 - Project Information

Describe the reasons for allocation priorities and any obstacles to addressing underserved needs

Allocation priorities are derived through qualitative research such as surveys, public meetings, public hearings and other avenues of resident input. The research has also impacted the priority needs that address the most vulnerable population in our communities. The City Council has established the priorities every two years to address those underserved needs.

AP-38 Project Summary

Project Summary Information

1	**Project Name**	Catholic Charities of Santa Clara County
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services
	Funding	CDBG: $20,500
	Description	Investigate and resolve complaints for seniors and disabled adults in long term care facilities.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Catholic Charities' Long-Term Care Ombudsman Program expects to help approximately 15 Milpitas residents. The Long-Term Care Ombudsman will make visits at all long-term care facilities to ensure all clients are safe and properly cared for.
	Location Description	All long-term care facilities in Milpitas.
	Planned Activities	Site visits to long term care facilities and nursing homes and provide with case management for those clients with open cases.
2	**Project Name**	Child Advocates of Silicon Valley
	Target Area	Citywide
	Goals Supported	Public Services for Children and Youth
	Needs Addressed	Community Services
	Funding	CDBG: $12,500
	Description	Provides court appointed youths with volunteers to maintain life-long mentorship and guidance.
	Target Date	6/30/2022

	Estimate the number and type of families that will benefit from the proposed activities	Child Advocates of Silicon Valley expects to serve 7 Milpitas foster children.
	Location Description	Milpitas, CA
	Planned Activities	Organization will recruit, train more volunteers and providing essential mentor and guidance for youth.
3	**Project Name**	Senior Adults Legal Assistance
	Target Area	Citywide
	Goals Supported **Needs Addressed**	Public Services for Seniors Community Services
	Funding	CDBG: $12,000
	Description	Legal services in the form of advice/referrals, consultations/brief service, and legal representation will be provided to Milpitas elders in areas of law common to SALA's target population including, but not limited to, the following: Public Benefits (Social Security, SSI, Medicare, and Medi-Cal); Nursing Homes and Alternatives to Institutionalization (including Advance Directives); Elder Abuse; Housing Law, Consumer Problems; and Personal Affairs (including Simple Wills through SALA's No Fee Wills Panel). SALA will provide services through on-site appointments scheduled at intake days at least once a month at the Barbara Lee (Milpitas) Senior Center. Home visits will be made to elders in Milpitas who are homebound or who reside in nursing homes. Milpitas residents with urgent problems will also be served on an emergency basis by telephone. Milpitas residents who appear at SALA intake sites in other cities will also be served. SALA will also conduct one community education presentation annually for the participants at the Milpitas Senior Center. All services described herein will be provided by one of the attorneys on SALA's staff, a pro bono (volunteer) attorney, or a paralegal (either paid staff or volunteer).
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Senior Adults Legal Assistance (SALA) expects to serve 20 Milpitas clients.
	Location Description	At their San Jose office, Milpitas Senior Center and Milpitas Library.
	Planned Activities	Legal assistance, including advising and counseling on basic rights. Facilitation access to public benefits to meet basic life needs and legal planning.
4	**Project Name**	Silicon Valley Independent Living Center
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Community Services

	Funding	CDBG: $12,716
	Description	Silicon Valley Independent Living Center (SVILC) is a nonprofit, non-residential organization which serves all people with all types of disabilities, including seniors with disabling conditions, who live in Santa Clara County. SVILC provides residents with support tools and resources needed to live interdependently, and advocates for policies that ensure equal access and opportunity for all. SVILC is a peer-driven agency run by and for people with disabilities. As one of 28 independent living centers across the State of California, SVILC is committed to the principles of self-advocacy, personal empowerment and independent living.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	The project expects to serve 50 Milpitas residents with disabilities.
	Location Description	San Jose
	Planned Activities	Assist low-income residents with disabilities in their search for affordable and accessible housing. Provide education and training workshops on how to conduct a housing search to transition from homelessness, from a health care facility, unstable or to permanent housing.
5	**Project Name**	YWCA Silicon Valley
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	CDBG: $40,000
	Description	YWCA Silicon Valley will provide intimate partner violence prevention and sexual assault prevention education to students.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	YWCA Silicon Valley expects to serve 400 MUSD students from predominantly LMI households.
	Location Description	At an MUSD campus identified as having students from predominantly LMI households.
	Planned Activities	Activities include education, workshops, and awareness events
6	**Project Name**	LifeMoves
	Target Area	Citywide
	Goals Supported	Public Improvements including accessibility and improving public facilities
	Needs Addressed	Community Services
	Funding	CDBG: $100,000

	Description	Performing repairs to the exterior of the LifeMoves Villa Shelter.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	LifeMoves expects to serve 73 homeless residents of Milpitas
	Location Description	The shelter is located in San Jose
	Planned Activities	Performing repairs to the exterior of the LifeMoves Villa Shelter.
7	**Project Name**	Next Door Solutions to Domestic Violence
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Public Improvements including accessibility and improving public facilities
	Funding	CDBG: $6,932.55
	Description	Next Door Solutions to Domestic Violence is a nonprofit, multi-cultural agency dedicated to providing proactive and progressive solutions to domestic violence. Next Door Solutions provides peer counseling, advocacy, legal help and support groups. Additionally, Next Door Solutions to Domestic Violence provides safe emergency shelter to victims of domestic violence and their children within a confidential and protected environment.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Next Door Solutions to Domestic Violence proposes to serve 50 Milpitas residents.
	Location Description	The office is located in San Jose.
	Planned Activities	Replacement of flooring throughout the Shelter Next Door facility.
8	**Project Name**	Rebuilding Together Silicon Valley
	Target Area	Citywide
	Goals Supported	Maintain and Preserve Existing Housing
	Needs Addressed	Affordable Housing Development and Preservation
	Funding	CDBG: $173,970
	Description	Funding to providing home repairs, rehabilitation, accessibility and mobility services work to low-income homeowners in Milpitas.
	Target Date	6/30/2022

	Estimate the number and type of families that will benefit from the proposed activities	42 LMC residents will benefit from this funding.
	Location Description	Throughout Milpitas
	Planned Activities	Funding to providing home repairs, rehabilitation, accessibility and mobility services work to low-income homeowners in Milpitas.
9	**Project Name**	Terrace Gardens Senior Housing
	Target Area	Citywide
	Goals Supported	Public Services for Seniors
	Needs Addressed	Affordable Housing Rental Rehabilitation
	Funding	CDBG: $11,000
	Description	Rehab the existing kitchenette at Terrace Gardens.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	184 low and very low-income seniors will benefit from this funding.
	Location Description	186 Beresford Court
	Planned Activities	Funding will be used to rehab the existing kitchenette at Terrace Gardens.
10	**Project Name**	Silicon Valley Independent Living Center - Rent Relief (COVID-19)
	Target Area	Citywide
	Goals Supported	Community Funding/Public Services
	Needs Addressed	Community Services
	Funding	$158,746.65
	Description	Direct aid to the Rent Relief Program
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	SVILC expects to serve approximately 125 LMC residents

	Location Description	Throughout Milpitas
	Planned Activities	Providing rental assistance to LMC Milpitas residents at risk of eviction due to COVID-19.
11	**Project Name**	Project Sentinel (Fair Housing)
	Target Area	Citywide
	Goals Supported	Fair Housing
	Needs Addressed	Community Services
	Funding	CDBG: $56,290
	Description	Project Sentinel is a private nonprofit agency providing fair housing, tenant-landlord counseling and dispute resolution services to the City of Milpitas. In addition to counseling and case intake, education and outreach activities will be ongoing. Outreach activity includes: the publication of Rent Watch, a rental housing advice column; distribution of brochures, radio public service announcements and public presentations and workshops. Presentations and workshops are provided to a wide spectrum of the community: ESL classes at local schools; civic groups like the Rotary and Lions; social service agencies like Catholic Charities and Next Door Solutions; municipal offices such as the Senior Center and Community Center; housing provider associations such as the Apartment Owners Association (AOA). Program services are delivered by designated staff in the agency's Fremont office using a local Milpitas phone line and by staff in the agency's main office at 1490 El Camino Real, Santa Clara. Office hours for counseling and case intake are from 9:00 am to 4:00 pm, Monday through Friday. Evening and week-end appointments are provided when necessary. Tenant-Landlord counseling/Dispute Resolution includes all areas of concern in rental housing; however, evictions and substandard housing complaints receive priority attention. Mediations and conciliations are conducted by trained staff and volunteers. Services are delivered in a neutral, unbiased manner to all parties engaged in the rental housing relationship. Fair Housing services of community education, and complaint investigation are provided from the corporate office and other public facilities within the City of Milpitas (library, community center). HUD-certified mortgage default counseling and First Time Homebuyer workshops are open to Milpitas residents. These services are provided from Project Sentinel's office at the Milpitas Sobrato Center.
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Project Sentinel will provide service for 26 Milpitas residents.
	Location Description	At various venues in Milpitas and also their Santa Clara office.
	Planned Activities	Provide educational presentations, outreach, and brochures at a variety of venues. Provide information and referral services and investigate cases of alleged discrimination.
12	**Project Name**	Program Administration
	Target Area	Citywide
	Goals Supported	Program Administration
	Needs Addressed	Program Administration
	Funding	CDBG: $78,321.80

	Description	Program Administration
	Target Date	6/30/2022
	Estimate the number and type of families that will benefit from the proposed activities	Program Administration
	Location Description	Milpitas, CA
	Planned Activities	Program Administration

AP-50 Geographic Distribution – 91.220(f)

Description of the geographic areas of the entitlement (including areas of low-income and minority concentration) where assistance will be directed

Not applicable. The City of Milpitas does not set geographic concentration areas for assistance. Instead the City helps fund organizations that provide supportive services to low- and moderate-income individuals throughout the City.

Geographic Distribution

Target Area	Percentage of Funds

Table 8 - Geographic Distribution

Rationale for the priorities for allocating investments geographically

Not applicable

Discussion

Not applicable

Affordable Housing

AP-55 Affordable Housing – 91.220(g)

Introduction

The City adopted Affordable Housing Ordinance No. 297 on June 12, 2018. The Affordable Housing Ordinance requires that all new developments over 10 units requires 15% affordable units. On March 5, 2019, the City established residential and non-residential affordable housing fees.

One Year Goals for the Number of Households to be Supported	
Homeless	50
Non-Homeless	200
Special-Needs	1,000
Total	1,250

Table 9 - One Year Goals for Affordable Housing by Support Requirement

One Year Goals for the Number of Households Supported Through	
Rental Assistance	50
The Production of New Units	0
Rehab of Existing Units	42
Acquisition of Existing Units	0
Total	61

Table 10 - One Year Goals for Affordable Housing by Support Type

Discussion

The City anticipates the construction of approximately 133 new extremely low/very-low income units, 188 low-income units, and 20 moderate-income units in the next few years. These will be built as stand-alone affordable housing and as mixed-income housing in compliance with the City's Affordable Housing Ordinance.

AP-60 Public Housing – 91.220(h)

Introduction

The City of Milpitas currently does not have any public housing. However, there is one Project-based Section 8 property in the City, the Sunnyhills Apartments. The Sunnyhills Apartments is a 171-unit development in which 149 units receive project-based Section 8 vouchers. The Project-based Section 8 vouchers provides rental assistance for each unit between the Department of Housing and Urban Development (HUD) established Fair Market Rent (FMR) for the area and what the tenant can afford to pay. Its aim is to be competitive with the local market thus incentivizing the owner to rent to low income households. The City has agreed to extend the HUD contract for another five years.

Actions planned during the next year to address the needs to public housing

This is not applicable to the City of Milpitas as there are no public housing units owned or managed by the Housing Authority of the County of Santa Clara in the City.

Actions to encourage public housing residents to become more involved in management and participate in homeownership

Not applicable. There are no public housing units in the City of Milpitas.

If the PHA is designated as troubled, describe the manner in which financial assistance will be provided or other assistance

Not applicable.

Discussion

Not applicable.

AP-65 Homeless and Other Special Needs Activities – 91.220(i)

Introduction

The County of Santa Clara and the City have designated homelessness as a critical issue. Although the total homeless population is declining as a whole, there still remains 7,394 homeless persons. In Santa Clara County's 2019 Point-in-Time Census & Survey Comprehensive Report, the survey identified a total of 125 unsheltered homeless persons in Milpitas. Notably, there was an 89% increase in unsheltered homeless persons in Milpitas. Given the complexity of homelessness, interagency and interregional collaboration is crucial in solving the homeless issue.

Describe the jurisdictions one-year goals and actions for reducing and ending homelessness including reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

In October 2020, the City Council endorsed the 2020-2025 Santa Clara County Plan to End Homelessness. On November 10, 2020, the City Council approved and authorized staff to enter into an agreement for homeless outreach, assessment, and street-based case management services with Santa Clara County. In December 2020, the City Council authorized staff to contract with Project WeHope to provide mobile shower and laundry services in Milpitas. The City Council also established a Homelessness Task Force, who will be responsible for providing low cost homeless response suggestions to the City Council. The City's Building Safety and Housing team will continue to explore resources that can further benefit the homeless population in Milpitas.

Addressing the emergency shelter and transitional housing needs of homeless persons

The City of Milpitas will address emergency shelter and transitional housing needs of homeless persons by continuing to coordinate services between the City's Police, Building Safety & Housing, and Public Works Departments and our local service providers, such as LifeMoves.

CDBG Funded

- Next Door Solutions to Domestic Violence: Next Door Solutions to Domestic Violence provides client-centered, community-based supportive services for victims of domestic violence and his/her children. The organization also provides undisclosed emergency shelter when requested and needed by the individual and/or family.
- YWCA Silicon Valley (YWCA): YWCA Silicon Valley empowers women and her children to end racism and violence through offering supportive services for self-improvement and undisclosed emergency shelter for short-term to a longer amount of time if needed. YWCA also provides

clients referrals to permanent housing if possible, and available.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

On November 10, 2020, the City Council approved and authorized staff to enter into an agreement for homeless outreach, assessment, and street-based case management services with Santa Clara County. The assessment will place our residents in the Santa Clary County community queue, which is the pathway towards being placed in rapid rehousing, transitional or permeant affordable housing.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); or, receiving assistance from public or private agencies that address housing, health, social services, employment, education, or youth needs.

As mentioned in the previous paragraph of CDBG funded programs related to emergency shelter, the City also funds organizations that take proactive measures in helping individuals in need of legal help, youth needs and concerns and fair housing so that he/she can become informed of his or her rights before the individual is forced into homelessness.

CDBG and City Local Funds

- Rent Relief Program: The Silicon Valley Independent Living Center has been administering the City's Rent Relief Program, which offers low- and moderate-income residents no more than 3 months of rental assistance to prevent eviction, avoid community displacement, and to remain housed.
- Child Advocates of Silicon Valley: Child Advocates connect court appointed special advocates (CASAs) to foster children. These volunteers must make a commitment to the children for a long-term, many for his or her entire life. The consistent support of the CASA is often the only adult who has steadily remained with the child, providing crucial mentorship.
- Seniors Adults Legal Assistance (SALA): SALA is committed to providing free-legal services to seniors. Legal services that SALA provides ranges from: public benefits, long-term care, alternatives to institutionalization, elder abuse, long-term care insurance, incapacity planning, probate, simple wills and housing – related to Landlord-Tenant issues. Often, many seniors do not know his or her housing rights or sign over the will of their house without knowing, and with fixed income, many are unable to provide legal help. SALA provides legal help free of charge for

these low to extremely low income seniors.

Discussion

Please see discussion above.

AP-75 Barriers to affordable housing – 91.220(j)

Introduction:

Along with other jurisdictions in Santa Clara County, the City of Milpitas is facing many obstacles in creating more affordable housing. The many constraints that the City is facing is the limited amount of developable land, government constraints, infrastructure and public facilities constraints, environmental, housing for persons with disabilities, and financing and construction costs.

Actions it planned to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment

Resolution No. 8523

The City adopted Resolution No. 8523 on February 2, 2016, which recognizes homelessness as a crucial problem in the County and will help contribute to future affordable housing projects that will house homeless.

Affordable Housing Ordinance

On June 12, 2018, the City Council adopted Affordable Housing Ordinance No. 297 which requires that any new development with 10 or more units must include 15% of the units these units as affordable. The ordinance applies to both rental and ownership developments.

Density Bonus Ordinance

To attract developers to build affordable units, the Density Bonus Ordinance will allow developers the ability to build above their permitted densities in permitted zoning districts in exchange for the construction of affordable units.

Below Market Rate Ownership

The City manages a Below Market Rate (BMR) Ownership program for first-time, income-qualified homebuyers. Once a unit from the current BMR housing stock becomes available, a qualified applicant from the waiting list will have the ability to purchase a home in Milpitas at one of the various developments throughout the City. For qualified households, the City also provides a loan of up to

$50,000.

Fair Housing

Milpitas provides CDBG funds to Project Sentinel. Project Sentinel is a reputable organization that provides expertise in fair housing and tenant-landlord dispute. Services include information, referrals, community outreach and education in several languages other than English, investigation, and resolving fair housing complaints. In addition, they provide education and outreach to property owners, and property management to become proactive in their housing policies.

Discussion:

Please see discussion above.

AP-85 Other Actions – 91.220(k)

Introduction:

The most significant obstacle to addressing the underserved needs for fiscal year 2021-2022 is the lack of sufficient federal, state, and local funds to carry out all the necessary programs, activities and projects.

Actions planned to address obstacles to meeting underserved needs

The diminishing amount of funds continues to be the most significant obstacle to addressing the needs of underserved populations. To address this, the City supplements its CDBG funding with other resources and funds, such as:

- The City of Milpitas Affordable Housing Fund – Used primarily to increase the number of new affordable housing units. It is funded through fees collected from developers in accordance with Affordable Housing Ordinance 297. As an example, the City used these funds to initially fund the Pilot Rent Relief Program the City established in November 2019.
- The City's provides loans on an ongoing, as qualified basis for BMR applicants to qualify for purchasing an available BMR unit.
- Measure A Affordable Housing Bond was approved by voters in November 2016 that approved $950 million dollars for the County to address housing needs for the most vulnerable residents, those in the extremely low-income households.

Actions planned to foster and maintain affordable housing

The City has taken proactive steps to help decrease the barriers in affordable housing through the following ordinances:

Resolution No. 8523

The City adopted Resolution No. 8523 on February 2, 2016, which recognizes homelessness as a crucial problem in the County and will consider contributing to future affordable housing projects that will house the homeless. The City is in discussion to create its first 100% permanent supporting housing project in Milpitas.

Affordable Housing Ordinance

On June 12, 2018, the City Council adopted Affordable Housing Ordinance No. 297 which requires that any new development with 10 or more units must include 15% of the units these units as affordable.

The ordinance applies to both rental and ownership developments.

Density Bonus Ordinance

To attract developers to build affordable units, the Density Bonus Ordinance will allow developers the ability to build above their permitted densities in permitted zoning districts in exchange for the provision of affordable units in the development.

Below Market Rate Ownership

The City manages a Below Market Rate (BMR) Ownership program for first-time, income-qualified homebuyers. Once a unit from the current BMR housing stock becomes available, the homebuyer will have the ability to purchase a home in Milpitas at one of the various developments throughout the City. For qualified households, the City also provides a loan of up to $50,000.

Fair Housing

Milpitas provides CDBG funds to Project Sentinel. Project Sentinel is a reputable organization that provides expertise in fair housing and tenant-landlord dispute. Services include information, referrals, community outreach and education in several languages other than English, investigation, and resolving fair housing complaints. In addition, they provide education and outreach to property owners, and property management to become proactive in their housing policies.

Actions planned to reduce lead-based paint hazards

The County of Santa Clara has received funding from State's Department of Health Service and Federal Government for Center for Disease Control to implement a Childhood Lead Poisoning Prevention Program. The funded programs include community outreach screen, case management and public education to inform low-to-moderate income and older communities. The project will then follow up with environmental testing, lead-based education, blood-lead testing for children, hazard reduction grants and follow up with monitoring and testing.

Milpitas has adopted a Lead-Based Paint Management Plan which complies with HUD Based Paint regulations, which outlines the required states of abatement and remediation for rehabilitation projects. In addition, the City publicize and identifies lead-based hazards and older residential projects through its Code Enforcement Division and Building Department. In addition, projects undergoing rehabilitation, under the City's Rehabilitation, provides technical assistance and abatement of lead-

based paints.

Actions planned to reduce the number of poverty-level families

The City of Milpitas will follow these actions:

- Work with non-profit housing developers to fund and provide more affordable housing opportunities to address the homeless problem and needs of very low and low-income households.
- Provide funding and supportive services to prevent very low-income persons and families from becoming homeless and assist them in ending the cycle of homelessness.
- Address the employment and income needs of individuals and families who are economically disadvantaged, including persons who are homeless, who have disabilities, and those who are participating in the County of Santa Clara Welfare-to-Work Programs.
- Provide funding for a variety of services and referrals to assist people in obtaining access to public assistance to prevent poverty.
- Per Section 3, if there are HUD funded projects that can create direct economic opportunities must take every effort to recruit, target and directed towards low and very low-income residents and businesses.

Actions planned to develop institutional structure

The City is striving to improve intergovernmental and private sector cooperation to synergize efforts and resources and develop new revenues for community service needs and the production of affordable housing. Collaborative efforts include:

- Regular quarterly meetings between entitlement jurisdictions at the CDBG Coordinators Meeting and Regional Housing Working Group
- Joint jurisdiction Request for Proposals and project review committees
- Coordination on project management for projects funded by multiple jurisdictions. Recent examples include the effort by the County to create a regional affordable housing fund, using former redevelopment funds that could be returned to the County to use for affordable housing. Another effort underway involves the possible use of former redevelopment funds to create a countywide pool for homeless shelters and transitional housing. These interactions among agencies generate cohesive discussion and forums for bridging funding and service gaps

on a regional scale.

Actions planned to enhance coordination between public and private housing and social service agencies

The City benefits from a strong jurisdiction and region-wide network of housing and community development partners, such as the County and the CoC. To improve intergovernmental and private sector cooperation, the City will continue to participate with other local jurisdictions and developers in sharing information and resources.

Discussion:

Please see discussion above.

Program Specific Requirements

AP-90 Program Specific Requirements – 91.220(l) (1, 2, 4)

Introduction:

The City of Milpitas only receives CDBG funds and will receive the following program income for FY21-22.

Community Development Block Grant Program (CDBG)
Reference 24 CFR 91.220(l)(1)

Projects planned with all CDBG funds expected to be available during the year are identified in the Projects Table. The following identifies program income that is available for use that is included in projects to be carried out.

1. The total amount of program income that will have been received before the start of the next program year and that has not yet been reprogrammed	$8,959
2. The amount of proceeds from section 108 loan guarantees that will be used during the year to address the priority needs and specific objectives identified in the grantee's strategic plan.	0
3. The amount of surplus funds from urban renewal settlements	0
4. The amount of any grant funds returned to the line of credit for which the planned use has not been included in a prior statement or plan	0
5. The amount of income from float-funded activities	0
Total Program Income:	**$8,959**

Other CDBG Requirements

1. The amount of urgent need activities	0
2. The estimated percentage of CDBG funds that will be used for activities that benefit persons of low and moderate income. Overall Benefit - A consecutive period of one, two or three years may be used to determine that a minimum overall benefit of 70% of CDBG funds is used to benefit persons of low and moderate income. Specify the years covered that include this Annual Action Plan.	90.00%

CITY OF MILPITAS
CITIZEN PARTICIPATION PLAN

Introduction

The City of Milpitas is required to adopt a citizen participation plan that sets forth the jurisdiction's policies and procedures for citizen participation. The citizen participation plan must provide for and encourage citizens to participate in the development of the Assessment of Fair Housing (AFH), any revisions to the AFH, the Consolidated Plan, any substantial amendment to the Consolidated Plan, any Annual Action Plan, and the Consolidated Annual Performance and Evaluation Report (CAPER).

The City of Milpitas' Building Safety and Housing Department is responsible for ensuring compliance with the Citizen Participation Plan. Copies of the Citizen Participation Plan are available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street, and online at http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/.

Public comments can also be sent to:

Sharon Goei, Director of Building Safety and Housing
City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95030
(408) 586-3286
sgoei@ci.milpitas.ca.gov

Community Development Block Grant (CDBG)

The U.S. Department of Housing and Urban Development (HUD) provides annual grants through its Community Development Block Grant (CDBG) to local entitlement cities to assist organizations to provide decent housing, a suitable living environment and expand economic opportunities to low- and moderate-income persons. As part of the CDBG program, it is required that the Citizen Participation Plan provide a process to create opportunities for low- and moderate-income households to participate in the process of planning, implementation and the assessment of programs and projects. The Citizen Participation Plan will reflect HUD programmatic requirements and insure greater public participation.

Estimate Amount that will Benefit Persons of Low and Moderate Income

City of Milpitas receives about $600,000 annually from Department of Housing and Urban Development. At least 70% of this CDBG funding must be allocated to low and moderate-income households and clientele.

Below outlines the process that the City plans to incorporate residents' participation.

City of Milpitas' Citizen Participation Plan: Community Outreach and Background Information

The Citizen Participation Plan requirements are designed to encourage participation by low- and moderate- income persons. Local residents, service providers, and other interested parties such as businesses, developers, non-profits, and community-based and faith-based organizations are also encouraged to participate.

Community Outreach - The City of Milpitas will take the following steps to encourage citizen participation:

- Public hearing notices will be advertised in a local newspaper of general circulation~~,~~ and on the City's website.~~, on the City's social media accounts, at the Milpitas Public Library and at Milpitas City Hall~~
- City Staff will provide language interpreters for individuals with limited English proficiency at City Council meetings.
- City Staff will help translate public hearing notices in the following languages which are common in Milpitas: Vietnamese, Spanish, Mandarin.
- The ~~CDBG~~ City Council~~Subcommittee~~ will meet with groups, agencies, and organizations representing diverse populations and/or areas of concentration of minorities to addresses their social and economic needs as CDBG funds will allow.
- Milpitas will continue to make available the TDD phone number for disabled persons.
- City staff will notify all interested parties of any substantial amendments to the greatest extent possible.
- ~~City staff will post public hearing and meeting notices on the City and department website and social media accounts.~~
- City staff will email the Community Advisory Commission, current and prior CDBG applicants, and known interested parties, all public hearing and meeting notices.

Jurisdiction Plans to minimize Displacement of Persons and Assistance Available

Milpitas will take every precaution to minimize the displacement of persons and provide assistance as available. Any CDBG activity that will cause displacement, City staff will work with the tenant(s) with relocation plans, regarding site, locations, costs, moving expenses, etc. before funding is allocated. Projects that may cause temporary harm to the tenants such as fumigation, must include a relocation plan in the project budget and a proposal during the time of application submission to the City.

Unsolicited Application and Public Hearing Process for CDBG Funding

1) At least 150 days prior to the end of the fiscal year, the City will publish in the local newspaper of general circulation, a Notice of Funding Availability for CDBG applications. The notice will include an estimated amount of funds that will be made available to the City by HUD during the fiscal year. The notice shall also include where applications can be obtained, a link to the City's application process, and a City contact person to obtain additional information regarding the CDBG application submittal process. Applications will be accepted on a rolling basis. ~~Applications accepted up until 21 days prior to the City's CDBG Council Subcommittee meeting on CDBG allocations will be considered at that meeting. If a subsequent CDBG Subcommittee meeting on CDBG allocations is scheduled, subsequent applications will utilize the same timeframe to be considered at the subsequent CDBG Subcommittee meeting.~~

2) All notices along with applications will be sent to all current and former CDBG sub-recipients, former applicants who were previously denied funding in the past fiscal year and interested parties. A letter will be included with the notices to offer any technical assistance by the City to applicants explaining the CDBG regulations and process, responding to questions, and assisting on completing the application for funding.

3) The City will also provide this information on the City's website to provide additional outreach efforts to local Milpitas residents, groups and organizations. As COVID-19 related health conditions allow, notices will also be made available in the Milpitas Public Library and other public buildings throughout the City.

4) Prior to the start of the funding cycle for CDBG funds, the City will make itself available to assist any applicant on the processing of their CDBG application, inform the general public about the CDBG application process, to enhance public access and participation of the CDBG process.

5) The Milpitas Community Advisory Commission (CAC) and City Council will hold at least one advertised public hearing on CDBG funding allocations during each fiscal year. Notice of the public hearing will made available in the following manner:

a) At least 10 days prior to the established public hearing date, the City will publish a Public Hearing notice in the local newspaper of general circulation and main City website. The public hearing notice will include: the time, place and date of the public hearing to be held, the purpose of the public hearing and how and where persons interested in the public hearing can obtain more information about this matter, and a City contact person for reasonable requests and interpreters.

b) A copy of the public hearing notice will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process. All notices will be sent at least 10 days prior to the established meeting date.

c) The public hearing notice will be posted on the City Public Bulletin Board in front of City Hall to allow maximum visibility by local residents. The notice will be posted at least 10 days prior to the meeting.

d) The public hearing notice will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

Notice of Public Hearings, Public Noticing, and Public Comments

The following section outlines the Public Hearing requirements for each of the documents that require citizen participation. These documents are the Assessment of Fair Housing (AFH), any revisions to the AFH, the Consolidated Plan, any substantial amendment to the Consolidated Plan, any Annual Action Plan, and the Consolidated Annual Performance and Evaluation Report (CAPER). Unless noted otherwise in its specific subsection, the public hearing noticing requirements will apply for all documents and conform to process detailed below:

b) At least 10 days prior to the established public hearing date, the City will publish a Public Hearing notice in the local newspaper of general circulation and City website. The public hearing notice will include: the time, place and date of the public hearing to be held, the purpose of the public hearing and how and where persons interested in the public hearing can obtain more information about this matter, and a City contact person for reasonable requests and interpreters.

b) A copy of the public hearing notice will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process. All notices will be sent at least 10 days prior to the established meeting date.

c) The public hearing notice will be posted on the City Public Bulletin Board in front of City Hall to allow maximum visibility by local residents. The notice will be posted at least 10 days prior to the meeting.

d) The public hearing notice will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

All public hearings will be held in the evenings to encourage citizen participation. Public hearings will be held consistent with accessibility and reasonable accommodation requirements, in accordance with section 504 of the Rehabilitation Act of 1973 and the regulations at 24 CFR part 8; and the Americans with Disabilities Act and the regulations at 28 CFR parts 35 and 36, as applicable.

As needed, the City will provide technical assistance to groups representative of persons of low- and moderate-income that request such assistance in commenting on the documents listed in this section.

Citizen complaints regarding any of the documents listed below may be made in person at City Hall, by telephone at 408-586-3240, or via email at housing@ci.milpitas.ca.gov. The City will respond to complaints with a timely, substantive written response to every written resident complaint, within 15 working days.

Consolidated Plan and Assessment of Fair Housing

The City will hold two public hearings prior to the adoption of the Consolidated Plan to encourage the community to participate in the development of the Consolidated Plan and Assessment of Fair Housing. The public hearing noticing requirement will be 30 days for each meeting.

Additionally, the City will publish on its website, and make available for comment, the draft Consolidated Plan and Assessment of Fair Housing 30 days prior to the public hearing. Copies of the documents will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the draft Consolidated Plan and Assessment of Fair Housing will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The draft Consolidated Plan and Assessment of Fair Housing will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The final version of the Consolidated Plan will be posted on the Building Safety and Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Minor Amendments to the Consolidated Plan

Any minor amendments to the Consolidated Plan will be made administratively and will be incorporated into the City's CAPER at the end of the program year. Minor amendments shall

maintain the integrity of the plan and cannot include any substantial change in policy or in funding priorities while still maintaining flexibility in meeting the goals and objectives.

Substantial Amendments to the Consolidated Plan

Substantial amendments to the Consolidated include: 1) changes in the allocation priorities or the method of distribution of funds, 2) changes that carry out an activity, using funds from any program covered by the Consolidated Plan (including program income) not previously described in the Action Plan, and 3) changes to the purpose, scope, location or beneficiaries of any activity. Any amendment listed above shall be determined to be substantial if a change totals 25% or more of the city grant allocation. Minor adjustments in funding levels for public services, housing activities and administration due to differences in actual verses anticipated program income should not be considered substantial.

The City will hold one public hearings prior to the adopting any substantial amendments to the Consolidated Plan to encourage the community to participate in the changes to the plan. The public hearing noticing requirement will be 30 days.

Additionally, the City will publish on its website, and make available for comment, the substantial amendments to the Consolidated Plan 30 days prior to the public hearing. Copies of the document will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the substantial amendments to the Consolidated Plan will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The substantial amendments to the Consolidated Plan will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The amended version of the Consolidated Plan will be posted on the Building Safety and Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Revisions to the Assessment of Fair Housing

The minimum criteria for a revision to the Assessment of Fair Housing is when a material change occurs. A material change is a change in circumstances in the jurisdiction of a program participant that affects the information on which the AFH is based to the extent that the analysis, the fair housing contributing factors, or the priorities and goals of the AFH no longer reflect actual circumstances. An example of a material change would be a federally declared natural disaster.

The City will hold one public hearing prior to the adopting any revision to the Assessment of Fair Housing to encourage the community to participate in the changes to the plan. The public hearing noticing requirement will be 30 days.

Additionally, the City will publish on its website, and make available for comment, the revision to the Assessment of Fair Housing 30 days prior to the public hearing. Copies of the document will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the revision to the Assessment of Fair Housing will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The revision to the Assessment of Fair Housing will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The amended version of the Assessment of Fair Housing will be posted on the Building Safety and Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Annual Action Plan

The City will hold one public hearing prior to the adoption of the Annual Action Plan to encourage the community to provide feedback to the City Council as to where and to whom CDBG funds should be allocated.

The public hearing will take place during the City Council meeting to approve the final CDBG allocation. The public hearing noticing requirement will be 30 days for this meeting.

Additionally, the City will publish on its website, and make available for comment, the draft Annual Action Plan 30 days prior to the public hearing. Copies of the document will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the draft Annual Action Plan will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The draft Annual Action Plan will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The final version of the Annual Action Plan will be posted on the Building Safety and Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Consolidated Annual Performance and Evaluation Report (CAPER)

The City will hold one public hearing prior to the adoption of the CAPER to encourage the community to provide feedback to the City Council as to the performance of the subgrantees during the fiscal year. The public hearing noticing requirement will be 15 days for this meeting.

Additionally, the City will publish on its website, and make available for comment, the draft CAPER 15 days prior to the public hearing. Copies of the document will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the draft CAPER will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The draft CAPER will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The final version of the CAPER will be posted on the Building Safety & Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Amendments to the Citizen Participation Plan

Minor Amendments

Any minor amendments to the Citizen Participation Plan will be made administratively and will be incorporated into the City's CAPER at the end of the program year. Minor amendments shall maintain the integrity of the plan and cannot include any substantial change in policy or in funding priorities while still maintaining flexibility in meeting the goals and objectives.

Substantial Amendment

Any amendment the City deems substantial shall be made available for public review and comments in the following manner:

The City will hold one public hearing prior to the adopting any substantial amendments to the Citizen Participation Plan to encourage the community to participate in the changes to the plan. The public hearing noticing requirement will be 30 days.

Additionally, the City will publish on its website, and make available for comment, the substantial amendments to the Citizen Participation Plan 30 days prior to the public hearing. Copies of the document will be made available at the Permit Center front counter at City Hall located at 455 E. Calaveras Blvd. and Milpitas Public Library at 160. N. Main Street.

A link to the substantial amendments to the Citizen Participation Plan will also be e-mailed to all grant applicants and other persons who have indicated a previous interest in the CDBG process.

The substantial amendments to the Citizen Participation Plan will be posted on the City's social media accounts and on the Milpitas Building Safety and Housing Department's webpage.

The amended version of the Citizen Participation Plan will be posted on the Building Safety and Housing Department webpage at: http://www.ci.milpitas.ca.gov/milpitas/departments/federal-program-community-development-block-grant-cdbg/

Citizen Participation Requirements in State of Emergency

The City of Milpitas shall comply with all U.S. Department of Housing and Urban Development (HUD) memorandums and notices that transmit citizen participation requirements in the event of a local, state, or national emergency or disaster. In order to secure and access new HUD funding and/or re-allocate existing HUD funding to allow the City to respond to the state of emergency in the most expeditious manner, such HUD memorandums and notices automatically supersedes any conflicting provisions of the Citizen Participation Plan, and therefore no formal amendment is required when such emergency memorandums and notices are in effect.

~~CDBG Subcommittee~~

~~The City of Milpitas established the CDBG Council Subcommittee in June 2019. For the purposes of Citizen Participation, CDBG application selection, Annual Action Plan, Consolidated Plan amendments, and CAPER reporting, the CDBG Council Subcommittee will be the primary reporting and recommending body to the full City Council.~~

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Conduct a Public Hearing and Adopt a Resolution Adopting the 2020 Urban Water Management Plan and Authorize the Mayor to Sign Letters on Behalf of the City Council Regarding Water Supply Matters**
Category:	Public Hearings-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Tony Ndah, Public Works Director, 408-586-2602**
Recommendation:	1. Open the public hearing, hear testimony, then move to close the public hearing; 2. Adopt a Resolution Adopting the 2020 Urban Water Management Plan. 3. Authorize the Mayor to sign letters on behalf of the City Council regarding water supply matters affecting the City of Milpitas.

Background:

Established by California State Assembly Bill 797 in 1983, the Urban Water Management Planning Act (Act) requires urban water suppliers to prepare plans that support long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands.

Urban water suppliers with more than 3,000 service connections or supplying more than 3,000 acre feet of water annually are required to develop an Urban Water Management Plan (UWMP) every five years on or before July 1, in years ending in six and one. The UWMP is intended to address changing conditions related to water sources, water availability, water demands and water reliability, for the next 20 years. The City of Milpitas has approximately 14,000 service connections. The City's current UWMP (2015 UWMP) was approved by City Council on June 7, 2016.

The Act recognizes that water is a limited and renewable resource subject to ever-increasing demands and that conservation and efficient use of urban water supplies is a statewide concern. By directing urban water suppliers to prepare UWMPs, the Legislature established a clear policy direction for local water agencies to actively pursue conservation and efficient use of water. Current provisions of the Act require agencies to:

- Include information on the agency's past, current and projected water supplies and demands;
- Assess the reliability of water sources over a 20-year planning horizon (2040) under various hydrologic conditions;
- Describe demand management measures and water shortage contingency planning;
- Report progress toward meeting the targeted 20 percent reduction in urban per-capita water consumption required under SB X7-7 by the year 2020;
- Discuss the use and planned use of recycled water; and
- Implement conservation and efficient use of urban water supplies.

UWMPs are used to support long-term resource planning and water supply sustainability and must be adopted in order for the City to be considered for future grant funding opportunities and to receive drought assistance from the State. The UWMP integrates local and regional land use planning, regional water supply, infrastructure and demand management projects, as well as Statewide issues of concern, including but not limited to, climate change and regulatory revisions.

The UWMP provides information specific to water management and planning by the City; therefore, other planning processes integrate with and inform the UWMP. Some of these relevant planning documents include the General Plan, Specific Plans, Water Master Plans, and Regional Water Resource Plans, to the extent data from these plans are applicable and available.

On October 14, 2020, a Professional Services Agreement was executed with Maddaus Water Management, Inc. for the preparation of the Milpitas 2020 Urban Water Management Plan.

Analysis:
The 2020 UWMP provides information on the City's water supply and demand projections, water supply reliability analysis and other efforts to ensure adequate water supply for existing and future demands. The 2020 UWMP also summarizes the City of Milpitas water demand management measures, including the Water Conservation Act of 2009 SB X7-7 (20% by 2020) and the 2018 long-term water conservation framework for California (AB1668 and SB606). Additionally, the 2020 UWMP contains several new requirements, including an analysis that demonstrates reduced reliance on wholesale treated water supplies, energy intensity of water supplies and a seismic risk evaluation.

State regulations require a public hearing prior to adoption of the UWMP and notification to the public of the preparation and planned adoption of the UWMP. On February 23, 2021, the City published notice regarding the preparation of the 2020 UWMP. In addition, on May 28 and June 4, 2021, the City published notices to the public, via the Milpitas Post, regarding the availability of the 2020 UWMP on the City's website for public review~~,~~ and the date and time of the public hearing for the adoption of the UWMP. Adoption of the 2020 UWMP will allow staff to submit the document to the Department of Water Resources (DWR) by the July 1, 2021 deadline, to comply with regulations and ensure continued eligibility of DWR administered grants, loans and drought assistance.

2020 Urban Water Management Plan

Over the years, the State Legislature has amended the Urban Water Management Planning Act in response to water resource challenges and planning imperatives confronting California. These amendments include significant revisions and additions to the required content for an UWMP and its associated Water Shortage Contingency Plan (WSCP). As applicable, the City's 2020 UWMP reflects the following significant revisions as required by the amended UWMP Act.

- Five Consecutive Dry-Year Water Reliability Assessment. The Water Reliability Assessment requires dry-year water reliability planning for a "drought lasting five consecutive water years." This is a modification of the prior plan which required a "multi-year time period.
- Drought Risk Assessment. The Drought Risk Assessment (DRA) requires a supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.
- Energy Intensity Analysis. The Energy Intensity Analysis requires the inclusion of the most current available water system energy usage information that can be readily obtained. This new requirement is intended to identify energy saving opportunities, greenhouse gas emissions, and provides opportunities to receive energy efficiency funding. The analysis was completed in 2020. Current estimates of energy efficiency are approximately 554.4 (kilowatt hour per million gallons) kWh/MG.
- Seismic Risk. The Seismic Risk analysis requires a supplier to specifically address seismic risk to various water system facilities and to have a mitigation plan and for this to be described in their WSCPs.
- Water Shortage Contingency Plan. The 2018 UWMP Act requires suppliers to develop a Water Shortage Contingency Plan (WSCP). The WSCP must include specific water shortage response elements, including developing procedures to perform an annual water supply and demand assessment.

- Groundwater Supplies Coordination. Groundwater Supply Coordination requires that the 2020 UWMPs for suppliers that utilize groundwater as a supply source are consistent with Groundwater Sustainability Plans in areas where those plans have been completed by the Groundwater Sustainability Agencies.
- Lay Description. This section summarizes the UWMP in lay language, including the fundamental determinations of the UWMP, such as water service reliability, challenges ahead, and strategies for managing reliability risks.

2020 UWMP Chapters:

The following section provides the titles and a brief description of the UWMP eleven chapters.

Chapter 1 – UWMP Introduction and Lay Description. This chapter provides a discussion on fundamentals of the UWMP and provides the newly required lay description.

Chapter 2 – Plan Preparation. This chapter provides information on the processes used for developing the UWMP, including efforts in coordination and outreach.

Chapter 3 – System Description. This chapter describes the City's water system, including maps of the service area, an explanation of the service area and climate, details on the public water system and an overview of the City's organizational structure and history.

Chapter 4 – Customer Water Use. This chapter describes and quantifies the current and projected water uses within the City's service area.

Chapter 5 – Conservation Target Compliance. This chapter details the City's compliance with the 2020 per-capita water conservation mandate, the 2020 per-capita target value that was adopted in the 2015 UWMP, and the City's compliance value based upon actual 2020 customer water use. Also provided are the target and baseline calculations. Beginning in 2016, urban retail water suppliers were required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. This chapter of the UWMP contains the data and calculations used to determine compliance with these requirements. The City's historic water demand has followed a downward trend since the year 2000.

Chapter 6 – System Supplies. This chapter describes and quantifies the City's current and projected potable and non-potable water supplies. Also provided is a narrative description of each supply source and quantification of the supply availability for each source identified.

Current and future supplies have been provided in the 2020 UWMP. The full portfolio of the City's water supplies includes purchasing treated water from San Francisco Public Utilities Commission (SFPUC) and Valley Water, recycled water from South Bay Water Recycling (SBWR), and pumping groundwater for emergency use. The City evaluated the availability of these supplies to meet demands over time under various hydrological conditions to assess the overall water supply reliability. The City's available supplies per SFPUC and Valley Water contractual treated water purchase agreements are enough to meet 100 percent of existing and future water demands in normal years; however, it does not meet demands during a single dry year and multiple dry year events. This is primarily due the supply reductions from SFPUC in single and multiple dry year events as a result of supply rationing in accordance with the Bay Delta Plan.

A new requirement of the 2020 UWMP is to assess the adequacy of water supplies over five consecutive dry years, versus the three-year period considered in the 2015 UWMPs. Based on the updated assessment in the 2020 UWMP, it is estimated that the City may need to secure an additional supply of up to 1,803 million gallons in the 5th year of a drought in 2045. The timing and need for additional purchases of water will be dependent on observed growth in water demands.

Chapter 7 – Water System Reliability. This chapter describes the City's water system reliability through a 20-year planning horizon for normal, single dry year, and five consecutive dry years. This chapter also includes the

Drought Risk Assessment. The water system reliability differs from the DRA by allowing a different basis for characterizing the five consecutive dry years.

Chapter 8 – Water Shortage Contingency Planning. This chapter provides the City's structured plan for dealing with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic supply interruption.

Chapter 9 – Demand Management Measures. This chapter communicates the City's efforts to promote conservation and to reduce demand on its water supply, including a narrative describing efforts to implement several demand management measures.

Chapter 10 – Plan Adoption, Submittal, and Implementation. This chapter describes and documents the steps taken to make the City's UWMP publicly available as well as the steps taken to adopt and submit the UWMP in accordance with the Water Code. This chapter also describes the City's plan to implement the UWMP.

Chapter 11 – References. This chapter provides a list of source documents used to develop the 2020 Urban Water Management Plan.

City Water Supply Status and Strategies

The City purchases its water from the San Francisco Public Utilities Commission (SFPUC) and the Santa Clara Valley Water District (SCVWD). As detailed below, given the uncertainty of SFPUC supply and approved SCVWD supply restrictions, the UWMP outlines long-term supply strategies summarized below. Further, the Water Shortage Contingency Plan, scheduled to be adopted during the June 15, 2021 Council meeting, provides a framework for water conservation measures during reduced water supply such as a drought.

A. San Francisco Public Utilities Commission (SFPUC) Supply

In December 2018, the State Water Resources Control Board adopted the Bay-Delta Plan that includes more water to be retained in the Tuolumne River to protect fish and the environment. The current Plan, however, would result in a very serious loss of up to 90 million gallons of water every day from the San Francisco Regional (Hetch Hetchy) Water System, resulting in reductions of up to 50% during a drought like the recent 2014-2017 drought. Such water losses would result in unacceptable impacts on job growth, a slowdown in the economy and health, safety and economic risks for people, businesses and our communities. While there is agreement that this problem must be addressed, the present Plan threatens the traditional water supply from the Tuolumne River for people, businesses, and cities in our region.

In addition, SFPUC issued a letter in April 2021 which provided an update to its wholesale water customers regarding the availability of water supplies due to the ongoing drought. Despite lower than normal snowpack for this year, SFPUC forecasts indicate that Hetch Hetchy reservoir will fill this year; however, the Water Bank is not expected to fill, which will put the regional water system at risk for next year. As such, SFPUC is has asked water retailers to make it a goal to maintain summertime water usage to no more than 2019 levels, and reduce irrigation usage by 10%.

B. Santa Clara Valley Water District (Valley Water) Supply

Constructed and operated by the U.S. Bureau of Reclamation, the Central Valley Project (CVP) is one of the largest water storage and transport systems in the world, storing and distributing about 20% of the State's developed water. Valley Water through its contract with the U.S. Bureau of Reclamation is allocated a percentage of water depending on rain and snowfall amounts, regulatory restrictions to protect fish and water quality, as well as other factors. On average, the Bureau of Reclamation provides Valley Water with 36,000 million gallons of water per year. On May 26, 2021, the Bureau of Reclamation announced a reduction in allocation from 55% to 25% of historic use due to worsening hydrologic conditions. As a result, on June 9, 2021, Valley Water to took action by calling for a mandatory 15% reduction in water use compared to 2019 levels and also urged the County of Santa Clara to proclaim a local emergency to underscore the seriousness of the threats posed by the drought.

C. Long-term Water Demand and Supply Strategies

The City's per capita water use prior to the drought in 2013 is considered in the upper limit. Since then, the City has been able to meet 2020 water use targets with the ongoing implementation of water conservation programs and rebates, as well as increased usage of recycled water for irrigation. The information included in the UWMP identifies long-term strategies for how the City can reduce reliance on purchased treated water through water efficiency programs, blending of the two wholesaler supplies and alternative supply sources, including but not limited to converting existing emergency wells to active wells, to augment wholesaler supply rationing, particularly for late stage droughts.

D. Legislative Advocacy

On May 18, 2021, the City Council approved the Legislative Advocacy Policy and Legislative Guiding Principles. Since the Legislative Guiding Principles do not explicitly authorize advocacy related to water supply issues, staff is seeking authorization for the Mayor to sign letters on behalf of the City Council regarding water supply matters affecting our City.

Policy Alternatives:

Alternative 1: Delay Adoption of the 2020 Urban Water Management Plan

Pros: Delaying the adoption of the 2020 Urban Water Management Plan will allow for more time to evaluate how recent Bureau of Reclamation cutbacks impact the water wholesalers and therefore the City.

Cons: Assembly Bill 2067 mandates that all 2020 Urban Water Management Plans be submitted to the Department of Water Resources by July 1, 2021.

Reason not recommended: Failure to adopt the 2020 Urban Water Management Plan renders the City ineligible for any water management grant or loan administered by the Department of Water Resources (DWR) and may render the City ineligible for other State funding, depending on the conditions that are specified in the funding guidelines.

Fiscal Impact:

There are no fiscal impacts related to the adoption of the 2020 Urban Water Management Plan.

California Environmental Quality Act:

The 2020 Urban Water Management Plan is exempt from CEQA pursuant to Water Code Section 10652.

Recommendation:

1. Open the public hearing, hear testimony, then move to close the public hearing;
2. Adopt a Resolution Adopting the 2020 Urban Water Management Plan; and
3. Authorize the Mayor to sign letters on behalf of the City Council regarding water supply matters affecting the City of Milpitas.

Attachments:

1. Resolution
2. 2020 Urban Water Management Plan

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN

WHEREAS, on September 21, 1983, the State of California enacted Assembly Bill 797 (Wat. Code § 10610, et seq.), known as the "Urban Water Management Planning Act," which, as amended, required that urban retail suppliers of potable water for municipal purposes serving more than 3,000 customers or retailing more than 3,000 acre feet of water annually, adopt Urban Water Management Plans by December 31, 1985, and every five years on or before July 1, in years ending in six and one thereafter adopt updated plans for the conservation and efficient use of water; and

WHEREAS, in 1985 the City of Milpitas ("City") provided municipal water to a population of over 40,000 (now over 72,000) and supplied over 6,000 acre feet of water annually (now over 8,700 acre feet), it adopted Urban Water Management Plans on December 17, 1985; June 4, 1991 as amended April 1994; March 19, 1996; January 16, 2001; December 6, 2005; and June 7, 2011; and June 7, 2016; and

WHEREAS, pursuant to recent amendments to the Urban Water Management Planning Act, urban water suppliers are required to update and electronically submit their 2020 Urban Water Management Plans to the California Department of Water Resources (DWR) by July 1, 2021; and

WHEREAS, on November 10, 2009, the State of California enacted Senate Bill 7 (SB X7-7) (Wat. Code § 10608 et seq.), known as the "Water Conservation Act of 2009," which defines an "urban retail water supplier" as a water supplier that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre feet of potable water annually at retail for municipal purposes, and an "urban wholesale water supplier" is defined as a water supplier that provides more than 3,000 acre feet of water annually at wholesale for potable municipal purposes; and

WHEREAS, the City meets the definition of an urban retail water supplier for purposes of the Urban Water Management Planning Act and SB X7-7; and

WHEREAS, SB X7-7 required 20 percent reduction of urban per capita water use by December 31, 2020, required water suppliers to include in their 2010 Urban Water Management Plans per capita daily water use target values to achieve 20 percent water use reduction, and allowed water suppliers to update the 2020 urban water use targets in their 2015 Urban Water Management Plan; and

WHEREAS, the 2010 Urban Water Management Plan established the 2020 per capita daily water use target via Method 1 – "Gross Water Use Method," as developed by the California Department of Water Resources, which required the City's 2020 per capita water consumption rate to be 80 percent of its baseline per capita water use, determined that the City's baseline, as averaged over the ten-year period from July 1, 1995 to June 30, 2004, was 176 gallons per day, and therefore found that the target per capita water use for the year 2020 was 141 gallons per day; and

WHEREAS, the 2015 Urban Water Management Plan uses a calendar year basis of January 1, 1995 to December 31, 2004 to calculate the 2015 and 2020 per capita water use targets to be consistent with calendar year convention throughout the Urban Water Management Plan, resulting in a baseline usage of 183 gallons per day per capita (gpdpc) and 2015 and 2020 targets of 159 and 146 gpdpc; and

WHEREAS, as the City's per capita use is currently 108 gallon per day, a consumption rate lower than the 2020 target water use; and

WHEREAS, the City has prepared a 2020 Urban Water Management Plan in accordance with the Urban Water Management Planning Act and SB X7-7, and in accordance with applicable legal requirements, has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to its 2020 Urban Water Management Plan; and

WHEREAS, the 2020 Urban Water Management Plan describes the City's service area, existing and planned sources of water, reliability of the supply, water demand and use projections, water conservation and demand manage

measures, water shortage contingency analysis, and recycled water use; and

WHEREAS, in accordance with the Urban Water Management Planning Act and SB X7-7, City has prepared its 2020 Urban Water Management Plan with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its 2020 Urban Water Management Plan, and has also utilized DWR's Urban Water Management Plan Guidebook 2020, including its related appendices, in preparing its 2020 Urban Water Management Plan; and

WHEREAS, the said Urban Water Management Plan incorporates the City's current water conservation program consisting of policies, practices, and regulations that may be expected to continue yielding increased per capita water savings as higher-density housing is developed in accordance with water conservation requirements; and

WHEREAS, pursuant to said public hearing on City's 2020 Urban Water Management Plan, the City, among other things, encouraged the active involvement of diverse social, cultural, and economic sectors of the population within the City's retail water service area with regard to the 2020 Urban Water Management Plan and encouraged community input regarding City's 2020 Urban Water Management Plan; and

WHEREAS, the City prepared the 2020 Urban Water Management Plan in coordination with other appropriate agencies, including other suppliers sharing common sources, regional water management agencies, and relevant public agencies, to the extent practicable; and

WHEREAS, in accordance with applicable law, including Water Code sections 10608.26 and 10642, and Government Code section 6066, a Notice of a Public Hearing regarding City of Milpitas' 2020 Urban Water Management Plan was published within the jurisdiction of the City on May 28, 2021 and June 4, 2021; and

WHEREAS, the City has provided notice to the public of its intent to adopt the 2020 Urban Water Management Plan, has made the draft plan available for public review, and has encouraged the public to provide comment; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code sections 10608.26 and 10642, the City properly noticed and held a public hearing on June 15, 2021, in order to provide members of the public and other interested entities with the opportunity to be heard in connection with proposed adoption of the 2020 Urban Water Management Plan and issues related thereto; and

WHEREAS, the City has reviewed and considered the purposes and requirements of the Urban Water Management Planning Act and SB X7-7, the contents of the 2020 Urban Water Management Plan, and the documentation contained in the administrative record in support of the 2020 Urban Water Management Plan, and has determined that the factual analyses and conclusions set forth in the 2020 Urban Water Management Plan are legally sufficient; and

WHEREAS, the City Council desires to adopt the 2020 Urban Water Management Plan prior to July 1, 2021 in order to comply with the Act and SB X7-7; and

WHEREAS, Section 10652 of the California Water Code provides that the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) (CEQA) does not apply to the preparation and adoption of the 2020 Urban Water Management Plan.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. The custodian for these records is the City Clerk. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The City Council finds and determines that, under California Water Code Section 10652, the adoption of the Urban Water Management Plan and this resolution does not constitute a project under the California Environmental Quality Act, and no environmental assessment is required. Pursuant to CEQA, the

Council directs staff to file a Notice of Exemption with the County Clerk within five (5) working days of adoption of this resolution.

3. The 2020 Urban Water Management Plan, which replaces the 2015 Urban Water Management Plan, is hereby adopted and ordered filed with the City Clerk.

4. The City of Milpitas' 2020 Urban Water Management Plan, attached hereto as Exhibit A, is hereby adopted as amended by changes incorporated by the City Council as a result of input received (if any) at the public hearing and ordered filed with the City Clerk.

5. The City Manager is hereby authorized and directed to include a copy of this Resolution in City of Milpitas' 2020 Urban Water Management Plan.

6. The City Manager, or his designee, is hereby authorized and directed to file the Plan, in accordance with Water Code sections 10621(d) and 10644(a)(1)-(2), to electronically submit a copy of the 2020 Urban Water Management Plan to the California Department of Water Resources no later than July 1, 2021.

7. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code section 10644(a), to submit a copy of the 2020 Urban Water Management Plan to the California State Library, and any city of county within which the City of Milpitas provides water supplies no later than thirty (30) days after this adoption date.

8. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code section 10645, to make the 2020 Urban Water Management Plan available for public review at the City of Milpitas' offices during normal business hours or on the City of Milpitas' website no later than thirty (30) days after filing a copy of the 2020 Urban Water Management Plan with California Department of Water Resources .

9. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code Section 10635(c), to provide that portion of the 2020 Urban Water Management Plan prepared pursuant to Water Code Section 10635(a)-(b) to any city or county within which City of Milpitas provides water supplies no later than sixty (60) days after submitting a copy of the 2020 Urban Water Management Plan with California Department of Water Resources .

10. The City Manager, or his designee, is hereby authorized and directed to implement the Water Conservation Program set forth in the 2020 Urban Water Management Plan in accordance with the Urban Water Management Planning Act and SB X7-7 , which includes procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs and to provide recommendations to the City Council regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the 2020 Urban Water Management Plan.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

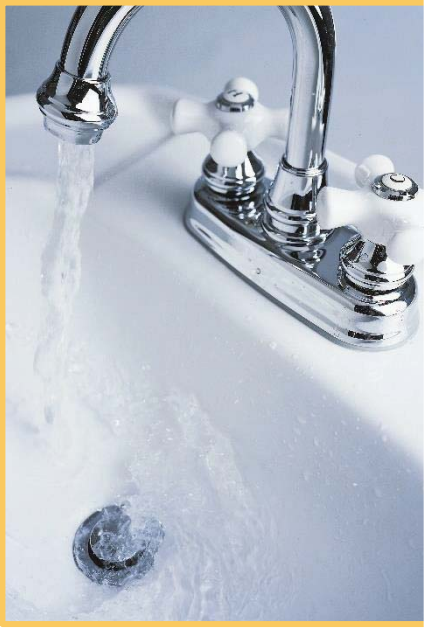
ATTEST: APPROVED:

Wendy Wood, City Clerk Rich Tran, Mayor

APPROVED AS TO FORM:

_____

Christopher J. Diaz, City Attorney



The City of Milpitas
DRAFT 2020 Urban Water Management Plan

June 1, 2021

Prepared by: MADDAUS WATER MANAGEMENT

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LIST OF ABBREVIATIONS AND ACRONYMS

2020 UWMP	2020 Urban Water Management Plan
AB	Assembly Bill
ABAG	Association of Bay Area Governments
acct	account
ACS	American Community Survey
ACWD	Alameda County Water District
AF	acre-feet
AFY	acre-feet per year
AMI	Advanced Metering Infrastructure
AWE	Alliance for Water Efficiency
AWWA	American Water Works Association
AWWARF	American Water Works Association Research Foundation
BAIRWMP	Bay Area Integrated Regional Water Management Plan
BART	Bay Area Rapid Transit
BMP	Best Management Practice
ccf	100 cubic feet
CalWEP	California Water Efficiency Partnership
CAP	Climate Action Plan
CCR	California Code of Regulations
CEC	California Energy Commission
CII	Commercial, Industrial and Institutional
CIMIS	California Irrigation Management Information System
CIP	Capital Improvement Program
CNRA	California Natural Resources Agency
CPUC	California Public Utilities Commission
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
DDW	State Water Resources Control Board Division of Drinking Water
DMM	Demand Management Measures
DOF	California Department of Finance
DRA	Drought Risk Assessment
DSS Model	Least Cost Planning Decision Support System Model
DWR	California Department of Water Resources
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
ETo	Evapotranspiration
GCM	global climate model
GPCD	gallons per capita per day
gpd	gallons per day
gpf	gallons per flush
gpm	gallons per minute
hcf	hundred cubic feet
HE	high efficiency
HET	High-Efficiency Toilet
HEU	High-Efficiency Urinal
IPCC	Intergovernmental Panel on Climate Change
IPR	Indirect Potable Reuse
ISG	Individual Supply Guarantees
LD&R	Leak Detection and Repair
LOS	Level of Service
M&I	Municipal & Industrial
MF	Multifamily
MG	million gallons
mgd	million gallons per day
MGY	million gallons per year
MOU	Memorandum of Understanding
MSP	Midtown Specific Plan
MWM	Maddaus Water Management
NIWR	Net Irrigation Water Requirements
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
PPIC	Public Policy Institute of California
PRV	Pressure Reducing Valve
psi	pounds per square inch
PWS	Public Water Systems

PWSID	Public Water System Identification Number
R-GPCD	residential gallons per capita per day
REUWS	Residential End Uses of Water Study
RUWMP	Regional Urban Water Management Plan
RWF	Regional Wastewater Facility
RWQCB	Regional Water Quality Control Board
RWS	Regional Water System
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009
SBWR	City of San Jose South Bay Water Recycling
SF	Single Family
SFPUC	San Francisco Public Utilities Commission
SJWC	San Jose Water Company
State Water Board	State Water Resources Control Board
SWP	State Water Project
TASP	Transit Area Specific Plan
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act of 1983
VTA	Santa Clara Valley Transportation Authority
WARN	Water/Wastewater Agency Response Network
WCR	Water Conservation Requirements
WDR	Waste Discharge Requirement
WPCP	Water Pollution Control Plant
WRR	Water Recycling Requirement
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WWTP	Wastewater Treatment Plant
WUE	Water Use Efficiency

1 INTRODUCTION AND OVERVIEW

This report presents the 2020 Urban Water Management Plan (2020 UWMP) for the City of Milpitas ("City" or "Milpitas") service area. This section describes the general purpose of this 2020 UWMP and its organization and implementation as well as its relation to supplier grant and loan eligibility and the California Water Code.

1.1 Lay Description

An UWMP is a report used for local water conservation planning and implementation purposes. This may also include the inclusion of planning for emergency supply interruptions as well as improved alignment with other local planning documents. The UWMP is an important and valuable water management and planning tool because it helps guide the government and managers of a water supplier by creating connections from land-use planning, water supply planning and local or statewide issues such as climate change. The UWMP also provides a way by which the water supplier can share information about its water management practices with its customers, community, and state.

An UWMP can also provide accurate details about other management actions such as the effectiveness of water shortage contingency planning, necessary infrastructure improvements or emergency connections with neighboring suppliers, trends in water supply consistency (water reliability) related to climate change or regulatory conditions and opportunities to obtain funding for water management projects.

An UWMP is valuable in collecting and evaluating statewide water supply reliability data as it helps both the Suppliers and the state to plan for future risk of drought. If Suppliers so desire, they can add further details to better describe their area's water supply conditions. Doing so can help improve the evaluation of their water supply consistency and risk of drought. It can also make the UWMP more effective for addressing local, regional, and statewide water planning and management concerns.

1.2 Urban Water Management Plan Organization

This UWMP is organized into the following chapters:

Chapter 1 – UWMP Introduction and Lay Description. This chapter provides a discussion on fundamentals of the UWMP and provides the newly required lay description.

Chapter 2 – Plan Preparation. This chapter provides information on the processes used for developing the UWMP, including efforts in coordination and outreach.

Chapter 3 – System Description. This chapter describes the City's water system, including maps of the service area, an explanation of the service area and climate, details on the public water system and an overview of the City's organizational structure and history.

Chapter 4 – Customer Water Use. This chapter describes and quantifies the current and projected water uses within the City's service area.

Chapter 5 – Conservation Target Compliance. In this chapter, the City details its compliance with the 2020 per-capita water conservation mandate, the 2020 per-capita target value that was adopted in the 2015 UWMP and the City's compliance value based upon actual 2020 customer water use. Also provided are the target and baseline calculations.

Chapter 6 – System Supplies. In this chapter, the City describes and quantifies current and projected potable and non-potable water supplies. Also provided is a narrative description of each supply source and quantification of the supply availability for each source identified.

Chapter 7 – Water System Reliability. This chapter describes the City's water system reliability through a 20-year planning horizon for normal, single dry year and five consecutive dry years. This chapter also includes the Drought Risk Assessment. The water system reliability differs from the DRA by allowing a different basis for characterizing the five consecutive dry years.

Chapter 8 – Water Shortage Contingency Planning. This chapter provides the City's structured plan for dealing with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic supply interruption.

Chapter 9 – Demand Management Measures. This chapter communicate the City's efforts to promote conservation and to reduce demand on its water supply, including a narrative describing efforts to implement several demand management measures.

Chapter 10 – Plan Adoption, Submittal, and Implementation. This chapter describes and documents the steps taken to make the City's UWMP publicly available as well as the steps taken to adopt and submit the UWMP in accordance with the Water Code. This chapter also describes the City's plan to implement the UWMP.

Appendices – In order to produce a well-supported planning document, a number of appendices, as listed in the Table of Contents, are included in this UWMP to provide information in addition to that in the main chapters.

1.3 UWMPs in Relation to Other Efforts

General Plan – The Milpitas 2040 General Plan was adopted on March 9, 2021 (De Novo, 2021).

Draft 2020 Water Master Plan – The City's Draft Water Master Plan was completed May 18, 2021 (West Yost, 2021).

2013 Climate Action Plan – The City's Climate Action Plan was adopted May 7, 2013 (PMC, 2013). A Climate Action Plan (CAP) Update is currently being developed.

1.4 UWMPs and Grant or Loan Eligibility

In order for a water supplier to be eligible for any water grant or loan administered by DWR, the supplier must have a current UWMP on file that has been determined by DWR to address the requirements of the California Water Code. A current UWMP must also be maintained by the Supplier throughout the term of any grant or loan administered by DWR. A UWMP may also be required in order to be eligible for other state funding, depending on the conditions that are specified in the funding guidelines.

1.5 Demonstration of Consistency with the Delta Plan for Participants in Covered Actions

Valley Water Standard Text

Retailer water supply includes groundwater pumped from a conjunctively managed groundwater basin. The groundwater basins in Santa Clara County span nearly 400 square miles, with thousands of well users pumping groundwater for beneficial use.

As a retailer in Santa Clara County that uses groundwater, we rely on Valley Water activities to maintain sustainable supplies, including managed groundwater recharge and in-lieu groundwater recharge (e.g., treated surface water deliveries, demand management programs, and SFPUC supply)

Valley Water's complex water supply and management system is based on the conjunctive management of groundwater and surface water (both local and imported). Therefore, it is very difficult to demonstrate reduced Delta reliance at a retailer level:

- Valley Water uses water from the State Water Project (SWP), Central Valley Project (CVP) and local watershed runoff to meet groundwater recharge and water treatment plant needs, which in turn produce water for use by retailers and other users. The interconnected nature of the groundwater basins and blended use of sources in Valley Water infrastructure like reservoirs and pipelines make it infeasible to quantify imported water use at the retailer level.
- Valley Water manages most of the water conservation programs for the County with the support of retailers. Retailers support the conservation programs through water rates and cost share agreements.
- Valley Water and local retailers have recycled water goals for the future but the projected future split between potable and non-potable is not yet determined. Potable reuse would be managed by Valley Water and either directly augment groundwater or treated surface water. In both instances, it would get blended with several other sources before being used by retailers so it would be infeasible to determine the proportion of potable recycled water going to each retailer compared to Delta supplies.
- Valley Water projects an increased use of supplies captured locally, which can contribute to reduced reliance on the Delta. But given Valley Water's conjunctive water management, these reductions cannot be allocated to individual retailers.

Valley Water, with the support of all retailers including the City has made significant investments in demand management and local supplies to reduce Santa Clara County's and thus the City's reliance on the Delta. These investments include:

- Conservation measures
- Recycled water
- Stormwater capture
- Dam Improvements/Seismic Retrofits of local reservoirs

Through careful management and conjunctive use of local surface water and groundwater supplies, and increasing conservation and use of recycled water, Santa Clara County (and by extension the City of Milpitas) is reducing reliance on the Delta.

The Delta Plan is not mentioned in the SFPUC UWMP as SFPUC does not receive water from the California State Water Project (SWP) and the Central Valley Project (CVP).

1.6 Background and Purpose

This Urban Water Management Plan is the legal and technical water management foundation for supplies throughout California. A well-constructed UWMP can save time and money and provides the City UWMP staff, the public and elected officials with an understanding of past, current and future water conditions and management. The UWMP integrates local and regional land-use planning, regional water supply, infrastructure and demand management projects, as well as statewide issues of concern like climate change and regulatory revisions. For this 2020 UWMP, the City has gathered and synthesized water-related information from numerous sources into a plan with local, regional, and statewide information.

Chapter 1 introduces the UWMP, its legislative history, legal requirements and amendments, focus, importance and purpose. Additionally, in this chapter the City describes its process for integrating information from other documents and coordination with local and regional agencies. The intent of UWMPs is to provide the California Department of Water Resources (DWR) and the public with information on present and future water sources and demands and to provide an assessment of the City's water resource needs.

This UWMP provides the City with a reliable water management action plan that can be confidently referred to continuously, as conditions change and management decisions arise. It also can demonstrate the reliability of the City's water supplies and how that might affect local growth and the economy.

An additional intention of this UWMP is to provide DWR, the State Water Resources Control Board (State Water Board) and the California Legislature with a representation of the City's water reliability so that a full picture of statewide water reliability may be constructed. The UWMP also allows the City to characterize conditions to improve its water reliability assessments, drought risk assessments and use of the UWMP for addressing local, regional and statewide water planning and management issues.

The UWMP provides the City with the opportunity to consider additional options for managing water assets to enhance the City's long-term water reliability and other management objectives. A careful accounting of supplies, uses and reliability can inform actions for retaining conserved water assets or for leveraging water assets for environmental improvements or financial gain. The more detailed and reliable the accounting, the better the City is able to gauge how much extra or how short water supplies may be in any given situation. This information can allow the City to make sound management decisions regarding asset management and infrastructure planning to help mitigate long-term water management conditions attributable to climate change, regulatory change and local water quality conditions.

For example, where surplus water conditions exist under certain circumstances, these water assets can be used for alternative purposes like instream flow and habitat enhancement, or crisis-related supplies for neighboring urban purveyors, which stabilize the environment or enhance regional water reliability.

In short, the City has prepared this UWMP to provide practical and effective water management guidance for its staff, stakeholders, customers, community and the state of California water governing bodies and Legislature.

The intent of this plan is to provide the Department of Water Resources (DWR) and the public with information on present and future water sources and demands and to provide an assessment of City's water resource needs. Specifically, the 2020 UWMP must provide water supply planning for a 20-year planning period in 5-year increments, identify and quantify adequate water supplies for existing and future demands during normal, dry and drought years and assure efficient use of urban water supplies. This 2020 UWMP addresses all Water Code requirements for such a plan as shown in the completed DWR UWMP checklist provided in Appendix A.

Thoughtful urban water management planning provides the City with the opportunity to integrate supplies and demands in a balanced and methodical planning platform that addresses short-term and long-term water planning conditions. This 2020 UWMP will:

- Assess changes in natural hydrology, climate and groundwater conditions.

- Anticipate the implications of regional, state and federal regulations.
- Understand supply conditions and water use variability.
- Identify regional constraints on or opportunities for shared water resources.
- Integrate local land-use changes, development, plans and population growth.
- Prepare for water shortages and unforeseen calamities.
- Anticipate infrastructure improvements.
- Recognize project funding needs and opportunities.

This UWMP will address the following water-planning fundamentals:

- Preparing a detailed look at current and future water use, including assessing and error-checking available baseline data and examining long-term planning documents like municipalities' General Plans and Specific Plans.
- Analyzing potable and non-potable water supplies, including reviewing water rights and contracts, assessing water deliveries, ascertaining restrictions on water availability under certain regulatory and hydrological conditions and other opportunities or limitations explained in documentation for each water supply.
- Analyzing water supply reliability by integrating the water use analyses with the water supply analyses to provide a water service reliability picture under normal conditions, single dry-year conditions and five consecutive dry years through at least 2040.
- Preparing a realistic Drought Risk Assessment (DRA) by including integrated water supplies and projected water use in a hypothetical five-year drought condition; and
- Developing an effective Water Shortage Contingency Plan that specifies opportunities to reduce demand and augment supplies under numerous, and even unpredictable, water shortage conditions.

Furthermore, this UWMP allows the City to reflect short-term and long-term land-use planning assumptions and goals, account for specific plan and infill development projects over the course of the UWMP planning period, handle the dynamic nature of water supplies and demands through sound water-shortage contingency planning and inform the state and the City's customers about its water management practices.

Lastly, changes in cultural use patterns, such as the stay-at-home 2020 pandemic-related orders, can alter urban water use patterns and affect current and future water conservation accounting and analysis. Current water data may reflect a temporary or long-term change in water use and could affect evaluation of near-term and long-term management considerations. Within this UWMP, the City will describe such changes and the potential effects on its current and projected water data.

1.7 Urban Water Management Planning and the California Water Code

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMP Act). The law required an urban water supplier[1] to adopt a UWMP every five years demonstrating water supply reliability in normal, single dry and multiple dry years. The original UWMP Act also required the California Department of Water Resources (DWR) to provide a report to the California Legislature on the status of water supply planning in California.

[1] A "Supplier" is defined as an entity providing water for municipal purposes to more than 3,000 customers or serving more than 3,000 acre-feet annually.

Since the UWMP Act was passed, it has undergone significant expansion and revision since the last UWMP Guidebook was prepared in 2015 (see details following). Prolonged droughts, groundwater overdraft, regulatory revisions and changing climatic conditions not only affect a supplier's water reliability determinations, but also the broad picture of statewide water reliability overseen by DWR, the State Water Board and the State of California Legislature (Legislature). Accordingly, the UWMP Act has grown to address changing conditions as it guides California's water resource management.

There are numerous additional requirements passed by the Legislature for the 2020 UWMPs, updating the 2015 UWMP guidance. Significant new requirements include the following:

- **Five Consecutive Dry-Year Water Reliability Assessment** – The Legislature modified the dry-year water reliability planning from a "multiyear" time period to a "drought lasting five consecutive water years" designation. This statutory change requires a Supplier to analyze the reliability of its water supplies to meet its water use over an extended drought period. This requirement is addressed in the water use assessment presented in Chapter 4, the water supply analysis presented in Chapter 6 and the water reliability determinations in Chapter 7.
- **Drought Risk Assessment** – The California Legislature created a new UWMP requirement for drought planning in part because of the significant duration of recent California droughts and the predictions about hydrological variability attributable to climate change. The DRA requires a Supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses and the resulting water supply reliability under a reasonable prediction for five consecutive dry years.
- **Seismic Risk** – The Water Code now requires a Supplier to specifically address seismic risk to various water system facilities and to have a mitigation plan (see Chapter 8). An important aspect of this provision is the intersection of water supply infrastructure planning with a county or regional hazard mitigation plan.
- **Water Shortage Contingency Plan** – In 2018, the Legislature modified the UWMP laws to require a Water Shortage Contingency Plan (WSCP) with specific elements. The WSCP is a document that provides a Supplier with an action plan for a drought or catastrophic water supply shortage. Although the new requirements are more prescriptive than previous versions, many of these elements have long been included in WSCPs, other sections of UWMPs, or as part of a Supplier's standard procedures and response actions (see Chapter 8). Many of these actions were implemented by Suppliers during the last drought, to successfully meet changing local water supply challenges. The WSCP will also have statewide utility for DWR, the State Water Board and the Legislature in addressing extreme drought conditions or statewide calamities that impact water supply availability. See Appendix I of this UWMP for the full WSCP.
- **Groundwater Supplies Coordination** – In 2014, the Legislature enacted the Sustainable Groundwater Management Act to address groundwater conditions throughout California. Water Code now requires 2020 UWMPs to be consistent with Groundwater Sustainability Plans in areas where those plans have been completed by Groundwater Sustainability Agencies.
- **Lay Description** – The Legislature included a new statutory requirement for Suppliers to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead and strategies for managing reliability risks. This new section of the UWMP could be viewed as a go-to synopsis for new staff, new governing members, customers and the media, and it can ensure a consistent representation of a Supplier's detailed analysis.

2 PLAN PREPARATION

Lay Description

This chapter describes the basis of the development of the Urban Water Management Plan; the requirements for preparation; the processes used, including efforts in notification, coordination and outreach; the regional planning involved; and the calendar year and units of measure used.

2.1 Plan Preparation

Coordination and outreach are key elements in developing a useful and accurate UWMP. Working with neighboring water suppliers strengthens a region's ability to plan for drought and catastrophic events.

Coordination with city and county land use planning agencies can provide information on regional planning, demographics and expected future development for determining future water use, supply and reliability assessments. Notification to all interested parties and stakeholders allows those entities to provide information on aspects of the UWMP, to help in creating a more useful plan. It also lets these entities know about the different water management considerations that may affect their own decisions.

The City is an active member of the water community and coordinated with these agencies for this UWMP:

- BAWSCA
- Valley Water
- SFPUC

The City coordinated various water planning documents to support development of the UWMP:

- Draft 2020 Water Master Plan: evaluates historical and existing water demands to review and refine performance and planning criteria to evaluate the water system and facilities.
- General Plan: identifies the community's vision for the future and provides a framework that will guide decisions on growth, development, and conservation of open space and resources in a manner that is consistent with the quality of life desired by the city's residents and businesses.

2.2 Basis for Plan Preparation

California Water Code Section 10617 defines an urban water supplier as "*a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part*

applies only to water supplied from public water systems."[2] In accordance with the California Water Code Section 10621, urban water suppliers are required to prepare a UWMP every five years.[3]

As per the above definition, the City qualifies as an urban water supplier. The City has prepared this plan in compliance with state law and following the guidelines as outlined by the Department of Water Resources in its *Urban Water Management Plan Guidebook 2020*, posted as Final in April 2021. This 2020 UWMP is the 5-year update to the 2015 UWMP and will supersede the contents of the former plan.

Public water systems are the distribution systems that provide drinking water for human consumption. All public water systems are given a unique Public Water System Identification Number (PWSID). These systems are regulated by the State Water Board, Division of Drinking Water (DDW). The California Health and Safety Code 116275 defines a public water system as "*a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year."*[4] Based on this definition, the City of Milpitas is a Public Water System and therefore operates under a water supply permit issued by DDW.

As indicated in Table 2-1, the City served 16,360 municipal connections and 3,429 million gallons of water in 2020. The total number of connections accounts for all billed water meters in the City, including recycled water and fire meters. The total number of connections does not account for the number of multi-family residential units served by master meters. Multi-family residential developments such as apartment complexes may use a single master meter to measure consumption for more than one dwelling unit.

Table 2-1. Public Water Systems

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
4310005	City of Milpitas	16,360	3,430
	TOTAL	16,360	3,430
NOTES: The volume of water supplied in 2020 was a combination from SFPUC (2,159 MG), Valley Water (914 MG), and Recycled Water (357 MG). The number of connections is the number of active connections, including recycled water and fire accounts, as of December 2020.			

2.3 Regional Planning

Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for the individual agency, assessing water resources at the appropriate geographic scale and allowing for solutions that cross jurisdictional boundaries.

[2] California State Legislature. (1983). Water Code Section 10617, amended 1996. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT&sectionNum=10617.

[3] Ibid. (1983). Water Code Section 10621. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT&sectionNum=10621

[4] Ibid. (1995). Health and Safety Code Section 116275. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=116275.

Depending on the level of regional cooperation, other possible benefits can include:

- More reliable water supplies.
- Increased regional self-reliance.
- Improved water quality.
- Better flood management.
- Increased economic stability.
- Restored and enhanced ecosystems.
- Reduced conflict over resources.

In support of regional UWMPs and regional water conservation targets, the UWMP portion of the Water Code provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning. The City understands the value of regional planning and as such partakes in regional conservation efforts through participation with the Bay Area Water Supply & Conservation Agency (BAWSCA). BAWSCA provides regional water reliability planning and conservation programming for the benefit of its 26 member agencies, including the City of Milpitas, that purchase wholesale water supplies from SFPUC. Collectively, the BAWSCA member agencies deliver water to over 1.8 million residents and nearly 40,000 commercial, industrial and institutional accounts in Alameda, San Mateo and Santa Clara Counties.

As an active member of BAWSCA, the City of Milpitas works in conjunction with BAWSCA and the other member agencies. BAWSCA represents the collective interests of these wholesale water customers on all significant technical, financial, and policy matters related to the operation and improvement of SFPUC's Regional Water System (RWS). This regional planning interaction allows for broader distribution of materials and information as well as reduced costs to each of the individual water suppliers through sharing of resources. BAWSCA's role in the development of the 2020 UWMP updates is to work with its member agencies and the SFPUC to seek consistency among UWMP documents.

In 2009, the SFPUC and BAWSCA members entered into a Water Supply Agreement, a 25-year contract outlining the relationship between the two entities. A key component of the Water Supply Agreement is that it continued the "Supply Assurance," a maximum supply of 184 million gallons per day (mgd) to be allocated among BAWSCA members, established by the Water Supply Agreement's predecessor (the 1984 Settlement Agreement and Master Water Sales Contract). Though the Supply Assurance can be reduced due to drought, maintenance, or emergencies, the Water Supply Agreement established the 184 mgd delivery ceiling in perpetuity. The City has an individual supply guarantee (ISG) of 9.232 mgd from SFPUC. SFPUC's Supply Assurance and the City's ISG is discussed in more detail in section 7.2.5.

Per the City's contract with Valley Water, potable water deliveries consist of State Water Project and Central Valley Project water only, with amounts based on an annual request the City submits every three years. In each of the three years after submitting the request, the City is obligated to purchase at least 95 percent of the maximum amount listed on the schedule. Every month, Valley Water guarantees the City can receive at least 15 percent of the annual delivery schedule.

2.4 Individual or Regional Planning and Compliance

The City has developed this UWMP to report solely on its distribution service area. Individual UWMPs address all requirements of the Water Code including water use targets and baselines (for SB X7-7 Water Conservation Act of 2009 reporting). The City has notified and coordinated with the appropriate regional agencies and constituents.

This 2020 UWMP, which is an individual UWMP (see Table 2-2), updates and replaces the City's 2015 UWMP.

Table 2-2. Plan Identification Type

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		

2.4.1 Regional UWMP

A group of suppliers agreeing among themselves to plan, comply and report as a region on urban water use target requirements of SB X7-7 is referred to as a Regional Alliance. A Regional Alliance allows water suppliers to work toward cooperatively developing programs and meeting regional water conservation targets, but not necessarily submitting a Regional Plan. Since the City does not have a Regional Alliance, this section does not apply.

2.5 Fiscal or Calendar Year and Units of Measure

Since the City reports on a calendar year basis rather than fiscal, it is required to include the water use and planning data for the entire calendar year of 2020, which is reflected in this 2020 UWMP. In addition, the City utilizes million gallons (MG) throughout this plan as the unit of measure when reporting water volume.

Table 2-3 provides agency identification information, type of year reporting and units of measure used by the City in this 2020 UWMP to report water data and assessments.

Table 2-3. Supplier Identification

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years, provide month and date that the fiscal year begins (mm/dd)	
Units of Measure Used in UWMP (select from drop down)	
Unit	MG

2.6 Coordination and Outreach

This section describes the coordination and outreach efforts of the City during preparation of the 2020 UWMP.

2.6.1 Wholesale and Retail Coordination

When a water supplier relies upon a wholesale agency for a water supply, both suppliers are required to provide each other with information regarding projected water supply and demand. Retail agencies that receive a water supply from one or more wholesalers are required to provide their wholesaler(s) with the retail agency's projected water demand from that source in five-year increments for 20 years or as far as possible based on the data available.

During the preparation of the 2020 UWMP, the City coordinated with its two potable water wholesalers, the San Francisco Public Utilities Commission (SFPUC) and Valley Water, as indicated in Table 2-4. The City maintains one groundwater well for use in emergencies, but it is not used as a normal supply. More information about coordination and notification efforts can be found in Chapter 10.

Table 2-4. Water Supplier Information Exchange

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name (Add additional rows as needed)
San Francisco Public Utilities Commission
Valley Water (previously named Santa Clara Valley Water District)

2.6.2 Coordination with Other Agencies and the Community

On February 23, 2021, the City distributed notices of preparation to the appropriate agencies through email. The notice was sent to the following entities:

- San Francisco Public Utilities Commission, the City's wholesaler
- Valley Water, the City's wholesaler
- BAWSCA and the 26 other BAWSCA member agencies that share SFPUC as a common wholesale water source[5]
- Great Oaks Water Company
- Milpitas Chamber of Commerce
- Milpitas Unified School District
- Montara Water and Sanitary District
- Alameda County Water District, the City's emergency intertie
- San Jose Water, the City's emergency intertie

In addition to the notice of intent to update its UWMP, the City of Milpitas also notified surrounding cities, Santa Clara County, BAWSCA and its member agencies and the general public more than 60 days in advance of the public hearing. With the exception of the general public, notification was provided by email. Notification to the

[5] BAWSCA. Member Agency Profiles web page, accessed May 2021: https://bawsca.org/members/profiles

general public was achieved through a display advertisement in *The Milpitas Post.* Copies of the notices can be found in Appendix E of this UWMP.

The City convened the public hearing on June 15, 2021, to receive comments on the 2020 UWMP prior to its final adoption by the City Council and submittal to the California Department of Water Resources. The plan was adopted on June 15, 2021, at the regular City Council meeting. The 2020 UWMP was made available for public review online on the City's website[6] since access to the City office, the public library and City Hall were limited due to COVID-19 restrictions.

A copy of the Final 2020 UWMP was submitted to the following entities:

- California Department of Water Resources
- California State Library
- BAWSCA and the 25 other BAWSCA member agencies
- SFPUC
- Valley Water
- Santa Clara County
- Spring Valley Heights Association
- Milpitas Unified School District
- Milpitas Chamber of Commerce

The City of Milpitas has a very socially, culturally and economically diverse community. To support this diversity, prior to and during the preparation of the plan, the City encouraged the active involvement of diverse social, cultural, and economic elements of its population within the service area. In addition to outreaching through Facebook and NextDoor, the City also sent notices to non-profit organizations, service groups, and churches and religious leaders.

2.6.3 Notice to Cities and Counties

The California Water Code 10621(b) requires that agencies notify cities and counties to which they serve water that the 2020 UWMP is being updated and reviewed. The California Water Code specifies that this must be done at least 60 days prior to the public hearing.

The full list of cities and counties to which the City of Milpitas sent the 60-day notification is reported in Table 10-1 in Chapter 10.

[6] https://www.ci.milpitas.ca.gov/2020_uwmp/

3 SYSTEM DESCRIPTION

Lay Description

This chapter provides guidance for describing the City's system, including a description of the service area, climate, projected population and other factors that might affect water management planning. It includes additional guidance for uncertainties, such as the potential impacts of climate change.

3.1 General Description

The City of Milpitas is located in Santa Clara County near the southern tip of the San Francisco Bay, 45 miles south of San Francisco. The City of Fremont borders Milpitas to the north and the City of San Jose borders Milpitas to the south. Most of its 14 square miles of land is situated between two major freeways (I-880 and I-680) and a county expressway. The City has approximately 10 square miles of valley floor to the west and 4 square miles of hillside areas to the east. Industrial and commercial areas are located on the valley floor with residential areas on the valley floor and hillside. Parks and recreational open spaces are distributed throughout residential areas.

Since its inception in 1954, the City has experienced steady growth and development. At the time of incorporation, the City covered an area of 2.9 square miles with a population of 825. Rapid growth began with the Ford Motor Company assembly plant in 1955 and continued with the high technology industry in the 1970s. The majority of the valley floor is fairly new. Growth slowed as result of the recession of 2008. However, in more recent years, the transformation of industrial areas of the City into high-density housing has resumed. The City contains a strong complement of employment and retail uses as well as housing. Large sources of employment include manufacturing, the school district, and the Great Mall shopping center.

The City owns, operates and maintains a potable water distribution system which consists of five turnouts, one emergency groundwater well, three emergency interties, five storage reservoirs, five pump stations, 17 pressure reducing valves (PRVs), and approximately 183 miles of pipeline. The City also operates and maintains a recycled water system owned by the City of San Jose South Bay Water Recycling (SBWR) program.

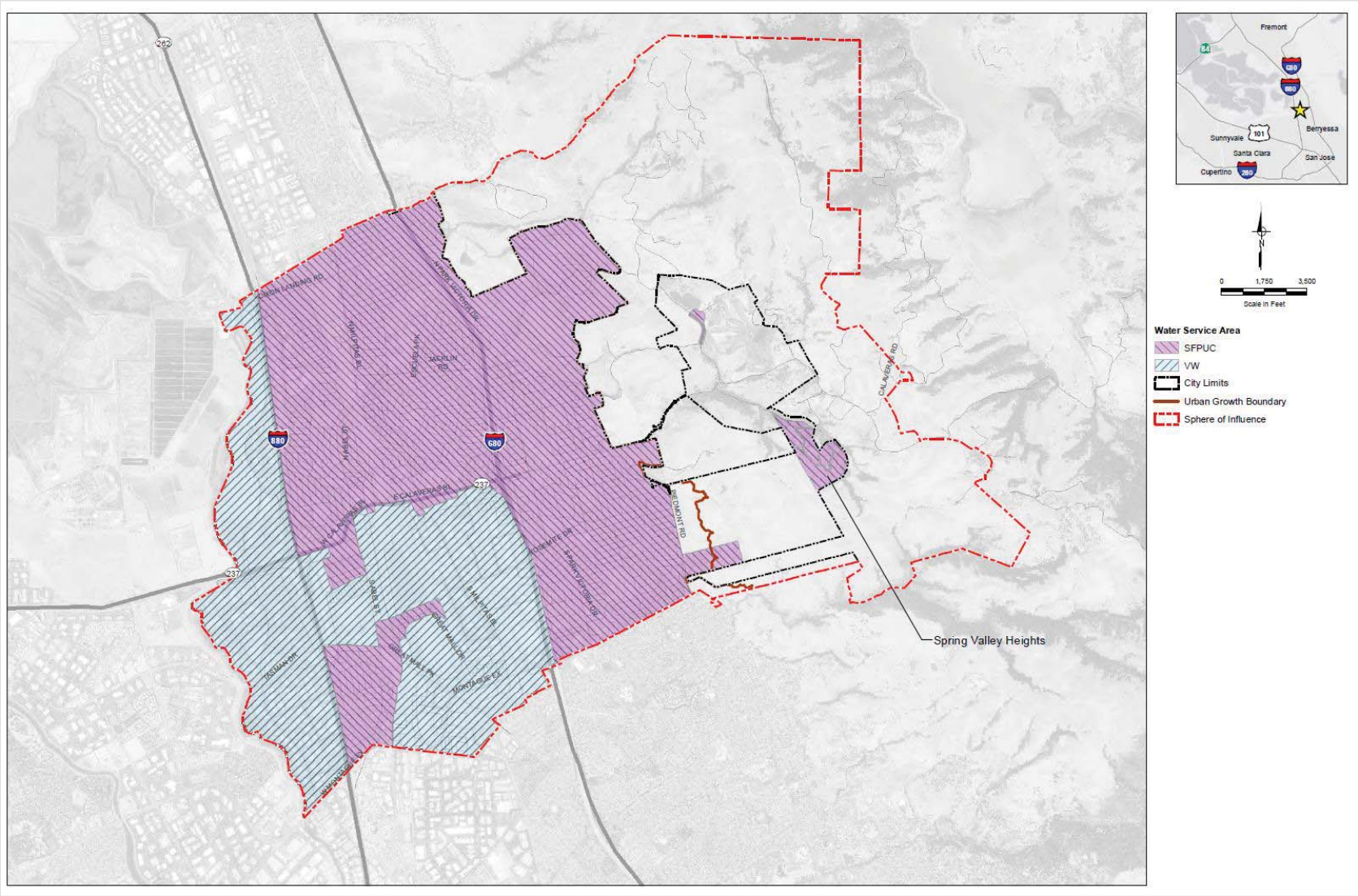
3.2 Service Area Boundary Maps

As shown in Figure 3-1, the City's potable water supply system is divided into two distinct service areas, corresponding to the areas served by the City's two wholesalers: SFPUC and Valley Water. Under normal operating conditions, the City does not blend water from SFPUC and Valley Water. However, the two sources of water can be interconnected to provide an emergency water supply, if needed.

The City of Milpitas Sphere of Influence (SOI) includes both incorporated and unincorporated areas within which Milpitas has primary responsibility for providing public facilities and services. In 1998, voters in the City of Milpitas established an Urban Growth Boundary (UGB) limiting development in the eastern hillside. The initiative was set to expire in 2018 but was extended by Measure I in November 2016 and will expire in 2038. The Urban Service Area (USA) Boundary is contiguous with the UGB, and the (USA) restricts the extension of public services and infrastructure to new development(s) in the City Limits' eastern areas SOI.

Figure 3-1 shows the City's Sphere of Influence, Urban Growth Boundary and Urban Service Area Boundary. One exception to the moratorium is the Spring Valley Heights community, which is located outside the Urban Growth Boundary but served by City water distribution infrastructure.

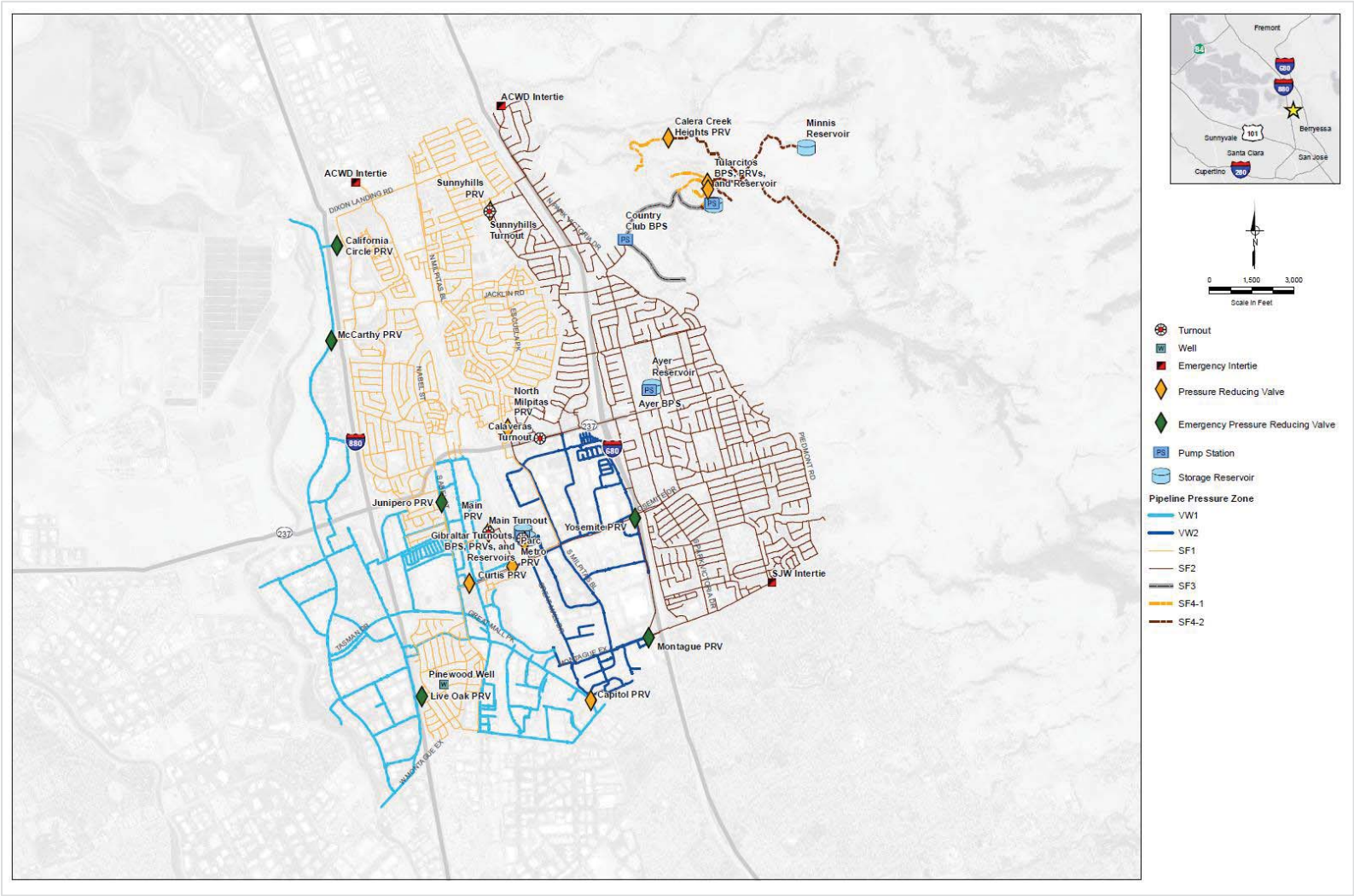
Figure 3-1. Potable Water Service Area Map



Source: West Yost. (2021). City of Milpitas Draft 2020 Water Master Plan.

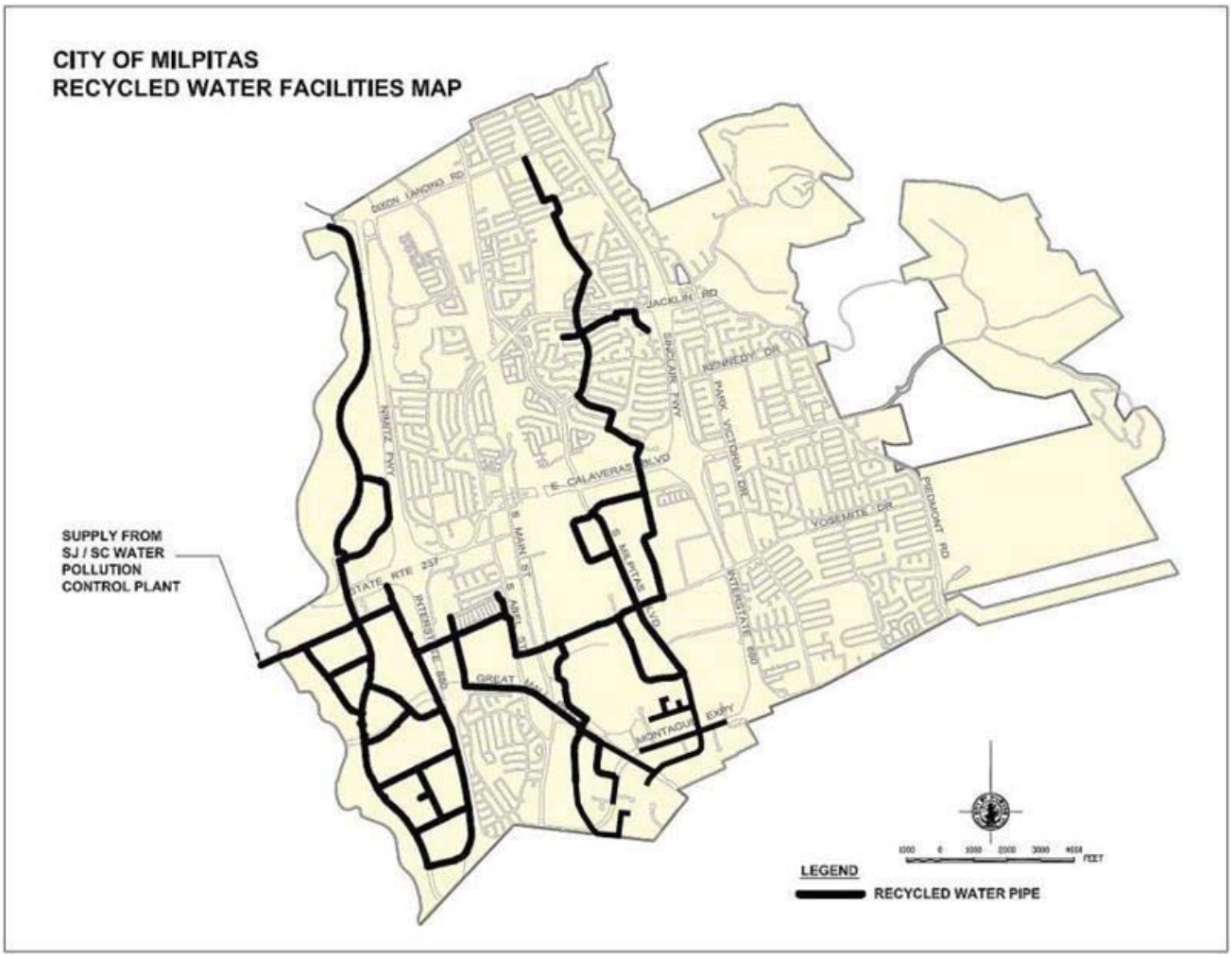
Figures 3-2 and 3-3 provide further details regarding the City's water system and infrastructure. Since the City has not had any service area changes since the 2015 UWMP, no service area change figure has been included. The City does not serve any parcels outside its jurisdiction, and since the jurisdictional boundary mirrors the service area no jurisdiction boundary map has been included. The City does not own or operate a Raw Water Distribution System, so no such map has been included. However, Valley Water has a Raw Water Transmission System, a map of which can be found in Chapter 3 of Valley Water's 2020 UWMP (pending publication in 2021).

Figure 3-2. Public Water System(s)



Source: West Yost. (2021). City of Milpitas Draft 2020 Water Master Plan.

Figure 3-3. City of Milpitas Recycled Water Distribution System

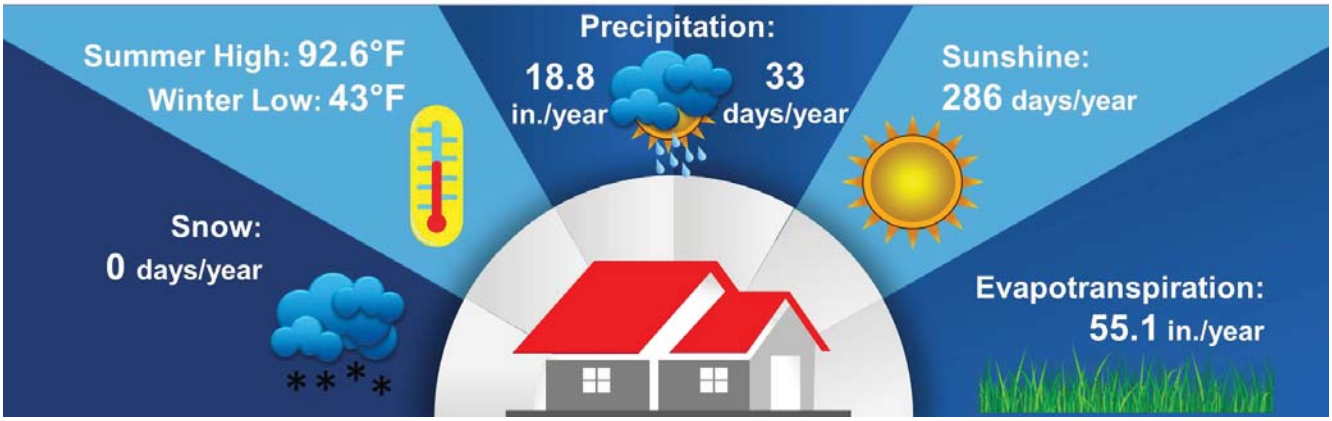


Source: City of Milpitas

3.3 Service Area Climate

The City's Mediterranean climate is characterized by warm, dry summers and mild wet winters. Annual precipitation averages about 16 inches. Annual ET_o in the region is 45.3 inches, and average temperature is 61 degrees Fahrenheit.

Figure 3-4. City of Milpitas Climate Characteristics



3.3.1 Climate Change Impacts on Water Demands, Supplies and Reliability

According to the National Academy of Sciences, climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun.
- Natural processes within the climate system (e.g., changes in ocean circulation).
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g. deforestation, reforestation, urbanization, desertification, etc.).

Climate change has the potential to directly impact the City's surface water supply and to indirectly impact groundwater supplies. The City is committed to adapting to climate change in a manner that protects the water resources for the maximum benefit while continuing to maintain a reliable, affordable, high quality water supply for the community. Several potential effects of climate change have been identified by the scientific community, including reduced winter snowpack, more variable and extreme weather conditions, shorter winters and increased evaporative demand. Additionally, climate change could affect water quality through increased flooding and erosion; greater concentration of contaminants, if any, in the water supply; and warmer water, which could lead to increased growth of algae and other aquatic plants. Rising sea level and increased flooding are also potential effects of climate change.

Changes in precipitation, temperature and atmospheric carbon dioxide affect crop evapotranspiration (ETo) and net irrigation water requirements (NIWRs). Global climate models (GCMs) have been used to project future climate change and impacts on crop water demands. Future conditions of warm-dry, warm-wet, hot-dry, hot-wet and central tendency were used. Three future periods for these five conditions were selected to project climate change effects and impacts, including the 2020s (2010-2039), 2050s (2040-2069) and 2080s (2070-2099). Santa Clara County is expected to see increasing temperatures, which could result in more extreme heat and drought events and increased demands. Future projections of precipitation are not as clear. Changes in precipitation timing and amounts could result in greater or lesser irrigation requirements to meet ETo demands.

Although there is consensus that climate change is occurring, and the effects of climate change are being observed, the timing and magnitude of climate change impacts remain uncertain. The City will mitigate climate change impacts with this uncertainty in mind through an adaptive management approach in cooperation with other regional stakeholders, municipalities within the City and neighboring water management agencies. Under adaptive management, key uncertainties will be identified and evaluated (e.g., April-July runoff as a percentage of annual runoff, total runoff, average temperature and reference evapotranspiration), and strategies will be developed to address the related climate change impacts. As the actual impacts occur, the strategies will be prioritized, modified as needed and implemented. In 2013, the City adopted a Climate Action Plan (PMC, 2013) and is currently drafting an updated CAP which will further evaluate impacts to the City.[7] SFPUC also is in process of completing a climate change impact report.

Additional Resources for Water Resources Planning for Climate Change

Much work has been done at state and regional levels to evaluate the effects and impacts of climate change and to develop strategies to support effective statewide, regional, and local water management in the future. The following resources provide additional information describing water resources planning for climate change:

- Progress on Incorporating Climate Change into Planning and Management of California's Water Resources. California Department of Water Resources Technical Memorandum, July 2006. (DWR, 2006)

[7] City of Milpitas. Climate Action Milpitas web page, accessed May 2021: https://climateactionmilpitas.org/home

- Climate Change and Water. Intergovernmental Panel on Climate Change, June 2008. (IPCC, 2008)
- Managing An Uncertain Future: Climate Change Adaptation Strategies for California's Water. California Department of Water Resources Report, October 2008. (DWR, 2008)
- 2009 California Climate Change Adaptation Strategy. California Natural Resources Agency Report to the Governor, December 2009. (CNRA, 2009)
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- West-Wide Climate Risk Assessments: Irrigation Demand and Reservoir Evaporation Projections, Technical Memorandum No. 86-68210-2014-01, U.S. Bureau of Reclamation, 2015. Available at http://www.usbr.gov/watersmart/wcra/index.html. (USBR, 2015)
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- *San Francisco Bay Area Summary Report*, California's Fourth Climate Change Assessment. Available at https://www.climateassessment.ca.gov/. (Ackerly et al., 2018)
- Adapting to Rising Tides, Bay Area. Available at http://www.adaptingtorisingtides.org/project/art-bay-area/. (BCDC et al., 2020)
- Silicon Valley 2.0 Climate Change Preparedness Decision Support Tool. Available at http://siliconvalleytwopointzero.org/home.

3.4 Service Area Population, Demographics and Socioeconomics

Suppliers are required to report their current and projected service area populations in their UWMP. The Water Code does not require a specific methodology for projecting future populations, but it does require that the estimates of future population be based upon data from state, regional, or local service agency population projections.

3.4.1 Service Area Population

The City's actual 2020 population was 77,961 from the Department of Finance. The City is projected to grow over the next 25 years as shown in Table 3-1. The projected population numbers are based on current planning documents including the City's General Plan and Association of Bay Area Governments (ABAG). Any change due to new plans adopted after this writing will change the projections. The population estimates reflect the City's entire water service area.

Table 3-1. Retail Population – Current and Projected

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	77,961	90,400	98,100	106,000	113,200	120,400
NOTES: 2020 actual population value from the Department of Finance Table E-5 for the City of Milpitas. The projected population is from the Association of Bay Area Governments. Projected population has been rounded to the nearest 100.						

The expected population growth will come from redevelopment of two central areas defined in the Milpitas Gateway-Main Street Specific Plan (MGSP) and Milpitas Metro Specific Plan (MMSP). The MGSP outlines planned growth of a mixed-use community that includes high-density, transit-oriented housing and a central community "gathering place," while maintaining needed industrial, service, and commercial uses. The plan is long-range in nature, intended to guide development through the year 2030. Some land in the Gateway Area is undeveloped and readily developable over the short-term, while other parcels may be developed over a longer time frame.

The MGSP designation provides for the current and future uses of the Gateway area of Milpitas, in accordance with the Specific Plan. The Specific Plan sets forth the types, locations and intensities of land uses to be accommodated within the Gateway Area. Its purpose is to create an economically viable main street-type development that serves as a cultural hub of the City. A variety of uses are allowed in this designation, including entertainment, retail, commercial, residential, civic, cultural, office and high-density mixed use residential in a compact, walkable and unique centralized setting. All new development occurring within the MGSP designation is required to adhere to the development standards and guidelines established in the Specific Plan. These projections are subject to change as the MGSP is updated.

The MMSP outlines planned growth at the hub of the existing Santa Clara Valley Transportation Authority (VTA) Light Rail station and the recently opened Bay Area Rapid Transit (BART) station near the City's Great Mall shopping center. The plan calls for new residential and mixed-use developments. New residential neighborhoods will consist of mixed-use areas with commercial use on the ground floor and residential units above in high-density residential neighborhoods. Industrial areas will be transitioned to areas that support higher density mixed use. The MMSP designation creates a structure for a walkable, transit-oriented area with a mix of land uses, which encourages walking, biking and transit trips minimizes vehicle trips and reduces vehicle miles traveled (VMT). Development allowed within the Specific Plan area accommodates substantial growth, while minimizing impacts on local roadways and reduces urban sprawl at the periphery of the region. All new development occurring within the MMSP designation adheres to the development standards and guidelines established in the Specific Plan. These projections are subject to change as the MMSP is updated.

3.4.2 Other Social, Economic and Demographic Factors[8]

It is recommended that water suppliers describe social, economic and demographic factors of their service areas since recent trends or shifts in these factors can also affect water management and planning. Other demographic factors affecting water management in the City service area include economic development.

The City recently published its final Economic Development Strategy and Implementation Actions report (EDS) in May 2020. The EDS is a policy document that guides the City's economic development activities over the next five years. The EDS serves as Milpitas' road map to grow and diversify the City's economy, support businesses and workers, and improve quality of life in the community. Milpitas is home to 51,500 jobs, and has experienced strong job growth since 2009. Many different types of businesses are thriving in Milpitas, ranging from industries that are exporting goods and services globally, as well as industries that serve residents and workers in the city and region. Employers in Milpitas offer a wide variety of job opportunities, with a mix of high skill, high-wage workers in computer, mathematical, and engineering occupations, as well as middle-wage, middle-skill workers in manufacturing occupations. Milpitas also has a sizeable share of low-wage service industry jobs.

Water Use Sectors of the Customer Base are addressed in Section 4.

3.5 Land Uses within Service Area

There are approximately 14 square miles of land within the City boundaries. The primary land uses in the developed portions of the City of Milpitas are residential, commercial and industrial. The distribution of land uses provided by the City of Milpitas Planning Department are consistent with the City of Milpitas 2040 General Plan adopted March 9, 2021 (City of Milpitas, 2021) and are listed in Table 3-2 and Table 3-3. The 2040 General Plan was adopted prior to Association of Bay Area Governments (ABAG) publishing final Regional Housing Needs Allocation (RHNA) numbers and therefore not included in the adopted General Plan (see section 4.2.6). On May 20, 2021, the ABAG Executive Board approved the Final Regional Housing Needs Allocation (RHNA) Methodology and Draft Allocations. The ABAG Executive Board is expected to adopt final allocations in late 2021. Per the Draft RHNA Plan, the City of Milpitas' total allocation is approximately 6,700 new housing units. These new housing unit numbers are not reflected in Table 3-2 and Table 3-3.

[8] City of Milpitas. (2020). *Economic Development Strategy and Implementation Actions Final Report*, accessed June 2021: https://www.ci.milpitas.ca.gov/_pdfs/milpitas_eds_2020.pdf

Table 3-2. City of Milpitas Current Land Use

Current Land Use	Area (acres)	Percent Total Land Use (%)
BVMU	88	1.02
GNC	347	4.05
HLD	260	3.03
HMD	188	2.19
HVL	609	7.11
HWS	138	1.62
INP	639	7.47
MFG	636	7.43
MFH	542	6.33
MFM	126	1.47
MHP	53	0.62
MXD	65	0.76
NA	1,633	19.07
PAO	14	0.17
PF	271	3.16
POS	983	11.48
RRMU	16	0.19
RSC	69	0.81
SFL	1454	16.98
SMD	131	1.53
TWC	119	1.39
URR	13	0.15
VHD	118	1.38
Waterways	49	0.58
TOTAL	**8,562**	**100**

Note: SFL = Single Family Low Density, HMD = Hillside Medium Density SMD = Single Family Medium Density, HLD = Hillside Low Density, POS = Permanent Open Space, RSC = Retail Subcenter, MHP = Mobile Home Park, MFG = Manufacturing, MFH = Multi-Family Residential High Density, INP = Industrial Park, HWS = Highway Services, PF = Public Facilities, HVL = Hillside Very Low Density, MFM = Multi-Family Residential Medium Density, TWC = Town Center, GNC = General Commercial, MXD = Mixed Use District, PAO = Professional and Administrative Office, VHD = Multi-Family Residential Very High Density, URR = Urban Residential, RRMU = Residential Retail High Density Mixed Use, BVMU = Boulevard Very High Density Mixed Use

Table 3-3. City of Milpitas Future Land Use

Future Land Use	Area (acres)	Percent Total Land Use (%)
MFG	482	5.62
BPRD	558	6.51
NCMU	141	1.64
PF	193	2.25
MGSP	498	5.82
GNC	144	1.69
MMSP	317	3.71
MDR	271	3.17
VHDR	9	0.10
INP	157	1.83
HMD	232	2.70
TWC	115	1.34
HVL	2,023	23.62
VHDMU	3	0.04
MHP	53	0.62
WW	39	0.46
POS	958	11.19
ROW	54	0.63
LDR	1,451	16.95
NC	34	0.40
HLD	376	4.39
HDR	443	5.17
NA	13	0.15
TOTAL	**8,562**	**100**

4 WATER USE CHARACTERIZATION

Lay Description

The Water Code requires a description and quantification of water uses in the service area. It also requires that if recycled water is used or may potentially be used, it is described and quantified. Information from this chapter and Chapter 6 will be used to prepare the reliability assessments in Chapter 7.

This chapter describes and quantifies the City of Milpitas's past, current, and future water use projections through the year 2045, to the extent that records are available. Also presented in this chapter is a summary of drinking water pressurized distribution system water losses (i.e., leakage from pipes, under-registering meters, etc.). Future water use is based upon the City's past and current water use, combined with considerations of anticipated growth, new regulations, changing climate conditions, and trends in customer water use behaviors. A thorough analysis examined each water use sector for a variety of factors, then aggregated the information into a comprehensive projection of customer water use.

Tables 4-1 through 4-4 present the City's actual total 2020 water consumption and projected water demands through 2045 by water use sector. Tables 4-1 and 4-4 show the City's most recent validated potable water audit results for 2019 was 346 MG and 11.9% of non-revenue water as percent by volume of the total "Water Supplied."

4.1 Non-Potable Versus Potable Water Use

The City purchases recycled water from SBWR and operates and maintains the recycled water distribution facilities within City boundaries. Section 6.2.5 of this UWMP discusses the City's recycled water in greater detail. Table 4-3 summarizes total water use projections, including recycled water.

4.2 Past, Current, and Projected Water Use by Sector

This section will identify water use, to the extent that records are available, for at least each of the 10 water use sectors identified in Water Code Section 10631(d). Additionally, a narrative description of how water uses are calculated and how water use projections are estimated is included.

The DSS Model was used to projected long-term demand, through 2045, based on expected service area growth for both population and employment. Demand forecasts were developed for each agency to account for conservation from passive (i.e., from codes/standards) and active conservation programs. Based on this analysis, water demands were projected after accounting for the effects of the existing plumbing code and future active conservation savings. The City's conservation measures are discussed in Chapter 9 – Demand Management Measures. BAWSCA also evaluated conservation measures for potential future regional implementation.

For the demand analysis, the City provided data from metering from 1995 through 2019 its water rates, water use sectors, monthly water consumption and water conservation, and additional information for historical and projected use analyses. Based on the analyses in the City's DSS Model, the City describes its past, current, and projected water use for its seven water use sectors, in five-year increments through 2045. As shown in Table 4-1, in calendar year 2020, the City's service area used a total of 3,073 million gallons (MG) of potable water.

In 2020, of the City's total potable water use, 34.8% was in the single-family residential sector, while 26.1% was in multi-family sector. In the Commercial, Institutional, and Industrial sector (CII), 10% was Commercial, 12.8% was Industrial, 2.1% was Institutional, 3.2% was City, 10.5% was Irrigation, and 0.6% was Other.

4.2.1 Water Use Sectors Listed in Water Code

The following water sectors are listed in the Water Code following the order found in the Water Code. Additional sectors or subdivisions of these sectors are included as needed to reflect unique conditions that may apply to certain sectors or subsectors not listed in the Water Code.

Single-Family Residential

This is defined as a single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.

The City has approximately 12,300 single-family accounts. Among the City's new residential development are some single-family units. However, overall, the City's newer housing is shifting from the traditional suburban single-family home with individual yards to urban high-density housing units.

Multi-Family

This is defined as multiple dwelling units contained within one building or several buildings within one complex.

The City has approximately 1,900 multi-family accounts serving 9,915 dwelling units. These share outdoor space, and some are combined with retail and office space as described in the specific plans for future development around the BART station. This demand sector is projected to have significant growth as a result of the numerous residential and mixed-use developments under construction, approved, pending entitlement or in plan review.

The City includes mobile homes in the Multi-Family classification.

Commercial

This is defined as a water user that provides or distributes a product or service. Water Code 10608.12(d).

The City has a complex mix of commercial customers, ranging from beauty shops, supermarkets, and gas stations to multi-story office buildings, outlet and regional shopping centers, and high-volume restaurants and other facilities serving the visitor population.

Industrial

This is defined as a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development. Water Code Section 10608.12(h). The following link is to the NAICS website.[9]

The City retains research & development facilities, along with some food preparatory facilities.

Institutional/Governmental

This is defined as a water user dedicated to public service. This type of user includes, among other users, higher-education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions. Water Code Section 10608.12(i).

[9] North American Industry Classification System website, accessed May 2021: https://www.census.gov/naics/

The City has a stable institutional/governmental sector, including local government, schools, a county correctional facility and outpatient medical facilities.

Landscape

This is defined as water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.

Irrigation demand is anticipated to increase due to continued development of vacant lands and redevelopment in the commercial and industrial sectors. However, landscape conversions to recycled water and increased efficiency in irrigation systems is expected to offset future increases in potable water demand for landscaping.

Sales to Other Agencies

As a retailer, the City purchases water for its own use and does not sell water to other agencies; therefore, this section is not applicable.

Groundwater Recharge

This is defined as the managed and intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells. Water used for groundwater banking or storage may also be reported using this sector. If all, or a portion of, the groundwater recharge water is subsequently pumped out of the basin in the same year, that water will be reported by the supplier as a supply from groundwater.

The City does not have groundwater recharge; therefore, this section is not applicable.

Saline Water Intrusion Barrier

This is defined as the injection of water into a freshwater aquifer to prevent the intrusion of saltwater.

The City does not have a saline water intrusion barrier; therefore, this section is not applicable.

Agricultural

This is defined as water used for commercial agricultural irrigation.

The City does not have agricultural irrigation; therefore, this section is not applicable.

Distribution System Water Loss

Distribution system water losses (also known as “real losses”) are the physical water losses from the water distribution system and storage facilities, up to the point of customer consumption. The water loss projections were developed assuming the ratio of water loss to other categories of demand remains constant over the planning horizon. See Section 4.2.4 for further details.

4.2.2 Water Use Sectors in Addition to Those Listed in Water Code

The water use sectors described below are not specifically listed in, nor required by the Water Code.

Exchanges

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user returning the water at a specified time, or when the conditions of the parties’ agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or can include payment and the return of water. The water returned may or may not be an even exchange. Water can be returned on a one-for-one basis or by another arrangement (e.g., for each acre-foot of water received, two are returned).

For more information on this water use sector, refer to Section 6.2.7.

Surface Water Augmentation

This is defined as the planned placement of recycled water into a surface water reservoir that is used as a source of domestic drinking water supply.

The City does not participate in surface water augmentation; therefore, this section is not applicable.

Transfers

The Water Code defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights. Transfers can be between neighboring Suppliers or across the state, provided there is a means to convey or store the water. A water transfer can be a temporary or permanent sale of water or a water right by the water right holder, a lease of the right to use water from the water right holder, or a sale or lease of a contractual right to water supply. Water transfers can also take the form of long-term contracts of the purpose of improving long-term supply reliability. Some Retail Suppliers transfer water to other suppliers.

For more information on this water use sector.

Wetlands or Wildlife Habitat

This is defined as water used for a managed environmental use to improve an environmental condition.

The City does not manage a wetlands or wildlife habit program; therefore, this section is not applicable.

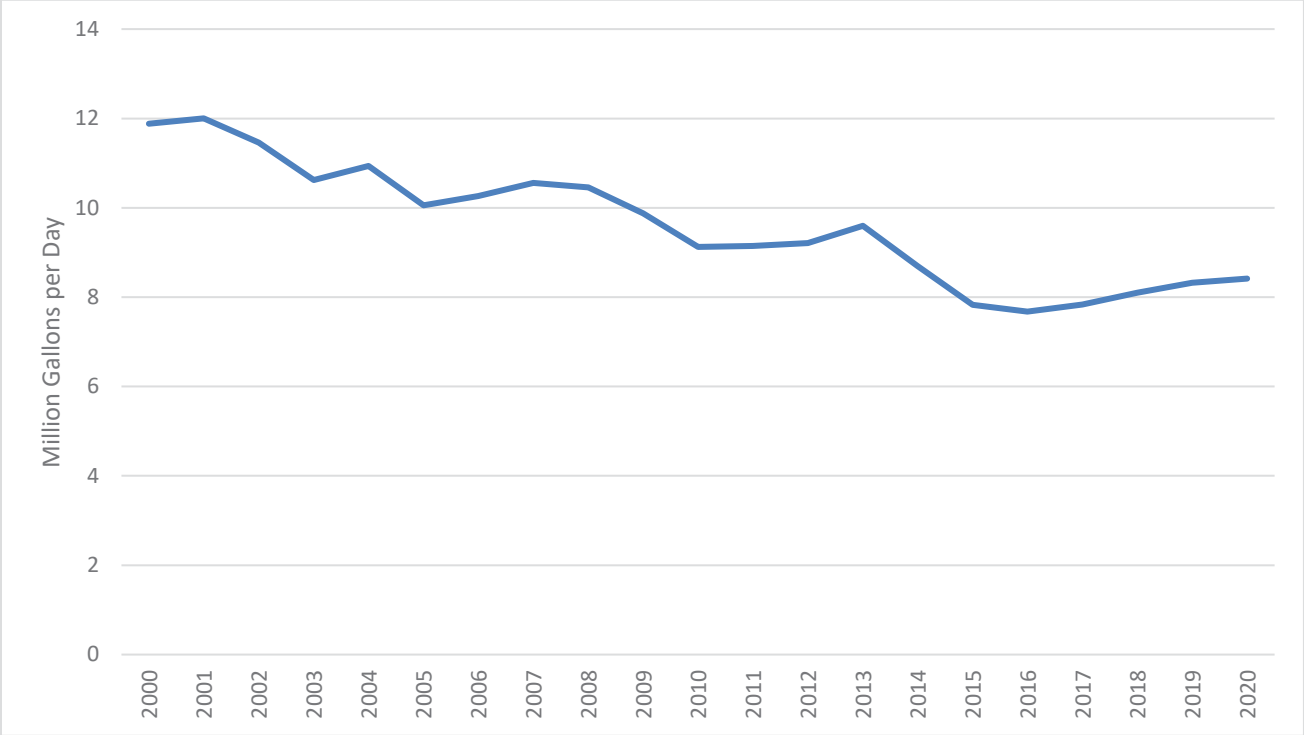
Other

The City has approximately 550 fire service accounts. The Other usage shown in the tables in this chapter is water use associated with those accounts.

4.2.3 Past Water Use

While not part of the DWR UWMP Reporting Tables, the Water Code requires Retail Suppliers to quantify past water use. Past water use is valuable during development of projected uses as it helps create an understanding of water use trends; effects of temporary use restrictions imposed during the most recent prolonged drought, and recovery from such temporary restrictions; effects of long-term demand management measures; and other pertinent water use factors. The City's historical water use is part of the data that was used for The City's DSS Model and for BAWSCA's Demand Study, which identify demand and conservation projections through 2045. The DSS Model analyzed The City's historical data from 2000–2020 to assess the impacts of certain factors (e.g., water rates, economic conditions, and weather) on water demands.

Figure 4-1. City of Milpitas Historical Water Demand in Million Gallons per Day



4.2.4 Distribution System Water Loss

Distribution system water losses (also known as "real losses") are the physical potable water losses from the pressurized water distribution system and the storage facilities up to the point of delivery to the customer's system (e.g., up to the residential water meter) calculated using the American Water Works Association (AWWA) Method (Title 23 California Code of Regulations [CCR] Section 638.1 et seq.). This is the sum of the AWWA Method real losses and apparent losses.

In the 2020 UWMP, distribution system water loss for each of the five years preceding the plan update must be reported (Water Code Section 10631(d)(3)) in accordance with the rules adopted pursuant to Water Code Section 10608.34. Table 4-4 was completed using the values calculated in the AWWA worksheet and submitted to DWR for each of the prior five years.

In order to better understand the nature of non-revenue waters, the City completed its first detailed Water Audit and Component Analysis of Real and Apparent Losses in 2015, utilizing the AWWA methodology. The AWWA method uses known factors, such as system input volume, authorized consumption, and revenue water, to determine water losses. These losses are further categorized into two types:

- Apparent losses – Due to meter inaccuracies, data errors and theft. The water is consumed but is not properly measured and accounted for.
- Real losses – Due to system leaks and breaks.

Through these efforts and other measures, real losses have been reduced significantly. The Water Audit for calendar year 2019 indicates total losses, apparent and real, of 346.223 million gallons, with 11.9% of non-revenue water as percent by volume of the total "Water Supplied." Table 4-4 shows the results of the Water Audit for the most recent period for which data is available, January 1, 2019 through December 31, 2019. Screen shots of the Water Audit reports from the last five years are included in Appendix B.

4.2.5 Current Water Use

This section presents current water use as ascertained by analyzing information such as meter data, billing records, and others as well as recently submitted eAR monthly reports. Current water use is entered into Table 4-1 provided to record current gross water use, not including recycled water use; recycled water use is detailed in Chapter 6 and summarized in Table 4-3 for total water use calculations.

Optional Planning Tool – Current Use

For the 2020 UWMP preparation, DWR has created an optional Planning Tool that suppliers can use to record and assess their data. The DWR Planning Tool can be used by water agencies, but it is not required.

As previously stated, The City is using its updated DSS Model as the key reference for current water use since past data and demand projections for The City were analyzed in detail during the model's development for the 2019 BAWSCA Demand Study. See Appendix C for an overview of the DSS Model.

Table 4-1. Demands for Potable and Non-Potable Water – Actual

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Single Family		Drinking Water	965
Multi-Family	Duplex, Townhouse, Condo, Mobile Homes	Drinking Water	724
Commercial		Drinking Water	276
Industrial		Drinking Water	355
Institutional/Governmental	Schools, Government or Church and City Domestic Accounts	Drinking Water	146
Landscape		Drinking Water	290
Other	Fire	Drinking Water	15
Losses		Drinking Water	302
		TOTAL	3,073

[1] Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.
[2] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:
1. Non-revenue water (losses) is calculated as the difference between total customer category use and production.
2. Institutional/Governmental combine institutional and City customer categories.

4.2.6 Projected Water Use

This section will present projected water use for each sector, in five-year increments through 2045. Projected water use is entered into Table 4-2. Water use projections were developed using long-term population and employment growth projections, 2018 base water use which includes plumbing codes and standards, and short-term drought recovery for 2019-2023. The short-term drought recovery was based on an econometric model, which included the City's specific economic conditions, retail water rates, historical population, monthly production data from 1995-2019, and impact of drought restrictions implemented during the 2014-2017 period. The econometric model generated water demand forecast to 2023 and was developed during the City's participation in the 2020 BAWSCA Demand Study[10] as described in further detail in the following BAWSCA text.

BAWSCA Standard Text

In June 2020, BAWSCA completed the Regional Water Demand and Conservation Projections Report (Demand Study). The goal of the Demand Study was to develop transparent, defensible, and uniform demand and conservation savings projections for each wholesale customer using a common methodology to support both regional and individual agency planning efforts and compliance with the new statewide water efficiency targets required by Assembly Bill (AB) 1668 and Senate Bill (SB) 606.

Through the Demand Study process, BAWSCA and the wholesale customers (1) quantified the total average-year water demand for each BAWSCA member agency through 2045, (2) quantified passive and active conservation water savings potential for each individual wholesale customer through 2045, and (3) identified 24 conservation programs with high water savings potential and/or member agency interest. Implementation of these conservation measures, along with passive conservation, is anticipated to yield an additional 37.3 MGD of water savings by 2045. Based on the revised water demand projections, the identified water conservation savings, increased development and use of other local supplies by the wholesale customers, and other actions, the collective purchases of the BAWSCA member agencies from the SFPUC are projected to stay below 184 MGD through 2045.

As part of the Demand Study, each wholesale customer was provided with a demand model that can be used to support ongoing demand and conservation planning efforts, including UWMP preparation.

The demand model used to prepare the projections is known as the Decision Support System (DSS Model). The initial step in the DSS Model was to establish the base-year water demand at the end-use level by breaking down total historical water use for each type of water service account (single-family, multi-family, commercial, industrial and the like) to specific end uses, such as toilets, faucets, showers and irrigation. Forecasting future demand involved determining the growth in the number of water service accounts. Once the rates of change were established, they were entered into the model and applied to those account types and end-use water consumption.

The next step in developing future demand was to evaluate the cost effectiveness and water savings of a variety of potential water conservation measures to determine how much of the projected demand can be reasonably met through demand management. The potential water conservation savings were deducted from the total demand. The model also incorporated the effects of plumbing and appliance codes, or so-called passive savings, on existing and future accounts, as well as anticipated land use changes, densification and industrial development anticipated in the City and supported by General Plan policies and strategies.

[10] Phase III Final Report (BAWSCA, 2020): http://bawsca.org/uploads/pdf/BAWSCA_Regional_Water_Demand_and_Conservation%20Projections%20Report_Final.pdf

Development Factors Affecting Water Demand

As noted, the water demand projections summarized in Tables 4-2 and 4-3 incorporate anticipated development factors within the City, affecting both residential and non-residential sectors.

The potable water demand projections are built off of the City's 2020 DSS Model, which estimated total water demand at year 2045 to be 4,917 million gallons (DWR Table 4-3). Of the total demand, 4,517 million gallons (DWR Table 4-2) is anticipated to be potable and 400 million gallons to be recycled water (DWR Table 6-4).

Since completion of the City's Draft 2020 Water Master Plan, ABAG is in the process of identifying the RHNA numbers. As part of RHNA, the California Department of Housing and Community Development, or HCD, determines the total number of new homes the Bay Area needs to build in order to meet the housing needs of people at all income levels. The ABAG Executive Board will adopt Final Allocations for 2023 through 2031 during late 2021, taking into consideration the results of the appeals process.

Table 4-2. Demands for Potable and Non-Potable Water – Projected

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Single Family		1,110	1,100	1,080	1,070	1,070
Multi-Family	Duplex, Townhouse, Condo, Mobile Homes	810	900	1,000	1,090	1,170
Commercial		530	540	540	550	560
Industrial		450	460	460	470	480
Institutional/Governmental	Schools, Government or Church and City Domestic Accounts	210	230	250	270	280
Landscape		390	400	430	440	460
Losses		420	440	460	480	490
Other	Fire	5	5	6	6	7
	TOTAL	3,925	4,075	4,226	4,376	4,517

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*
[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Projected demands include passive savings (plumbing code) and do not include active conservation. Values have been rounded to the nearest 10 MG when values exceeded 50 MG.

20-Year Planning Horizon

In accordance with Water Code Section 10635(a), all Suppliers will need to report their projected water use, in five-year increments through 2040 and encouraged to project through 2045. As shown in Table 4-2, the City projects its water use through 2045.

They City provided its projected demands to Valley Water in five-year increments through 2045. Additionally, through BAWSCA, the City provided its projected demands to the SFPUC, in five-year increments through 2045. The BAWSCA Demand Study, that is available to the SFPUC, incorporates projected water savings from the plumbing code, standards, ordinances, and projected demands due to growth in the City's service area.

Additionally, in accordance with Water Code Section 10603(d)(2), the City reports its projections in Section 4.2.6 for each of the water use sectors identified in Section 4.2.1.

Table 4-3. Total Water Use

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	3,073	3,925	4,075	4,226	4,376	4,517
Recycled Water Demand[1] *From Table 6-4*	357	400	400	400	400	400
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]	-	-	-	-	-	-
TOTAL WATER USE	3,430	4,325	4,475	4,626	4,776	4,917

[1]Recycled water demand fields will be blank until Table 6-4 is complete.
*[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

Water Year Types

For water supply reliability, the City is required to characterize the *normal* water use for estimating normal water supply reliability and reliability in the event of a single dry year. Suppliers may choose to characterize the *normal* year water use in whatever manner makes the best planning sense.

The City uses 2018 as the representative year for its "normal" year. The years were chosen since they were not affected by drought or other unusual environmental or economic circumstances. The City's *normal year* and *single dry year* data are reported in Tables 7-1, 7-2, and 7-3.

Codes and Other Considerations Used in Projections

Water savings from codes, standards, ordinances, and land use planning, also known as *passive savings*, generally decrease water use for new and future customers compared to existing customers. However, some ordinances and standards may also apply to existing customers, such as plumbing code changes that result in lower water use when existing customers replace fixtures and appliances. Suppliers are required to state the extent to which passive savings are considered in these water use projections; this will be noted in Table 4-5 R.

The water demand projections in Table 4-2 are based on analysis of historic metering data and projected growth in population, jobs, and development that are presented in the City's 2020 DSS Model. The projections in Table 4-2 include reductions due to "plumbing code" upgrades, reflect on-going change-outs of existing plumbing fixtures for more water efficient devices, and the implementation of conservation measures selected by the City.

Optional Planning Tool – Projected Use

DWR developed optional "Planning Tool" worksheets for suppliers to facilitate their review of water use data.

In this 2020 UWMP, the City is using data from its 2020 DSS Model because during development the City's past data and demand projections were analyzed in detail.

4.2.7 Characteristic Five-Year Water Use

A critical component of the new statutory language in Water Code Section 10635(b) is the requirement to prepare the five-year Drought Risk Assessment (DRA), found in Chapter 7. This five-year DRA can also be used to provide the water service reliability assessment for a drought lasting five years.

As a first step DWR recommends that the expected gross water use for the next five years without drought conditions (also known as *unconstrained demand*) be estimated. These numbers can then be adjusted to estimate the five-years' cumulative drought effects.

4.3 Worksheets and Reporting Tables

The DWR Submittal Tables relevant to customer water use have been included in the appropriate subsections of this chapter rather than here. The included tables are similar to those completed by the City for its 2015 UWMP. The 2020 tables do contain some modifications to reflect Water Code changes, the 2020 timeframe, and to provide additional details. In addition to including the tables in this 2020 UWMP document, an electronic version of just the tables was submitted to DWR.

4.3.1 Optional Planning Tool Use Analysis Worksheet

In this 2020 UWMP, the City is using data from its 2020 DSS Model because during the DSS Model development the City's past data and demand projections were analyzed in detail.

4.3.2 DWR 2020 UWMP Submittal Tables

Tables 4-1 through 4-5 are part of DWR's electronic reporting system for data input and are used by DWR to evaluate regional and statewide water use information and summarize data for DWR-required Legislative reports. These are the standardized tables for electronic submittal of the City's 2020 UWMP.

Earlier in this chapter, Tables 4-1 through 4-3 present the City's actual total 2020 water consumption and projected water demands through 2045 by water use sector. Table 4-4 also shows the City's validated water audit results, showing that the 2019 water loss was 11.9% of the total water production, as shown in the screen shots in Appendix B.

Table 4-4. 12-Month Water Loss Audit Reporting

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2019	346
01/2018	326
01/2017	279
01/2016	433
12/2015	280
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES: 12/2015 audit was an internal Audit by the City of Milpitas. First audit submitted to the state was 01/2016.	

4.4 Water Use for Lower Income Households

The City is required to include the projected water use for lower income households (i.e., those with income below 80% of area median income, adjusted for family size) in its 2020 UWMP. This section documents the City's best effort to do so. However, please note that the City does not use this estimate for any planning purposes. Projected water use by lower income households is estimated by multiplying the projected housing need for the City by the average household size and assumed per capita water use. The most recent source of data for low income housing units for the City is the 2014 Housing Element. The Housing Element is planned for an update in late 2021, which covers growth between 2023-2031.

Water usage for lower income housing units is included in the overall water demand projections, shown in Tables 4-2, 4-3 and 4-5 documents the fact that lower income residential water demands, as well as passive water savings estimates, are included in the projections.

Table 4-5a. Inclusion in Water Use Projections

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	Appendix C, Table C-1
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES: (1) As indicated in Table 4-5, estimates of future water savings from passive (plumbing code) savings are included in the projections in this UWMP. The 2020 actual water use already reflects significant water savings compared to historical use. During the 2014-2017 drought, the City made several amendments to its water conservation ordinance that assisted in achieving these water savings. Water projections do not include savings from active conversation. (2) According to the April 2015 City of Milpitas 2015–2023 Housing Element, low-income households represent 41% of City of Milpitas households. See Table 4-5b for low income residential demand. The City of Milpitas plans to update the Housing Element in the year 2021 for 2023-2031, per the draft HCD Regional Housing Need Determination (ABAG, 2020): https://www.hcd.ca.gov/community-development/housing-element/docs/abagrhna-final060920(r).pdf. At the time of the writing of this UWMP, the appeals process was not final. Final numbers will not be released until winter of 2021. As a result, there could be future changes to the 2021 Housing Element. https://www.ci.milpitas.ca.gov/milpitas/departments/building-and-safety-department/housing-3/housing-policy-plans/	

Table 4-5b. Projections of Future Low-Income Household Water Use

Projections of Future Low-Income Household Water Use, MG					
Water Use	**2025**	**2030**	**2035**	**2040**	**2045**
Estimated Very Low and Low-Income Household Water Use	790	820	850	890	920
Notes: Lower income demand is embedded in the presented demand projection estimates. According to the April 2015 City of Milpitas 2015–2023 Housing Element Update, low-income, very low, and extremely low-income households represent 41% of City of Milpitas households. Projected low-income demands represent 41% of projected single-family and multifamily residential demands. A lower income household has an income below 80 percent of area median income, adjusted for family size. The median income for a four-person household in Santa Clara County was $105,500 in 2013 and the income limit for a low-income household was $84,900. Values have been rounded to the nearest 10 MG.					

4.5 Climate Change Considerations

Type of climate change impacts that were considered in the water use projections include water demands and temperature increases. The scientific or other information the projections are based on is described below in the next section.

4.5.1 Water Demand Impacts and Analysis

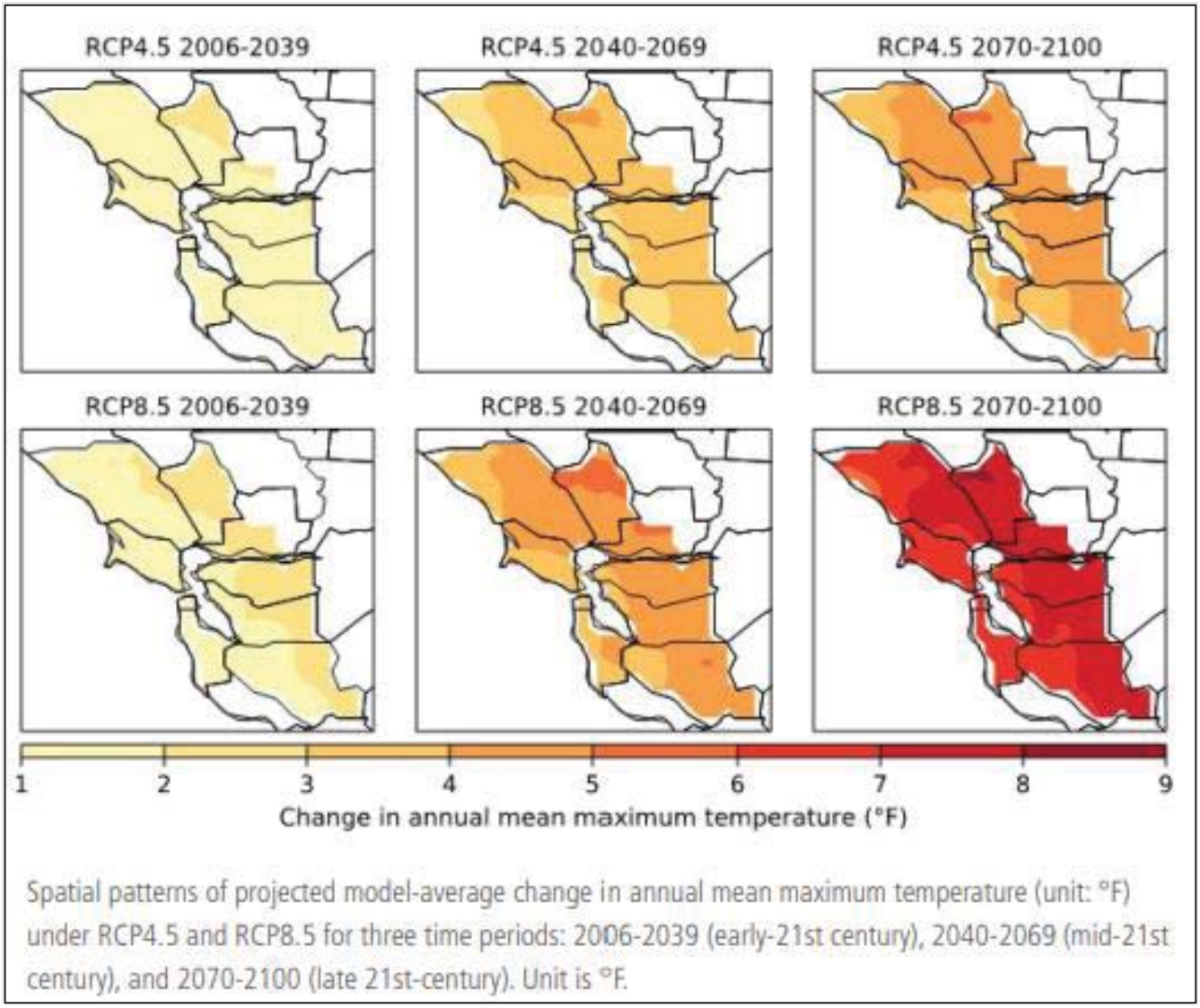
The Public Policy Institute of California has predicted that five climate pressures will impact the future of California's water management: warming temperatures, shrinking snowpack, shorter and more intense wet seasons, more variable precipitation, and rising seas.[11] As of 2019, some of these pressures are already apparent. The climate impact on water supply is predicted to significantly exceed the impact on water demand.

Precipitation in the Bay Area will continue to have high variability year to year, leading to very wet years sometimes and very dry years at other times. The largest winter storms in the Bay Area will likely become more powerful and potentially more damaging. Due to a predicted increase in temperature in the future, it is assumed that California and the Bay Area will experience longer and deeper droughts, which could impact water supply.

The International Panel on Climate Change (IPCC) develops several future climate change scenarios referred to as Representative Concentration Pathways (RCP). RCP 4.5 represents a mitigation scenario where global CO2 emissions peak by the year 2040. RCP 8.5 represents the business-as-usual scenario where CO2 emissions continue to rise throughout the 21st century. The following figure shows the spatial changes in annual mean of maximum daily temperatures across nine Bay Area counties under RCP 4.5 and RCP 8.5.

[11] Public Policy Institute of California (PPIC). (2020). Priorities for California's Water, accessed December 2019: https://www.ppic.org/publication/priorities-for-californias-water/

Figure 4-2. Bay Area Historical and Projected Mean Maximum Temperatures



Source: Ackerly et al. (University of California, Berkeley), 2018.

According to California's Fourth Climate Change Assessment San Francisco Bay Area Summary Report,[12] the Bay Area's historical temperature increased 1.7 degrees Fahrenheit from 1950 to 2005. It is predicted that annual mean maximum temperatures will increase by 1 to 2 degrees Fahrenheit in the early 21st century from the years 2006 to 2039, then will increase by an additional 3.3 degrees Fahrenheit in the mid-21st century from 2040 to 2069. This increment for the mid-21st century rises to 4.4 degrees Fahrenheit if the Bay Area remains under the high emissions scenario of "business-as-usual."

The above IPCC report temperature change is broken over two time periods (early-21st century and mid-21st century). For the BAWSCA Demand Study, the time period of focus was 2019-2045. Therefore, it was necessary to combine the two time periods to get an overall temperature change for the length of the BAWSCA Demand Study.

[12] Ackerly, David, Andrew Jones, Mark Stacey, Bruce Riordan. (University of California, Berkeley). (2018.) *San Francisco Bay Area Summary Report.* California's Fourth Climate Change Assessment. Publication number: CCCA4-SUM-2018-005. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-005_SanFranciscoBayArea_ADA.pdf

Following are the considerations and methodology used to calculate the average annual temperature change for each of the IPCC report time periods:

- Early 21st Century (2006-2039) had an estimated temperature increase of 1 to 2 degrees Fahrenheit that was averaged to 1.5 degrees Fahrenheit. For the 33-year time period, this equates to an average annual temperature increase of 0.045 degrees Fahrenheit.
- Mid-Century (2040-2069) was estimated to have a temperature increase of 3.3 degrees Fahrenheit. For the 29-year time period, this equates to an average annual temperature increase of 0.114 degrees Fahrenheit.

Calculating the increase within each time period for the BAWSCA Demand Study required three steps:

- **Step 1:** Calculate a value for the 20 years from 2019 to 2039, which equates to an estimated temperature change of 0.95 degrees Fahrenheit.
- **Step 2:** Calculate a value for the five years from 2040 to 2045, which equates to an estimated temperature change of 0.68 degrees Fahrenheit.
- **Step 3:** Finally, the two values from Step 1 and Step 2 were added together to get a total temperature increase of 1.7 degrees Fahrenheit (rounded) for 2019-2045.

In summary, for the BAWSCA Demand Study, the previously mentioned predicted annual mean temperature increase in the early 21st century of 1.7 degrees Fahrenheit[13] was incorporated into the demand forecast for all scenarios for the time period of 2019 to 2045.

4.5.2 Precipitation

Due to a predicted increase in temperature in the future, California and the Bay Area will likely experience longer and deeper droughts, which could impact the water supply. According to the San Francisco Bay Conservation and Development Commission (BCDC), historical records show that sea level in San Francisco Bay has risen 18-20 cm (7 inches) over the past 150 years.

BAWSCA Standard Text

Per the SFPUC Draft UWMP, dated April 2021 (SFPUC, 2021): Currently, the SFPUC is conducting a Long-term Vulnerability Assessment which assesses the potential effects of climate change on water supply using a wide range of plausible increases in temperature and changes in precipitation to address the wide uncertainty in climate projections over the planning horizon 2020 to 2070. There are many uncertain factors such as climate change, changing regulations, water quality, growth and economic cycles that may create vulnerabilities for the RWS's ability to meet levels of service. The uncertainties associated with the degree to which these factors will occur and how much risk they present to the water system are difficult to predict, but nonetheless they need to be considered in SFPUC planning. To address this planning challenge, the assessment uses a vulnerability-based planning approach to explore a range of future conditions to identify vulnerabilities, and to assess the risks associated with these vulnerabilities, that could lead to developing an adaptation plan that is flexible and robust to a wide range of future outcomes. This study is expected to be completed in the Summer of 2021.

[13] Ibid.

4.5.3 Sea Level Rise

The updated 2018 *State of California Sea-Level Rise Guidance*,[14] recommends for projects in the San Francisco area with a lifespan to 2050, under a high-emissions scenario (RCP 8.5), using three risk projections until 2050:

- Low risk aversion projection: 1.1 feet
- Medium-high risk aversion projection: 1.9 feet
- Extreme risk aversion projection: 2.7 feet

For highly vulnerable or critical assets that have a lifespan beyond 2050 and would result in significant consequences if damaged, the extreme risk aversion projection, is recommended to be included in planning analyses. The range of low, medium-high, and extreme risk aversion projections should be evaluated across the range of high and low emissions scenarios (RCP 8.5 and RCP 2.6, respectively). For example, for a project with a lifespan to 2100, the recommended range of projections is as follows:

- Low risk aversion projection: 2.4 - 3.4 feet
- Medium-high risk aversion projection: 5.7- 6.9 feet
- Extreme risk aversion projection: 10.2 feet

SFPUC, views assessment of the effects of climate change requiring regular updates to reflect improvements in climate science, atmospheric/ocean modeling, and human response to the threat of greenhouse gas emissions. Both the SFPUC and BAWSCA participated in the 2013 update of the Bay Area Integrated Regional Water Management Plan (BAIRWMP), which included an assessment of the potential climate change vulnerabilities of the region's water resources and identified climate change adaptation strategies.

The City is currently developing an update to the Climate Action Plan which will evaluate climate change risks and adaptation measures needed city-wide.

A discussion of the potential impacts of climate change on water supply is located in Section 6.2.10.

[14] California Natural Resources Agency and California Ocean Protection Council. (2018). *State of California Sea-Level Rise Guidance*, 2018 Update. http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf

5 SB X7-7 BASELINES AND TARGETS

Lay Description

With the adoption of the Water Conservation Act of 2009, also known as the SB X7-7, the state of California was required to reduce urban per capita water use by 20 percent by the year 2020. California Water Code (Water Code) Section 10608.16(a) states: "The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020." In order to meet this urban water use target requirement, each retail supplier completing a UWMP is required to determine its baseline water use as well as its target water use for the year 2020. To assist this process, DWR established methods for suppliers to determine their targets and baselines. There are four Target Methods available to suppliers for determining their urban water use target. For further information on the technical components of these calculations, DWR's guidelines can be found in its *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* document (DWR, 2016).[15]

The goal of this chapter is to allow the City of Milpitas to describe how it calculated its 2020 urban water use target and its baseline water use, in gallons per capita per day (GPCD), as well as to identify which Target Method was used (see Section 5.2.1). In addition, this chapter allows the City to demonstrate its compliance with this target reduction (by December 31, 2020). The details of this form are also summarized in Tables 5-1 and 5-2 in this chapter.

GPCD Terminology

When determining water use in a UWMP, two terms are often used interchangeably:

- Daily Per Capita Water Use – This is the amount of water used per person per day. In UWMP calculations, this is total water use within a service area, divided by population, and it is measured in gallons.
- GPCD – This is the "daily per capita water use" measured in gallons. Therefore, the term commonly used when referring to "daily per capita water use" is "gallons per capita per day" or GPCD.

It is important to distinguish GPCD (as used in UWMPs) from the Residential GPCD (R-GPCD) that is used in some reporting to the State Water Board.

- GPCD is the total water use from all sectors within a service area (residential, commercial, institutional, and any others) minus allowable exclusions, then divided by the population. This is used in UWMPs.
- R-GPCD is only a part of the GPCD; it is the estimated residential water use in a service area divided by population.

5.1 Guidance for Wholesaler Suppliers

The City of Milpitas is a retailer not a wholesaler; therefore, this section is not applicable.

[15] DWR. (2016). *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use*. https://cadwr.app.box.com/s/5rbv5gjm881dxonycnb7u2253a0l6e8l

5.2 Updating Calculations from 2015 UWMP to the 2020 UWMP

Section 5.2 only applies to Suppliers that need to update their 2020 Target and/or Baseline because of changes to their distribution area per *Water Code Section 10608.20 (g)*. The City of Milpitas does not need to update its Target or Baseline, as its distribution system and service area boundary did not change. Therefore, the City is using the same Baseline and Target GPCD that was developed in its 2015 UWMP, making this section not applicable to the City.

5.2.1 Update of Target Method

There are four different methods a supplier can use to calculate their target. Suppliers must use the same target method in their 2020 UWMP that they used in their 2015 UWMP if they need to update values. The City is not updating its Target Method and is using the same Baseline and Target GPCD that was developed using Method 1 in the 2015 UWMP.

5.2.2 Updating Baseline and Target GPCDs

Situations may occur between baseline period and the compliance year that may warrant a change in the calculated Baseline GPCD or 2020 Target. Adjustments to the Baseline GPCD or 2020 Target are permitted based on changes in the distribution area:

- Distribution area expansion caused by mergers.
- Distribution area contraction.
- Distribution area expansion by annexation of already developed areas.

For the 2020 UWMP, the City of Milpitas is not updating its Baseline or Target GPCDs.

5.2.3 SB X7-7 Verification Form

All Retail Suppliers are required to submit the standardized tables in the SB X7-7 Verification Form with their 2020 UWMPs. These standardized tables are required in 2020 to demonstrate compliance with the Water Conservation Act of 2009.

The City's 2020 daily per capita water use was 108 GPCD, which is less than the both the City's 2015 interim target and 2020 target. Although the 2020 water use reflects the 2014-2017 drought conditions, the City has met the 2020 target due to ongoing implementation of existing water conservation and "Demand Management Measures" (refer to Chapter 9), as well as increasing recycled water usage. The City's per capita water use prior to the drought in 2013 is considered the upper limit to which water use may rebound following the drought; the 2013 per capita usage of 142 GPCD is less than the 2020 target of 146 GPCD.

The City's compliance with SB X7-7 for the established water use target for the year 2020 is verified by DWR's review of the SB X7-7 Verification Form, which is summarized in Table 5-1 and Table 5-2 of this section.

5.3 General Requirements for Baseline and Targets

The 2020 UWMP requirements are the same as the 2015 UWMP requirements for determining the baseline period, Baseline GPCD, Target confirmation, and 2020 Target. They are as follows:

- **Baseline Period:** Per *Water Code Section 10608.20*, water use GPCD must be calculated and reported for two baseline periods, the 10- or 15-year baseline (Baseline GPCD) and the 5-year baseline (Target Confirmation).
    - The defined Baseline Period for the City for the 10 -year baseline was 1995–2004. The City used the 10- year period because its recycled water use in 2008 was less than 10% of the total water use.

- Suppliers must use their same water use from the 5-year baseline period as reported in 2015 UWMPs. This water use amount will be used to confirm that the selected 2020 target meets the minimum water use reduction requirements. The defined Baseline Period for the City for the 5-year period baseline was 2003–2007.

- **Baseline GPCD:** To correctly calculate annual GPCD, suppliers must determine the population that they served for each baseline year in both baseline periods. The City used Department of Finance data to determine the population served for each baseline period. For each baseline year, a GPCD is calculated by dividing gross water use by the service area population. Baseline GPCD or Target Confirmation GPCD is then an average of all GPCDs for each baseline year in the baseline period. The 10-year baseline GPCD for the City was 183.
- **Target Confirmation:** The 5-year baseline, also called the Target Confirmation, is a shorter-term baseline for confirming the 2020 Target. Suppliers must use their same water use from the 5-year baseline period as reported in 2015 UWMPs. This water use amount will be used to confirm that the selected 2020 target meets the minimum water use reduction requirements. The defined 5-year baseline period for the City was 2003–2007. The 5-year baseline GPCD for the City was 168.
- **2020 Target:** Every suppler must calculate a water use target for 2020 in GPCD (2020 target). The target method used in the 2015 UWMP may not be changed in any amendments to the 2015 Plan or in the 2020 UWMP. The City used Target Method 1 for determining the 2020 Target in its 2015 UWMP.

5.4 Service Area Population

In order to correctly calculate the compliance year GPCD, Retail Suppliers must determine the population that they served in 2020. DWR permits suppliers to use the best available information for their service area. DWR recommends the U.S. Census 2020 decennial data as the most defensive population data, however it was not available at the time of the 2020 UWMP preparation. DWR identifies California Department of Finance (DOF) data or American Community Survey 2018 or 2019 data (if available for the 2020 calculations), or other sources of population counts, that the Supplier considers the best available information for their service area.

The City used Department of Finance data for its population numbers in the 2015 UWMP. For the 2020 UWMP, the City has elected to use DOF data once again. Using this data, the City has determined that its 2020 service area population was 77,691. It should be noted that DOF data was also used in the City's 2015 and 2021 DSS Model updates, and the 2020 BAWSCA Demand Study.

5.4.1 Department of Finance

The use of DOF data is most appropriate because the UWMP Guidance document provides several alternatives for determining service area population, including California DOF estimates for cities whose service area boundaries correspond by 95% or more with the city boundaries. Since the City's service area is substantially the same as the City of Milpitas boundaries, the population estimates from the DOF are appropriate for the City's use. Therefore, the City has used this data for determining the service area population for all SB X7-7 calculations.

5.4.2 U.S. Census Bureau American Community Survey

This method is used to determine population estimates for the non-census years, including 2020 until the 2020 U.S. Census data is released. The U.S. Census Bureau gathers data between the 10-year Census cycles through the American Community Survey (ACS), to provide more current statistical averages of an area by subsampling a portion of the area population. Depending on the size of the area, one-year or five-year averages are provided. The one-year average is only provided for areas with populations of 65,000 or more, and the five-year average provides estimates for all areas. When using ACS data, it is important to use the same year's (or years') averages for the entire study area. ACS geographic boundaries and Supplier boundaries should also correspond by 95

percent to the service area boundaries. For the 2020 UWMP, the City did not use the U.S. Census Bureau Survey because they opted to use the Department of Finance as noted in Section 5.4.1.

5.4.3 Persons-per-Connection

This method is used to determine population estimates for the non-census years, including 2020, until the 2020 U.S. Census data is released. Suppliers must already have population estimates for the census years in order to use this method. Number of service connections refer to the residential connections, except in the case where Suppliers have classified any residential (including multifamily residential) as any other category, such as commercial or mixed use. For the 2020 UWMP, the City did not Persons-per-Connection because they opted to use the Department of Finance as noted in Section 5.4.1.

5.4.4 DWR Population Tool

DWR anticipates release of the updated free-online DWR Population Tool in adequate time for 2020 UWMP preparation. Any Supplier may use the DWR Population Tool, but it is particularly useful for suppliers whose service area boundaries do not match to a city or Census Designated Place, and that cannot use DOF or ACS population data. The tool will use the U.S. Census data and electronic maps of the Supplier's service area (the tool will provide instructions for developing electronic maps) to obtain population data for census years. Using the number of supplier service connections, the tool will then calculate the population for the non-census years. For the 2020 UWMP, the City did not use the DWR Population Tool because they opted to use the Department of Finance as noted in Section 5.4.1.

5.4.5 Other Population Methods

Suppliers may estimate their population using other methods developed in-house, by a wholesaler, Association of Governments, consultant, university, or other entity. However, DWR must determine that the alternate method complies with the requirements of Methodology 9 of the *Methodologies* (DWR, 2016) document and is at least as accurate as the methods recommended by DWR. The Supplier must provide a description of the method that provides enough detail for DWR to make this evaluation. For the 2020 UWMP, the City did not use other methods because they opted to use the Department of Finance as noted in Section 5.4.1.

The City used the population data from DOF for the 10-year and 5-year baseline calculations. As per DWR requirements, Table 5-0a (SB X7-7 Table 2: Method for Population Estimates) and Table 5-0b (SB X7-7 Table 3: Service Area Population) have been completed and are included below.

Table 5-0a. Method for Population Estimates

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

Table 5-0b. Service Area Population

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	77,961
NOTES: City of Milpitas 2020 Population value (77,961) by California Department of Finance.	

5.5 Gross Water Use

Gross water use must be reported for each year in the baseline periods as well as for 2020, the compliance year. The City's gross water use is a measure of the total volume of water, based on metering data, that enters its distribution system over a 12-month period from its supplier, SFPUC, with certain allowable exclusions as follows:

- Recycled water delivered within the service area. Recycled water use has been excluded from all calculation of gross water, as reflected in the SB X7-7 tables. The City is not required to report recycled water use, nor demonstrate any reduction in recycled water use for purposes of SB X7-7.
- Indirect recycled water (see Methodology 1 from the *Methodologies* document, DWR 2016)
- Water placed into long-term storage (surface or groundwater)
- Water conveyed to another urban supplier
- Water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24
- Process water

In the 2020 UWMP, the City used Million Gallons (MG) as the units of measure based on meters purchased from SFPUC. The City's metering data includes all the water that enters its distribution system during a calendar year (month through month). The City uses recycled water, but groundwater use is only for emergencies with wells classified as standby under the state. The City does not use other sources of water, such as surface water or desalinized water, and does not have other exclusions for industrial water.

Gross water purchases from SFPUC were reported in SB X7-7 Tables in the City's 2015 UWMP for each year in the baseline periods as well as in the 2015 Interim Target compliance year and the 2020 Target. No changes have been made to the tables from 2015 for this 2020 UWMP. Suppliers who deduct indirect recycled water and/or process water from their gross water will complete additional tables, as found in the subsections below. Since the City does not use other sources of water (e.g., indirect recycled water or process water), this is not applicable and as such not included in the City's calculations.

5.6 Baselines and Target Summary

The City of Milpitas used Method 1, consistent with the state's 20% reduction mandate, to develop the 2020 water use Target and the 2015 Interim Water use target. Method 1 requires the City's 2020 conservation goal to be 80% of its 5-year baseline, which is 168 GPCD. The summary of the SB X7-7 calculations that were previously reported in the City's 2015 UWMP, where the City's 2020 target was calculated to be 146 GPCD, are unchanged for this 2020 UWMP. The reduction from the 5-year baseline of 168 GPCD down to a confirmed target of 146 GPCD was a 13% reduction. This GPCD reduction exceeds the 5% base daily per capita water use for the 5-year baseline, per water code 10608.22.

As per DWR recommendation, the SB X7-7 Verification Form is summarized in Table 5-1. The City's Average Baseline GPCD use (as shown in Table 5-1) is the total water used (in gallons) divided by the total service area population that has been averaged over 5 years or 10-15 years.

Table 5-1. Baselines and Targets Summary

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1995	2004	183	146
5 Year	2003	2007	168	
**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD).*				
NOTES: Target is based on Method 1.				

5.7 2020 Compliance Daily Per-Capita Water Use (GPCD)

Per *Water Code Section 10608.12(e),* "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period. Per *Water Code Section 10608.20 (e), "An urban retail water supplier shall include in its urban water management plan…compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data*."

This section describes the City's compliance and adjustments to Gross Water Use.

5.7.1 Meeting the 2020 Target

As shown in Table 5-2, based on the City's actual metered water consumption for 2020, the GCPD use was 108. This is significantly lower than the City's 2020 Target of 146 GPCD, illustrating compliance with its 2020 Target. The City used SB X7-7 Method 1 to determine compliance with its 2020 Target. The actual 2020 GPCD for the City was 108, which equates to a 36% reduction from the 5-year baseline GPCD of 168.

The City exceeded its 2020 GPCD confirmed target by 26%. This is in part due to the City's ongoing implementation of permanent water conservation measures outlined in the City's prevention water waste ordinance (Ordinance 240.6 attached as UWMP Appendix I for the WSCP).

For the City service area, 2020 was an extremely unusual year due to the COVID-19 pandemic. Therefore, the City is continuing to track changes in its water use sectors to determine if these water use patterns are short-term (i.e., from the pandemic) or ongoing.

Table 5-2. 2020 Compliances

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form Retail Supplier or Regional Alliance Only				
2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
108	0	108	146	YES
NOTES: 2020 Population value (77,961) by California Department of Finance.				

5.7.2 2020 Adjustments to 2020 Gross Water Use

Per Water Code Section 10608.24 (d)(1), When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

- Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
- Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.
- Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

The City has not made any adjustments to its 2020 gross water use.

Extraordinary Events

If extraordinary events have affected institutional water use, Suppliers may choose to adjust their compliance GPCD. An example recognized by DWR of an extraordinary event is the shelter-in-place requirement in California, due to COVID-19 precautions beginning in March 2020, have affected urban water use (Cooley et al., 2020). The full effects of “shelter in place” and “work from home” on the City’s service area water use were discussed in Chapter 2. In all cases of extraordinary events, it is important to adequately document the rationale and calculations leading to any adjustments. Table 5-2 below includes a space to document this consideration, along with other adjustments.

5.8 Regional Alliance

Suppliers that are choosing to comply with SB X7-7 requirements through a Regional Alliance must report the information from this chapter in the Regional Alliance Report. The report has to include the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3.

The City of Milpitas is complying with SB X7-7 as an individual retail agency, not as part of a regional alliance.

6 WATER SUPPLY CHARACTERIZATION

Lay Description

This section characterizes the City of Milpitas's system supplies, including purchased or imported water, groundwater, surface water, stormwater, wastewater, recycled water, desalinated water, exchanges or transfers, future water projects, and any climate change impacts.

The water supply analysis focuses on characterizing each water asset in order to provide the information needed for reliability and risk assessments. The more accurately and detailed this characterization is, the better prepared the City will be for managing its water assets, assessing supply reliability, performing its DRA, and preparing and implementing its WSCP.

The source of the City's water supply comes from two suppliers. Water from SFPUC is primarily from the Hetch Hetchy watershed located in the Sierra Nevada mountains. Water from Valley Water is primarily from the Sacramento-San Joaquin Delta watershed via the South Bay Aqueduct, Dyer Reservoir, Lake Del Valle and San Luis reservoir.

6.1 Water Supply Analysis Overview

This section will identify and quantify, to the extent practicable, the existing and planned sources of water available to the City in five-year increments to 20 years.

6.1.1 Specific Analysis Applicable to All Water Supply Sources

System Supplies

The City currently has two sources of water from SFPUC and Valley Water which are both wholesale water agencies. Each system will be described separately below.

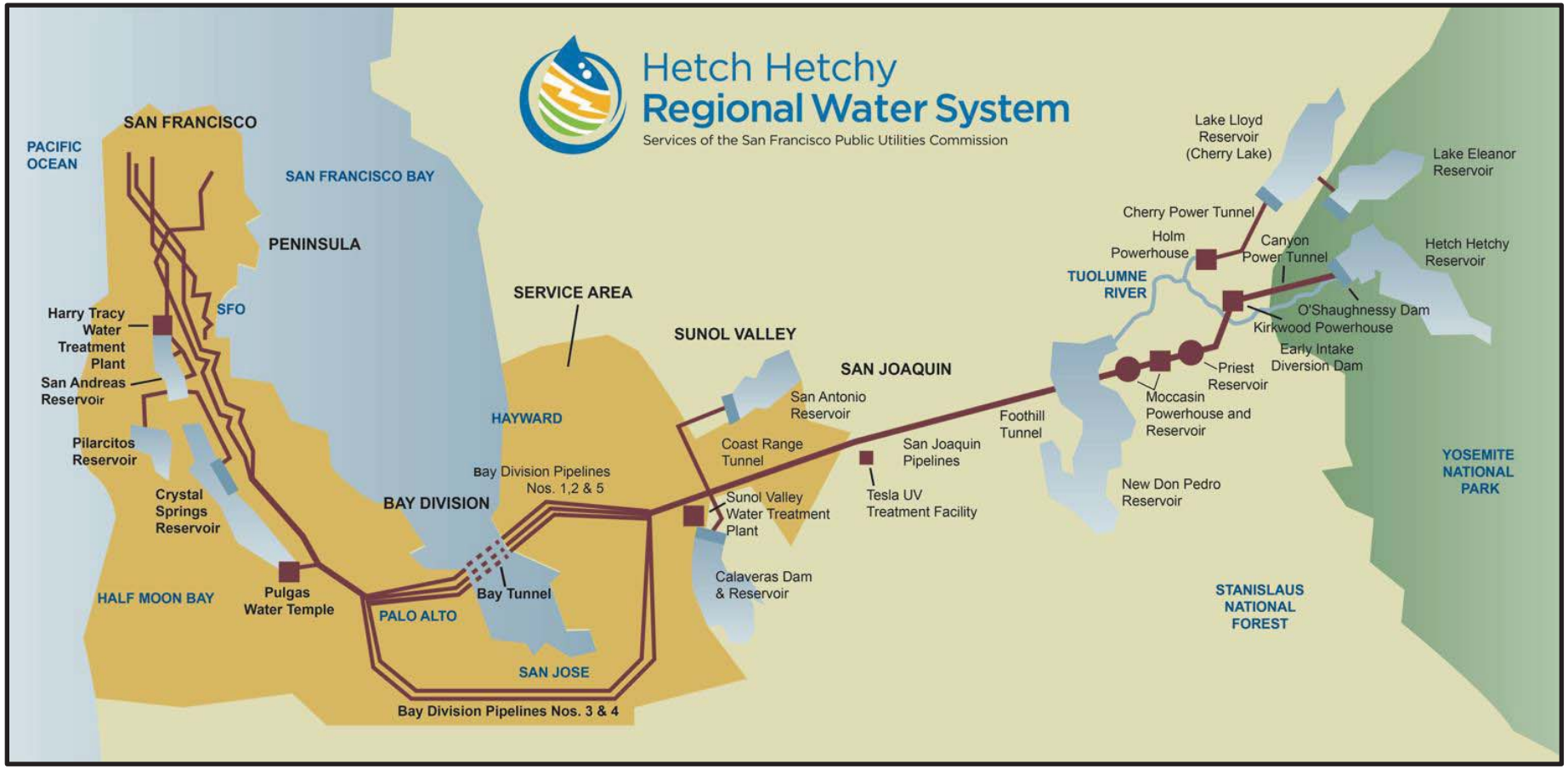
San Francisco Public Utilities Commission (SFPUC)

The City purchases potable water from the SFPUC Regional Water System (RWS). The SFPUC RWS supply is predominantly snowmelt rom the Sierra Nevada, delivered through the Hetch Hetchy aqueducts (see Figure 6-1), but it also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties (see Figure 6-1). Water from the RWS is treated before delivery and supplied to City from two connections, Bay Division Pipelines (BDPL) 1 and 2, and the Crystal Springs Bypass Tunnel.

On June 2, 2009, the City entered into a 25-year Water Supply Agreement with SFPUC. This agreement affirms the City's perpetual right to purchase up to 9.23 mgd of treated potable water unless SFPUC has a water shortage.

The amount of imported water available to the SFPUC's customers is constrained by climate, hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River, the key source for SFPUC. Due to these constraints, the SFPUC is very dependent on reservoir and snow-pack storage to manage its water supplies.

Figure 6-1. City of Milpitas Water Sources – SFPUC Regional Water System Map



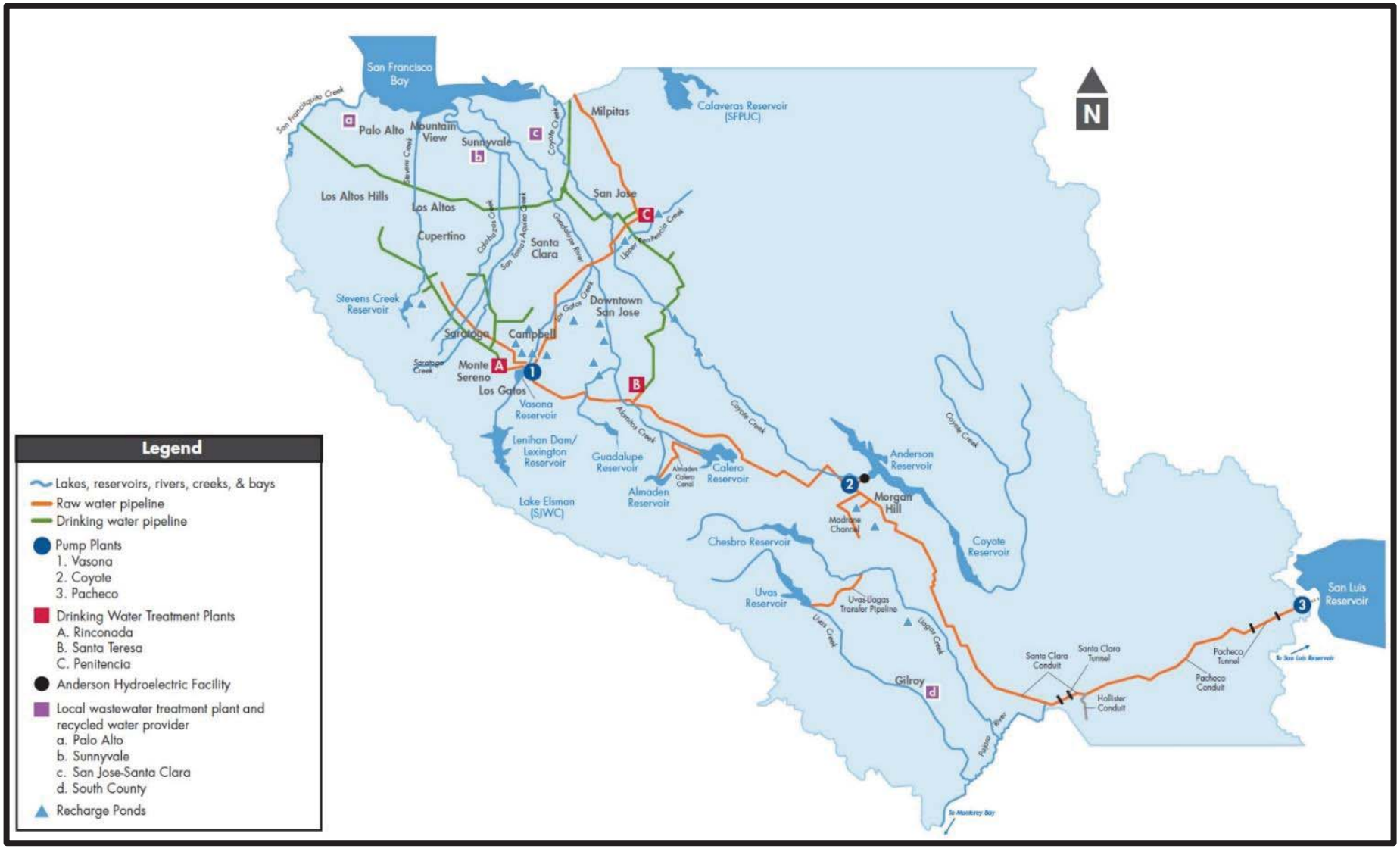
Source: SFPUC, 2020.

Valley Water (Formerly Santa Clara Valley Water District)

The City began receiving treated surface water from Valley Water in August 1993 under a September 1984 contract between the City and Valley Water (previously known as Santa Clara Valley Water District). The supply delivery is adjusted annually based on a binding 3-year annual delivery schedule. The City's annual purchase must be at least 90% of the delivery schedule and the City's monthly "supply guarantee" is at least 15% of the annual delivery schedule. Valley Water provides treated water from its Penitencia and Santa Teresa treatment plant via its Milpitas Pipeline which terminates in the City.

Although the City purchases are currently limited to surface water largely purchased by Valley Water from the State Water Project and Central Valley Project, Valley Water's overall water supply comes from a variety of sources. Nearly half is from local groundwater aquifers, and more than half is imported from the Sierra Nevada through pumping stations in the Sacramento-San Joaquin River Delta. Both groundwater and imported water are sold to retailers. Valley Water also manages the groundwater basin to the benefit of agricultural users and other independent users who pump groundwater. Local runoff is captured in Valley Water reservoirs for recharge into the groundwater basin or treatment at one of Valley Water's water treatment plants. The total storage capacity of these reservoirs is about 170,000 acre-feet (AF).

Figure 6-2. City of Milpitas Water Sources – Valley Water Supply System Map



Source: Valley Water Draft UWMP, March 29, 2021.

6.1.2 Other Characterization Considerations

There are no additional characterization considerations; all have been mentioned in Chapters 4, 6 and 7.

6.1.3 Optional Planning Tool

The optional PN Planning Tool Supply Worksheet allows for detailed characterization for potable separate from non-potable supplies. Both optional PN Planning Tool worksheets also allow for inclusion of the supplier's available supplies over the 25-year planning horizon for normal, single dry, and five consecutive dry year periods.

The City of Milpitas has opted to not use the Optional Planning Tool for the 2020 UWMP.

6.2 Narrative Sections for UWMP Water Supply Characterization

The City of Milpitas's water supply portfolio is described and quantified in the following subsections, including imported supplies and recycled water.

6.2.1 Purchased or Imported Water

The City purchases treated potable water from two wholesalers: SFPUC and Valley Water (previously known as SCVWD). These two sources are not blended under normal operating conditions. However, the distribution systems are physically interconnected with isolation valves to provide emergency water supply if needed. The 2020 breakdown of actual water supplies is in Table 6-8. Projected (future) water supplies include the aforementioned sources and are provided in Table 6-9.

In its incorporation year of 1954, the City began distributing SFPUC water to all residents and businesses, expanding to the hillside area in 1982. In August 1993, the City began serving water from SCVWD (now Valley Water), primarily to the commercial and industrial areas of the City (west of Highway 880, and also south of Calaveras Blvd. and west of Highway 680). Figure 3-1, in Chapter 3, shows the SFPUC and Valley Water service areas.

Most of the City's growth is occurring within areas served by Valley Water and as these areas grow so does the percentage of the City's potable supply that comes from Valley Water. In 2020, approximately 30% of the City's potable water came from Valley Water, which is a decrease from 40% in 2015.

Valley Water Standard Text

Major sources of supply for Valley Water include natural groundwater recharge, local surface water, imported water from the SWP and CVP, and recycled and purified water.

Imported

Much of Valley Water's current water supply comes from hundreds of miles away from natural runoff and releases from statewide reservoirs. This imported water is pumped out of the Delta and brought into the county through the complex infrastructure of the SWP and CVP. Valley Water holds contracts for 100,000 AFY from the SWP and for 152,500 AFY from the CVP. The actual amount of water delivered is typically less than these contractual amounts and depends on hydrology, conveyance limitations, and environmental regulations.

Constraints on imported water:

Imported water supplies are subject to hydrologic variability. Local and out-of-county storage can help mitigate the impacts of hydrologic variability.

Valley Water's SWP and CVP water supplies are also subject to a number of additional constraints including regulatory requirements to protect fisheries and water quality in the Delta, and conveyance limitations. Delta-conveyed supplies are also at risk from Delta levee failures due to seismic threats and flooding, sea level rise and climate change, declining populations of protected fish species, and water quality variations (including algal blooms). Many water quality variations are addressed, by blending sources and/or switching sources to the drinking water treatment plants. Algae and disinfection byproduct precursors have been especially challenging during recent drought conditions. To address at least some of these constraints, Valley Water continues to evaluate the costs and benefits of participating in the Delta Conveyance Project relative to other water supply options such as developing additional local supplies, securing and optimizing Valley Water's existing water system, and expanding water conservation.

6.2.2 Groundwater

Agencies that pump, or expect to pump, groundwater are required to include in their UWMPs an overview of the groundwater resources and groundwater management strategies. Currently, the City does not use groundwater to meet customer demands under normal conditions. The City has one existing fully developed well, Pinewood Well and two planned or in development: Curtis Well and McCandless Well. These wells are located in the southwestern part of the City (See Figure 6-3). The Curtis Well was drilled in 2003, but the well was not equipped with above-grade infrastructure required for a functioning well, and the facility was never completed. As a result, bringing the Curtis Well online requires installing a submersible pump, piping and treatment components, as well as conducting testing and permitting. Design for the Curtis Well improvements began in 2020. Construction of the McCandless Well began in 2020 and is anticipated to be completed by 2024.

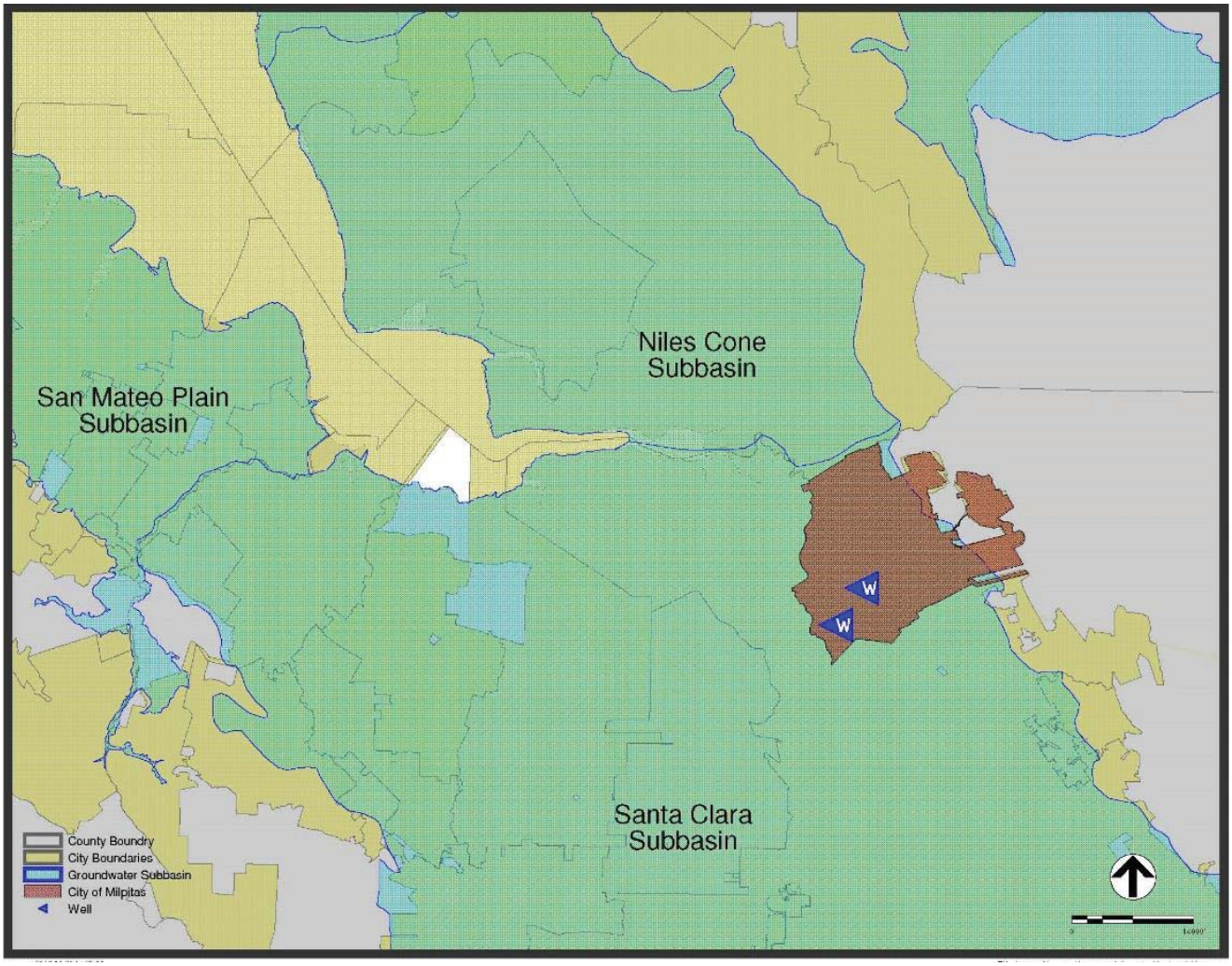
The use of Pinewood Well, Curtis Well and McCandless Well as emergency wells or fully functioning wells is yet to be studied, however the significance of these wells cannot be understated. In 2015, the State Water Resources Control Board Division of Drinking Water requested a formal evaluation of the City's Water Source Capacity, under Section 64558, Title 22, of the California Code of Regulations. The use of well(s) for storage credits is one strategy the City may use to supplement above grade storage requirements to satisfy Section 64558, Title 22. A Source Capacity Analysis, as part of a separate study independent of the UWMP, is being performed by the City at the time of the writing of this UWMP. In May of 2020, the City completed a Draft Final Water Master Plan which identified the City's current and future water demands and the infrastructure required to address source capacity. The Master Plan Study will inform the Source Capacity Analysis. However, preliminary evaluations

indicate a combination of groundwater supply in conjunction with above grade storage (tanks) may be the appropriate balance to ensure compliance with Section 64558 of Title 22. Additionally, expanding the City's water portfolio to include groundwater wells will supplement loss of supply as a result of wholesale cutbacks in the event of prolonged droughts as discussed in Chapter 7. Pinewood Well is permitted for use as a standby emergency well. The City currently reserves groundwater supply for emergency use in the event that SFPUC and Valley Water cannot deliver contract treated water supplies.

Basin Description

The local groundwater basin is called the Santa Clara Valley Sub-basin. The basin is made up on unconsolidated alluvium. Within City boundaries, the eastern portion of the basin is unconfined and does not contain an aquitard to prevent contamination from spreading from surface to groundwater. The western portion of the City overlies a confined, aquitard-protected area with water of good quality.

Figure 6-3. City of Milpitas Groundwater Resources



Source: City of Milpitas Draft 2020 Water Master Plan. West Yost. (2021)

Other Considerations

The Santa Clara Valley Sub-basin is not adjudicated and has not been identified to be in overdraft by DWR. Neighboring utilities, including the City of Santa Clara and the City of San Jose, utilize the groundwater basin. The basin has historically experienced periods of overdraft and land surface subsidence, particularly during the

1920s and 1960s when expanding development and agricultural production increased demand. The Santa Clara Valley Water Conservation District (today's Valley Water) was originally formed in 1929 to alleviate subsidence through artificial recharge. Valley Water manages the groundwater basin, monitoring the basin for local subsidence, managing surface recharge, and working with local retailers to prevent subsidence. For more information on basin characteristics and management, please refer to Valley Water's Groundwater Management Plan (Santa Clara Valley Water District, 2016). Additionally, The City may expand its managed groundwater well extraction program to supplement loss of supply as a result of wholesale cutbacks in the event of prolonged droughts as discussed in Chapter 7.

Table 9-2 of the Draft 2020 Water Master Plan (as shown in Figure 6-4) summarizes the location and capacity for each of these wells.

Figure 6-4. Location and Capacity of Emergency Groundwater Wells at Buildout

Table 9-2. Emergency Groundwater Wells at Buildout

Well Facility	Location	Pressure Zone Served	Capacity	
			gpm	mgd
Pinewood Well[a,d]	227 Lonetree Court	SF1	1,181	1.70
Curtis Well[b,d]	330 East Curtis Avenue	VW2[e]	400	0.58
McCandless Well[c,d]	Near 1680 McCandless Drive	VW1	400	0.58

(a) Pinewood Well capacity per 2009 WMPU, Table 4-3.
(b) Curtis Well capacity is assumed to be equal to McCandless Well but is subject to change pending additional testing.
(c) McCandless Well capacity per discussions with design team in September 2020.
(d) Pinewood Well has a plug-in adapter and transfer switch to receive power from a portable generator. It is assumed Curtis Well and McCandless Well will also have these backup power features.
(e) While Curtis Well is located within Zone SF1, it is adjacent to transmission mains for Zones SF1, SF2, and VW2. Given the projected large increase in demands in the VW service area, it is assumed Curtis Well would serve Zone VW2.

Source: West Yost. (2021). City of Milpitas Draft 2020 Water Master Plan.

Past Five Years

Table 6-1 shows the historical annual volume (in hundred cubic feet) of groundwater pumped over the past five years. This groundwater was pumped only for the purpose of routine water quality testing. It was not added to the municipal water supply.

Table 6-1. Groundwater Volume Pumped

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Alluvial Basin	Santa Clara Valley, Santa Clara Sub-basin	0.48	0.09	0.1	0.03	0.06
	TOTAL	0.48	0.09	0.10	0.03	0.06
NOTES: Groundwater pumped during reporting period was for testing purposes only. No groundwater was pumped into the distribution system.						

Table 6-9 shows the projected annual volume of groundwater pumped, in five-year intervals. The projection is based on well capacity values reported in the Draft 2020 Water Master Plan and reflects a tiered introduction of groundwater into the municipal supply. Capacity for McCandless Well (currently under construction) is based on discussions with the design team and production testing, which was performed at the end of 2020. It was conservatively assumed that Curtis Well would have the same capacity as McCandless Well (0.58 mgd). However, the Curtis Well capacity is subject to change.

6.2.3 Surface Water

Water from streams, lakes, and reservoirs is considered a surface water supply for the purposes of the UWMP. Surface water supplies for the City are reported in Tables 6-8, 6-9, and 7-1. Surface water that is not self-supplied will be reported as Purchased or Imported Water in Tables 6-8 and 6-9.

6.2.4 Stormwater

Communities are increasingly implementing opportunities to beneficially use stormwater to meet local water supply demands. These actions are motivated by constrained local water resources, new regulations, and relieving strain on overburdened stormwater infrastructure. Beneficial uses can include blending with other waters supplies for groundwater recharge, redirecting it into constructed wetlands or landscaping, and diverting it to a treatment facility for subsequent reuse.

The City is not currently using its stormwater but could consider this in the future.

6.2.5 Wastewater and Recycled Water

Per Water Code 10633, the UWMP shall provide to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- A description of wastewater collection and treatment systems in the supplier's service area.
- A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycle water project.
- A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- A description of actions, including financial incentives, that may be taken to encourage use of recycled water, and projected results of these actions in terms of acre-feet of recycled water used per year.

Municipal recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again for a beneficial purpose. The term "recycled water" is defined in the Water Code more broadly than "municipal recycled water." For purposes of the UWMPs, "recycled water" means only municipal recycled water, that is, water that has been treated and discharged from a municipal wastewater facility.

There are two requirements that treated municipal wastewater must meet to be classified as recycled water:

1. It must be reused beneficially, in a manner consistent with Title 22.
2. It must be reused in accordance with a Regional Water Quality Control Board permit such as National Pollutant Discharge Elimination System, waste discharge requirement, or water recycling requirement.

Recycled Water Coordination

As a tributary agency to the San Jose/Santa Clara Water Pollution Control Plant (WPCP), the City of Milpitas has rights to the recycled water purveyed by SBWR. The City purchases recycled water from SBWR, as well as operates and maintains the recycled water distribution facilities within City boundaries. This is done through a contract with the City of San Jose, whereby Milpitas provides day-to-day operational services and helps to comply with recycled water permit requirements within the City. Design and construction criteria pertaining to recycled water are included in SBWR's guidelines[1] and *Rules and Regulations.*[2]

Wastewater Collection, Treatment, and Disposal

Per Water Code Section 10633(a), a suppler must provide a general description of wastewater collection, treatment, and disposal within the service area. This information is reported in Tables 6-2 and 6-3.

Wastewater Collected Within the Service Area

The City collects, but does not treat, wastewater within the service area. Rather, it pumps its wastewater, consisting primarily of industrial and sanitary discharge, through two force mains to the WPCP, also known as the San Jose/Santa Clara Regional Wastewater Facility (RWF). Table 6-2 includes the volume of wastewater collected in the service area.

Wastewater Treatment and Discharge Within the Service Area

Wastewater treatment is provided by agreement with the cities of San Jose and Santa Clara (as joint owners of WPCP). Under terms of the agreement, the City pays a capital share (in proportion to the City's 14.25 mgd capacity rights and the total plant capacity) and pays an operating cost share based on discharge volumes to WPCP. WPCP is one of the largest advanced wastewater treatment facilities in California, treating an average of 110 million gallons of wastewater per day from over 1.4 million residents and 17,000 main business connections, encompassing the cities of San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. Most of the final treated water is discharged into the South San Francisco Bay. Approximately 20% is supplied to South Bay Water Recycling for distribution to customers. Because the WPCP is outside of the City's service area, no volume numbers are included in Table 6-3, which is meant to identify the volume of treated wastewater recycled or disposed of within the service area.

Recycled Water System Description

Recycled water is predominantly used for landscape irrigation within the City but is also used for industrial use. As indicated in Table 6-4, landscape irrigation and industrial uses of recycled water are projected to continue growing within the City, and golf course irrigation is anticipated to be added as a new recycled water use type within the City's service area.

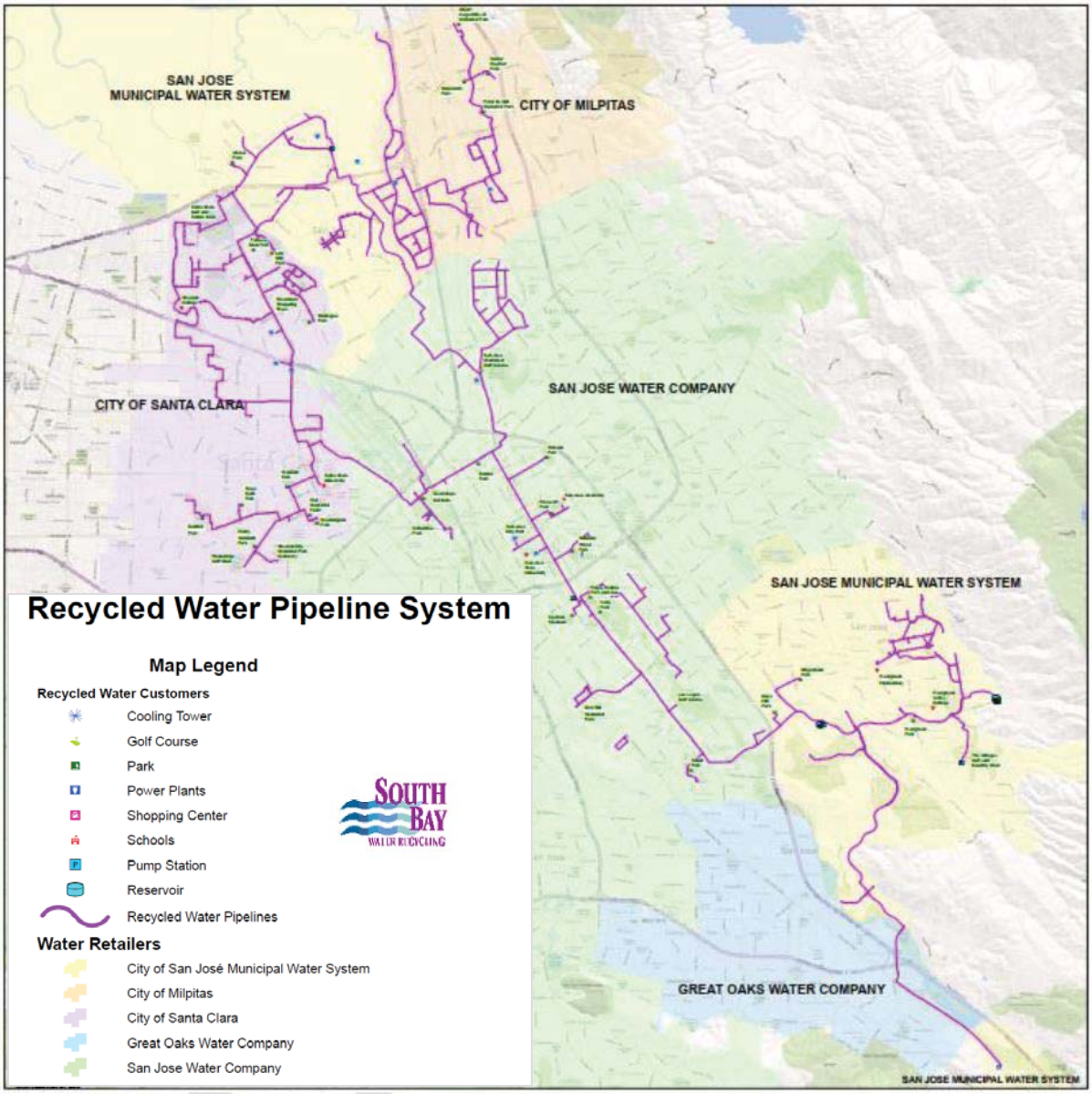
The City of San Jose in coordination with Valley Water completed the SBWR Strategic and Master Plan in 2015, which describes and quantifies potential uses of recycled water throughout the SBWR service area and addresses

[1] City of San Jose. Recycled Water web page, accessed May 2021: https://www.sanjoseca.gov/your-government/environment/water-utilities/recycled-water

[2] South Bay Water Recycling. *Rules and Regulations For Design and Operation of On-Site Recycled Water Facilities*. https://www.sanjoseca.gov/home/showpublisheddocument?id=526

technical and economic feasibility of the potential uses, including non-potable and potable alternatives. Figure 6-4 depicts the City's recycled water distribution system.

Figure 6-5. Recycled Water System



Source: City of San Jose Recycled Water web page.[3]

[3] City of San Jose. Recycled Water web page, accessed May 2021: https://www.sanjoseca.gov/your-government/environment/water-utilities/recycled-water

Table 6-2. Wastewater Collected Within Service Area in 2020

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
99%	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
99%	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? *(optional)*
City of Milpitas	Metered	2,032	City of San Jose	San Jose/ Santa Clara Water Pollution Control Plant	No	Yes
Total Wastewater Collected from Service Area in 2020:		2,032				
NOTES: All wastewater is included in the 99% except for the 25 Spring Valley Heights Association units.						

Table 6-3. Wastewater Treatment and Discharge Within Service Area in 2020

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020											
☑	No wastewater is treated or disposed of within the UWMP service area. The Supplier will not complete the table below.										
							2020 volumes				
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Require-ment
						Total	0	0	0	0	

Potential, Current, and Projected Recycled Water Use

The recycled water projections in Table 6-5 includes projects currently underway to convert potable users within the vicinity of the existing recycled water system, irrigation and indoor recycled water anticipated within Specific Plan areas, conversion of cooling towers as identified through a SBWR Cooling Tower Initiative and extension of the recycled water system to capture additional irrigation use. Every year, the City of Milpitas purchases approximately 300 million gallons of recycled water from the San Jose/Santa Clara Regional Wastewater Facility, through the wholesale agency, South Bay Water Recycling (SBWR). The recycled water undergoes an extensive tertiary treatment process (including filtration and disinfection) and is delivered to more than 220 recycled water customers in Milpitas, for landscape irrigation and industrial uses.

The recycled water system is part of the South Bay Water Recycling Strategic Master Planning Report completed in 2014. The Strategic Plan was divided into two phases, near term (2015-2020) and long term (2020-2035). Master Planning will provide basis for identifying alternative governance frameworks and associated funding strategies for non-potable water (i.e. recycled water). The SBWR system is currently developed to reflect near term recycled water demands. The long term plan is currently being studied, and future allocations have not been identified. Projected recycled water use is limited by the future supply allocations outlined by SBWR, and therefore not reflected in this UWMP.

Table 6-4 contains information on the current, projected, and potential beneficial use of recycled water in the City's service area. The total projected recycled water use for each of the five-year planning increments reported in Table 6-4 is also included in Table 4-5 in Chapter 4.

Table 6-4. Current and Projected Recycled Water Direct Beneficial Uses Within Service Area

Submittal Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area											
☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.										
Name of Supplier Producing (Treating) the Recycled Water:			City of San Jose								
Name of Supplier Operating the Recycled Water Distribution System:			South Bay Water Recycling								
Supplemental Water Added in 2020			0								
Source of 2020 Supplemental Water			N/A								
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity)	General Description of 2020 Uses	Level of Treatment	2020	2025	2030	2035	2040	2045 (opt)
Landscape irrigation		36 MG	Landscape irrigation for commercial and institutional sites, parks	Tertiary	341	380	380	380	380	380
Industrial use	1 industrial cooling tower	1 MG	Industrial cooling tower	Tertiary	16	20	20	20	20	20
Total:					357	400	400	400	400	400
**IPR – Indirect Potable Reuse*										
NOTES: 2020 is actual water use. 2025-2045 values have been rounded to the nearest 10 MG.										

Table 6-5. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☐	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	**2015 Projection for 2020 [1]**	**2020 Actual Use[1]**
Landscape irrigation (exc. golf courses)	368	341
Industrial use	6	16
Total	374	357

Actions to Encourage and Optimize Future Recycled Water Use

Per Water Code Section 10633, the UWMP shall provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier, and shall include a plan for optimizing the use of recycled water in the supplier service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

To encourage the use of recycled water, the City has an ordinance that prohibits the use of potable water for irrigation if recycled water is available and coordinates with SBWR and Valley Water on recycled water planning and implementation projects. The City has explored the possibility of connecting the recycled water infrastructure in its service area with that of the neighboring San Jose Water Company (SJWC), who is another SBWR retailer; a connection between the two retailer's systems would improve overall reliability.

Table 6-6 details the methods planned to expand future recycled water use in the City's service area.

Table 6-6. Methods to Expand Future Recycled Water Use

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
P. 61	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
Specific Plan	City has the MMSP Specific Plan policy that requires new development to include recycled water lines for irrigation	Existing	Once SBWR allocation is met
Ordinance	Ordinance 240.6, § 2 prohibits the use of potable water for irrigation if recycled water is available	2017	Once SBWR allocation is met
SBWR Coordination	Pending update to the SBWR Recycled Water Master Plan	Unknown	Unknown
		Total	0

6.2.6 Desalinated Water Opportunities

Desalination is the most costly of all treated waters available for the City, and as such the City does not plan to implement a desalination project at this time. However, desalination is still considered a viable option for a long-term augmentation method or back-up supply, especially with collaboration amongst neighboring agencies. The City's Water Supply Augmentation Study recommended that the City consider a partnership with a regional water purveyor for a local desalination plant.

The City is aware of the Bay Area Regional Desalination Project, of which Valley Water is a partner. More information on the regional desalination project is available at http://www.regionaldesal.com/. Currently, Valley Water is not including desalination in its projected water supplies.

6.2.7 Water Exchanges and Transfers

Per Water Code section 10631(c), this section describes the opportunities for exchanges or transfers of water on a short-term or long-term basis. The information contained in this section will inform the quantification of water supplies incorporated into Tables 6-8 and 6-9.

Exchanges

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or it can include payment and the return of water.

Since the early 1990s, the water exchange market (including water rights trading) has expanded to account for approximately 5% of all water used annually by California businesses and residents. However, the approval process for water exchanges have become more complex and difficult as water contracts shift from short-term to several-year durations, new pumping legislation is introduced as a result of controversies arising from water banking, unprecedented droughts, and other issues. It is a result of these complications that the City does not have, or plan to have, any exchange opportunities for the purpose of reducing costs or improving water quality.

Transfers

The Water Code defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.

The City of Milpitas is not currently doing water transfers.

Emergency Interties

Emergency water interties are connections between water systems that allow for the exchange or delivery of water between those systems on a short-term emergency basis. Emergency interties are addressed in Section 7 Water Service Reliability and Drought Risk Assessment.

The City has interties with neighboring San Jose Water Company (SJWC) and Alameda County Water District (ACWD) for emergency water supply. If a short-term or emergency supply were needed, the Alameda County Water District interties, both of which are 8-inches in diameter, could each suffice to supply the City with approximately 2.3 million gallons per day. This equates to 4.6 million gallons per day, which is nearly half of Milpitas's pre-drought average day demand. If more interties were constructed and connected, it would be possible to purchase an even higher volumetric flow rate from ACWD.

6.2.8 Future Water Projects

Per Water Code section 10631(f) this section describes all water supply projects and water supply programs that may be undertaken to meet the total projected water use. The City is able to meet future projected water needs from wholesale water purchases. However, as discussed earlier in Section 6.2, the City completed a Water Supply Augmentation Study in 2015 which recommended development of groundwater. Table 6-7 summarizes the expected increase in water supply as a result of these projects.

Table 6-7. Expected Future Water Supply Projects or Programs

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
P. 61	Provide page location of narrative in the UWMP.					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Groundwater	No		Three emergency groundwater wells - Curtis, McCandless and Pinewood.	2021-2025	All Year Types	54
Groundwater	No		Three groundwater wells pumping at 1.2 mgd as supply augmentation to reduce dry year shortfall. The 2021-2025 Curtis, McCandless and Pinewood wells will be converted.	2030	Single-Dry and Multi-Dry Year	1,314
Groundwater	No		One or more groundwater wells pumping at 1.2 mgd as supply augmentation to reduce shortfall.	2035	Single-Dry and Multi-Dry Year	438
NOTES: Groundwater wells in this table are for emergency use only and permitted to be operated no more than 5 consecutive days and no more than 15 calendar days per year. They are not designed as general supply wells.						

6.2.9 Summary of Existing and Planned Sources of Water

Per Water Code Section 10631 this section will identify and quantify the existing and planned sources of water available over 5-year increments and provide supporting and related information.

Description of Supplies

The City's existing water supplies include imported water, groundwater, recycled water, and interties with neighboring agencies. Under normal conditions, imported water comprises the City's entire water supply. The City purchases treated surface water from two agencies: the SFPUC and Valley Water, which was previously known as the Santa Clara Valley Water District. In 2019, water supplies from SFPUC totaled 6,146 acre-feet (af) and represented about 59 percent of the City's total water supplies, while water supplies from Valley Water totaled 3,182 af and represented about 31 percent of the City's total water supplies. Recycled water is produced at the San José-Santa Clara Regional Wastewater Facility and delivered to the City by SBWR. In 2019, the City used approximately 1,049 af of recycled water, mainly for landscape irrigation. This represented about 10 percent of the City's total 2019 water use. In emergencies, the City can activate interties with SJW and the ACWD and/or pump groundwater. The City overlies the Santa Clara Valley Groundwater Sub-basin and currently has one groundwater well (Pinewood Well) permitted for emergency use.

Demand projections are shown in Table 6-9.

Quantification of Supplies

Table 6-8 lists the actual volume of purchased or imported water for the City's service area. Each supply source is listed and quantified separately, to the extent practicable. The City purchases its potable water supplies from the San Francisco Public Utilities Commission (SFPUC), and Valley Water. Under normal conditions, SFPUC and Valley Water supplies remain separate. Isolation valves prevent mixing and create two distinct water service areas. Recycled water is produced at the San José-Santa Clara Regional Wastewater Facility and delivered to the City by South Bay Water Recycling (SBWR).

Table 6-8. Water Supplies – Actual

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply		2020		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Purchased or Imported Water	San Francisco Public Utilities Commission	2,159	Drinking Water	
Purchased or Imported Water	Valley Water	914	Drinking Water	
Recycled Water	South Bay Water Recycling	357	Recycled Water	
	Total	3,430		0

Table 6-9 lists the projected volume of water supplies, including volume by source, for the City's service area.

Table 6-9. Water Supplies – Projected

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply		Projected Water Supply * Report To the Extent Practicable									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**2025**		**2030**		**2035**		**2040**		**2045** (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	San Francisco Public Utilities Commission	2,410		2,470		2,570		2,660		2,750	
Purchased or Imported Water	Valley Water	1,445		1,505		1,536		1,586		1,637	
Recycled Water	South Bay Water Recycling	400		400		400		400		400	
Other	Active Conservation	70		100		120		130		130	
	Total	4,325	0	4,475	0	4,626	0	4,776	0	4,917	0

6.2.10 Special Conditions

Numerous special conditions may affect each supplier's water supplies. This section documents the special conditions applicable to the City's service area.

Climate Change Effects

The issue of climate change has become an important factor in water resources planning in the state and is frequently considered for urban water management planning purposes, though the extent and precise effects of climate change remain uncertain. The climate change impacts were discussed in Section 4.5.

Regulatory Conditions and Project Development

Emerging regulatory conditions and planned future projects may also affect characterization of future water supply availability and analysis.

This does/does not apply to the City of Milpitas.

Other Locally Applicable Criteria

Other locally applicable criteria may also affect characterization and availability of an identified water supply.

This does/does not apply to the City of Milpitas.

6.2.11 Active Conservation

The City participates in Valley Water's conservation program and has assumptions of active conservation supply going into the future supply portfolio as shown in Table 6-9. Please see Chapter 9 for details of Valley Water's conservation program elements that are offered in the City.

6.3 Submittal Tables

Submittal tables are included in the appropriate subsections of this chapter rather than here.

6.4 Energy Intensity

Water energy intensity is the total amount of energy, calculated on a whole-system basis, required for the use of a given amount of water in a specific location (Wilkinson, 2000).[19] The City used the Total Utility Approach for reporting energy intensity. This approach reports a single energy intensity for all water management operations. The energy intensity is reported for the calendar year 2020 selected as the one-year reporting period, and utility bills for the associated reporting period are used as the source for energy consumption data. Total energy consumed by City during calendar year 2020 based on reported utility bills is 1,901,378.39 kilowatt hour (kWh), excluding 676,649.50 kWh from solar. Table O-1b shows the energy consumed for each million gallon (MG) of water entering the distribution system. Based on the Total Utility Approach, the City's energy intensity is estimated to be 554.4 (kilowatt hour per million gallons) kWh/MG.

The City also has calculated the energy associated with the collection and treatment of wastewater for the Calendar Year 2020 reporting period. Reported utility bills are used as the source for energy consumption data for the collection of wastewater. Energy use metered is used as the source for energy consumption data for wastewater treatment. Table O-2 shows the energy consumed for each MG of water entering the collection system. The City is not involved in the treatment or discharge wastewater. The City's energy intensity for the collection of wastewater is estimated to be 200.6 (kilowatt hour per million gallons) kWh/MG.

[19] Wilkinson. (2020). *Methodology for Analysis of the Energy Intensity of California's Water Systems,* supported by Ernest Orlando Lawrence Berkeley Laboratory and the California Institute for Energy Efficiency, accessed June 2021: http://large.stanford.edu/courses/2012/ph240/spearrin1/docs/wilkinson.pdf

Table O-1b. Recommended Energy Intensity – Total Utility Approach

Urban Water Supplier:	*City of Milpitas*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*MG*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*3,429.71*	*0*	*3,429.7092*
Energy Consumed (kWh)		*1,901,378.39*	*0*	*1,901,378.388*
Energy Intensity (kWh/vol. converted to MG)		*554.4*	*0.0*	*554.4*

Quantity of Self-Generated Renewable Energy

676,649.50 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Utility bills from PG&E and ABAG Gas for the associated time period are used as the source for energy consumption data. Solar utility bills from Integrys Solar LLC are included in the Quantity of Self-Generated Renewable Energy. Ayer pump station shares a meter with Milpitas Sports Center. The City is unable to clearly define what proportion of electricity cost is used by the pump vs the sports center. It is assumed that 50% is consumed by water pumps.

Narrative:

Total energy consumption represents the energy consumed for plumbing and distribution of drinking water.

Table O-2. Recommended Energy Intensity – Wastewater & Recycled Water

Urban Water Supplier: *City of Milpitas*

Table O-2: Recommended Energy Reporting - Wastewater & Recycled Water					
Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control			
End Date	12/31/2020	Water Management Process			
☐ Is upstream embedded in the values reported?		Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Water Units Used	MG				
Volume of Wastewater Entering Process (volume units selected above)		*2,032.00*	*0*	*0*	*2,032.00*
Wastewater Energy Consumed (kWh)		*407,706.10*	*0*	*0*	*407,706.10*
Wastewater Energy Intensity (kWh/vol. converted to MG)		*200.6*	*0.0*	*0.0*	*200.6*
Volume of Recycled Water Entering Process (volume units selected above)		*0*	*0*	*0*	*0*
Recycled Water Energy Consumed(kWh)		*0*	*0*	*0*	*0*
Recycled Water Energy Intensity (kWh/vol. converted to MG)		*0.0*	*0.0*	*0.0*	*0.0*

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

543,351.00 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Utility bills from PG&E for the associated time period are used as the source for energy consumption data. Solar utility bills from Integrys Solar LLC are included in the Quantity of Self-Generated Renewable Energy.

Narrative:

The City does not operate recycled water collection, treatment or discharge. The City does not treat or discharge wastewater, however the City does operate two wastewater pump stations. City wastewater is collected at the Main Lift Pump Station which pumps to the San Jose-Santa Clara Regional Wastewater. The second pump station, Venus Way Lift Station pumps sewage from a small portion of the City then flows to the Main Lift Station.

7 WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

Lay Description

Chapter 7 contains information about the City of Milpitas's water service reliability and its Drought Risk Assessment (DRA). Assessing water service reliability is the fundamental purpose for water suppliers to prepare an UWMP. Water service reliability reflects the supplier's ability to meet the water needs of its customers under varying conditions. This chapter integrates information from SFPUC, BAWSCA, Valley Water and the City about water reliability and planning for water shortages.

7.1 Introduction

Chapter 7 incorporates information about its supply from SFPUC and Valley Water (described in Chapter 6) and its water uses (described in Chapter 4) and provides an evaluation of the City's risk under a severe drought period lasting for the next five consecutive years (California Water Code Section 10635).

For its overall reliability assessment, the City uses current information from Valley Water, SFPUC and BAWSCA to assess its water service reliability under varying hydrologic and regulatory conditions. This analysis looks beyond the City's past experience and considers what could be reasonably foreseen in the future.

In the 2015 UWMP, the City was required to evaluate its supplies and demands under a drought period lasting for three consecutive years. By comparison, the 2020 UWMP requires the City to develop a DRA, that evaluates its risk under a severe drought period lasting for the next five consecutive years. The DRA is an important element for selecting the City's demand management measures (DMMs, Chapter 9) and for planning projects for a reliable water supply. The DRA and DMMs are part of the City's WSCP (Appendix I).

In this chapter, the City also presents other water management measures in which the City has invested resources for long-term management and planning, such as the use of advanced technologies: advanced metering infrastructure (AMI), supervisory control and data acquisition (SCADA), and geographic information systems (GIS) for managing its water system and supplies effectively. Potential impacts from new development and climate change are long-term variables in the City's supply planning.

The City incorporates the current information from SFPUC and BAWSCA [20] to present its supply availability under the two contrasting scenarios SFPUC provided: Scenario 1 – with the Bay Delta Plan. Using Scenario 1, the City presents its water supply and potential cutbacks – its water supply reliability – under the following hydrologic conditions:

- normal hydrological conditions,
- a single dry year, and
- five consecutive years of drought.

The analysis is conducted in 5-year increments to project what conditions may look like for the next 25 years.

[20] Ibid.

In BAWSCA's Attachment B, Updated 2020 UWMP Drought Cutback tables for near-term single -year and multi-year droughts,[21] the data are based on SFPUC's guidance for Scenario 1 and Scenario 2 (presented in SFPUC Tables 1 through 10) and forecast agency purchases for 2021 through 2025:

- 2020 – actual agency purchases from SFPUC were used for 2020.
- 2021 and 2022 – Updated (January 2021) agency projected RWS purchases are used by BAWSCA for drought cutbacks in 2021 and 2022.
- 2023 and 2024 – BAWSCA calculated projected purchases assuming a linear change from 2022 to 2025.
- 2025 – BAWSCA Demand Study projected RWS purchases are used for 2025.

Although it is not possible to predict specific future regulatory and development variables, to the extent they can be addressed, they are discussed in this chapter.

7.2 Water Service Reliability Assessment

Every Supplier is required to provide their expected water service reliability projections for a normal year, single dry year and five consecutive dry years.

Given that the City partially relies on supplies from SFPUC and Valley Water, a discussion about the potential impacts on the SFPUC and Valley Water service reliability, due to the Bay-Delta Plan Amendment adoption, is warranted and presented below.

7.2.1 SFPUC system

In December 2018, the State Water Board adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay Delta Plan) to establish water quality objectives to maintain the health of the Bay-Delta ecosystem. The adopted Bay Delta Plan was developed with the stated goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay Delta. The Bay Delta Plan Amendment requires the release of 30-50% of the "unimpaired flow"[22] on the three tributaries from February through June in every year type. In SFPUC modeling of the new flow standard, it is assumed that the required release is 40% of unimpaired flow.

As described in Chapter 6, the SFPUC RWS's dominant supply is from the Tuolumne River watershed at high elevations in the Sierra Nevada Mountains. This main source of water for the SFPUC RWS is augmented by treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo counties.

The SFPUC has initiated an Alternative Water Supply Planning Program to ensure that San Francisco can meet its Retail and Wholesale Customer water needs, address projected dry years shortages, and limit rationing to a maximum 20 percent system-wide in accordance with adopted SFPUC policies. This program is in early planning stages and is intended to meet future water supply challenges and vulnerabilities such as environmental flow needs and other regulatory changes; earthquakes, disasters, and emergencies; increases in population and employment; and climate change. As the region faces future challenges – both known and unknown – the SFPUC is considering this suite of diverse non-traditional supplies and leveraging regional partnerships to meet Retail and Wholesale Customer needs through 2045.

Since the City's water supply relies partially on the SFPUC RWS, impacts from the potential implementation of the Bay Delta Plan, as presented in SFPUC's Scenario 1, will impact the City's service reliability. The City will be

[21] BAWSCA Attachment B: Updated 2020 UWMP Drought Cutbacks, BAWSCA, April 8, 2021. See Appendix L for more details.

[22] "Unimpaired flow represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds." – Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Dec. 12, 2018) p.17, fn. 14, available at https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.

able to meet the projected water demands presented in this UWMP in normal years but would experience supply shortages in single dry years and multiple dry years. Such implementation of the Bay Delta Plan will require rationing in all single dry years and multiple dry years.

For the 2020 UWMPs, SFPUC provided two scenarios, using hydrologic models with and without the Bay Delta Plan Amendment. BAWSCA, in turn, provided drought cutback allocations based on the information about projected water supply availability for the wholesale customers from SFPUC. All of BAWSCA's allocation tables assume that the wholesale customers can purchase up to 184 mgd from SFPUC's RWS through 2045.

In normal years 100 percent of the City's ISG is available to the City, that is 9.232 mgd. Assumptions from SFPUC about dry-year water supply projects are included in SFPUC's Water System Improvement Program (WSIP) and considered in SFPUC's Regional Water System supply reliability.[23] The SFPUC's Regional Water System supply reliability data reflect SFPUC's projected instream flow requirements under each scenario.

The City's expected water service reliability projections for a normal year, single dry year and five consecutive dry years are presented in:

- Table 7-1 shows the City's water service reliability projections for a normal year, single dry year and five consecutive dry year supply compared to the City's normal year supply for 2021 through 2025.
- Table 7-2 shows a normal year supply and demand comparison through 2045.
- Table 7-3 shows a single dry year supply and demand comparison through 2045.
- Table 7-4 shows a multi-dry year supply and demand comparison through 2045.
- Table 7-5 is the DRA, showing a five-year Drought Risk Assessment to address Water Code Section 10635(b), for a multi-dry year supply and demand comparison from 2021 through 2025.

Note that the City's Tables 7-2 through 7-4 extend to the year 2045, beyond the requirement of 2040 [Water Code Section 10635(a)].

7.2.2 Valley Water System

To maintain water supply reliability and flexibility, Valley Water's water supply includes a variety of sources including local groundwater, imported water, and local surface water. Valley Water has an active conjunctive water management program to optimize the use of groundwater and surface water, and to prevent groundwater overdraft and land subsidence.

Long-term planning and modeling analysis performed by Valley Water as part of its Integrated Water Resources Planning Study (IWRP) indicates that if additional investments are made, future countywide demands can reliably be met. It is the intent of Valley Water to invest in accordance with the IWRP framework to develop a flexible resource mix. This flexibility will allow Valley Water to respond to uncertain future conditions.

Valley Water's first IWRP report, completed in 1997, identified alternative water resource strategies and ranked them against planning objectives that ultimately resulted in a final preferred strategy.

That strategy identified three programs corresponding to a range of future water shortage levels, with components phased in over time, based on demand.

The 2003 IWRP developed a planning framework and supporting modeling tools to help Valley Water identify and select specific water resource investments. The 2003 IWRP evaluation was based on a best estimate of the water demand and water supply outlook through 2040. Future water demand was estimated based on data from ABAG, Department of Finance and general plans from cities and Santa Clara County. The demand projection for the cities in Santa Clara County did not distinguish between Valley Water or SFPUC supplies.

[23] SFPUC Regional Water System supply reliability letter from SFPUC, January 22, 2021.

The key findings from the 2003 IWRP are: (1) securing baseline supplies is top priority for ensuring reliability, 2) a mix of three types of new water supply investments makes the best water supply portfolio, and 3) local supplies decrease vulnerability.

Based upon the findings above, the IWRP 2003 provides three recommendations to ensure reliability through 2040.

1. Secure the Baseline

Valley Water's baseline includes existing water supplies, infrastructure, and programs, including the groundwater basins, reservoirs, imported water supplies, water rights, water use efficiency programs, and water utility infrastructure. The key steps to secure this baseline supply and Valley Water's progress are summarized below:

- Improve infrastructure reliability – Valley Water is evaluating the condition of its water treatment plants and distribution system and is rehabilitating aging or defective components. Improving local infrastructure is vital to ensuring reliability of both the water treatment and conveyance systems during emergencies.
- Expand groundwater management - Local groundwater basins supply nearly half of the water used annually in Santa Clara County and also provide emergency reserve for droughts or outages. Valley Water is considering development of Valley Water-owned groundwater extraction facilities to utilize this resource during emergencies -- particularly during outages of the treated water system -- and to maximize conjunctive use opportunities.
- Sustain existing supplies – Valley Water is protecting imported water supplies by resolving contract and policy issues, supporting Bay-Delta system improvements, resolving the San Luis Reservoir low-point problem, and supporting SFPUC efforts to implement a Capital Improvement Program to secure the long-term reliability of SFPUC supplies in the County. Valley Water is protecting local water supplies by maintaining local water rights and protecting the local groundwater basins.
- Reaffirm commitments to water conservation and recycling -Valley Water is investing in conservation and recycling, as demonstrated by its water conservation programs and investment into the Silicon Valley Advanced Water Purification Center.
- Continue to provide clean, safe drinking water – Valley Water has an aggressive source water protection program to meet and exceed water quality standards by conducting ongoing improvements to treatment facilities.

2. Implement the "No Regrets" Portfolio for Near-Term Reliability (Phase I)

IWRP 2003 identified a "No Regrets" investment portfolio to ensure reliability through about 2020. With these investments, potential shortages through about year 2020 are reduced to levels that can be managed through contingency planning and response, including spot market transfers or demand management measures. IWRP 2003 stakeholders endorsed the No Regrets portfolio, which calls for the following new near-term investments:

- 28,000 AF of additional annual savings from agricultural, and municipal and industrial conservation.
- 20,000 AF of additional groundwater recharge capacity.
- 60,000 AF of additional capacity in the Semitropic Water Bank.

3. Flexible Options for Long Term Planning

Critical steps to ensure long-term water supply reliability include monitoring for risks, new opportunities, and technology improvements, further investigating desalination feasibility and recycled water acceptance and marketability, exploring potential water management and water quality improvement alternatives, and maximizing external funding.

Valley Water finds that its water supply will reliably meet future countywide demands. Although this UWMP presents projections of future water supply by source, ongoing coordination with Valley Water will be necessary to ensure projections are consistent with Valley Water's long-term water management strategies. The City will continue to work with Valley Water to refine future water supply projections and ensure long-term planning efforts are consistent.

Valley Water is pursuing a purified water program to improve water supply reliability, consistent with the Water Supply Master Plan. The project is planned be an indirect portable reuse project of approximately 11,000 acre feet of water with an advanced purification facility in either San Jose, next to the Silicon Valley Water Advanced Purification Center, or in Palo Alto, to recharge water at the Los Gatos Ponds System. At the time of the writing of this UWMP, Valley Water is developing the project description including the notice of preparation, which will be the first formal notification of Valley Water's intent to proceed with the project.

7.2.3 Service Reliability – Constraints on Water Sources

To the extent practical, DWR requires retail suppliers to include information from their wholesale supplier about constraints on their water supply [Water Code section 10631 (b)(1)].

The amount of water available from SFPUC's RWS and Valley Water's Agreement No. A0657 for a Supply of Treated Water for the City is constrained by climate, hydrology, facilities, and the institutional parameters that allocate the water supply from the Tuolumne River. Climate change may affect the snow-pack storage and water availability in future.

The recent changes to instream flow requirements for SFPUC and wholesale customer demand projections have affected SFPUC's water supply planning. As a result, the SFPUC has established an Alternative Water Supply Planning program to evaluate several regional and local water supply options. Through this program, the SFPUC will conduct feasibility studies and develop an Alternative Water Supply Plan by July 2023 to support the continued development of water supplies to meet future needs.

Constraints on the SFPUC and Valley Water supplies were discussed in more detail in Chapters 3, 4, and 6. The main long-term constraints on supplies are due to climate change and regulatory changes. Key factors impacting water supply for both wholesalers include:

- Changes in precipitation patterns, such as time of snowfall or rain, intensity, and duration.
- Changes in water quality as a result of changes in precipitation patterns and storage.

The below-noted constraints potentially will affect SFPUC's Hetch-Hetchy watershed and management of the RWS water supply and its distribution.

- Fewer months of continuous below freezing (-32F) temperatures in the Sierra Nevada, resulting in less precipitation as snow, shorter duration for snowpack storage.
- Warmer temperatures leading to melt of the snowpack storage.
- Inadequate storage capacity to store the snowmelt water source.
- Regulatory changes affecting the SFPUC water supplies, such as implementation of the Bay Delta Plan Amendment that could reduce supply water for the SFPUC RWS by 60% in drought years.

The below-noted constraints potentially will affect Valley Water's treated surface water and groundwater supply.

- Groundwater availability
- Regulatory changes impacting the State Water Project supply availability

Potential Constraints on SFPUC's RWS Supply – Adoption of the 2018 Bay-Delta Plan Amendment

The State Water Board has stated that it intends to implement the Bay-Delta Plan Amendment on the Tuolumne River by the year 2022, assuming all required approvals are obtained by that time. But implementation of the Plan Amendment is uncertain for multiple reasons.

First, since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed in both state and federal courts, challenging the State Water Board's adoption of the Bay-Delta Plan Amendment, including a legal challenge filed by the federal government, at the request of the U.S. Department of Interior, Bureau of Reclamation. This litigation is in the early stages and there have been no dispositive court rulings as of this date.

Second, the Bay-Delta Plan Amendment is not self-implementing and does not automatically allocate responsibility for meeting its new flow requirements to the SFPUC or any other water rights holders. Rather, the Bay-Delta Plan Amendment merely provides a regulatory framework for flow allocation, which must be accomplished by other regulatory and/or adjudicatory proceedings, such as a comprehensive water rights adjudication or, in the case of the Tuolumne River, may be implemented through the water quality certification process set forth in section 401 of the Clean Water Act as part of the Federal Energy Regulatory Commission's licensing proceedings for the Don Pedro and La Grange hydroelectric projects. It is currently unclear when the license amendment process is expected to be completed. This process and the other regulatory and/or adjudicatory proceedings would likely face legal challenges and have lengthy timelines, and quite possibly could result in a different assignment of flow responsibility (and therefore a different water supply impact on the SFPUC).

Third, in recognition of the obstacles to implementation of the Bay-Delta Plan Amendment, the State Water Board Resolution No. 2018-0059 adopting the Bay-Delta Plan Amendment directed staff to help complete a "Delta watershed-wide agreement, including potential flow measures for the Tuolumne River" by March 1, 2019, and to incorporate such agreements as an "alternative" for a future amendment to the Bay-Delta Plan to be presented to the State Water Board "as early as possible after December 1, 2019." In accordance with the State Water Board's instruction, on March 1, 2019, SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary substitute agreement with the State Water Board ("March 1st Proposed Voluntary Agreement"). On March 26, 2019, the Commission adopted Resolution No. 19-0057 to support the SFPUC's participation in the Voluntary Agreement negotiation process. To date, those negotiations are ongoing under the California Natural Resources Agency and the leadership of the Newsom administration.[24]

Compared to the reliability projections that were provided by the SFPUC for BAWSCA agencies for the 2015 UWMP, for the 2020 UWMP, the biggest difference is in SFPUC's projected future deliveries to BAWSCA agencies as a result of SFPUC's assumptions about the implementation of the Bay Delta Plan. Given the uncertainty about the implementation of the Bay Delta Plan, in January and February 2021, the SFPUC provided BAWSCA agencies two contrasting scenarios to choose from for water reliability during single and multiple-year droughts.[25]

In their Table 3, "Basis of Water Supply Data, 2020 Infrastructure Conditions With Bay Delta Amendment", SFPUC shows the wholesale volume to BAWSCA that ranges, in a single dry year, from 157.5 mgd (approximately a 14 percent cutback from its Supply Assurance of 184 mgd) to reductions of 74.5 mgd (approximately a 60 percent cutback from its Supply Assurance of 184 mgd) in the third through fifth dry year.[26]

Scenario 1, with Bay Delta Plan, includes severe water cutbacks of 60% (from normal year total wholesale agency supply of 184 mgd), starting with the second year of a multi-year drought, if the Bay Delta Plan cutbacks are

[24] California Natural Resources Agency. Web page: Voluntary Agreements to Improve Habitat and Flow in the Delta and its Watersheds. https://files.resources.ca.gov/voluntary-agreements/

[25] SFPUC, letters to BAWSCA, SFPUC RWS Supply Reliability, January 22; and February 3, 2021.

[26] SFPUC, letter to BAWSCA, Danielle McPherson, January 22, 2021.

applied to SFPUC's water supply. Scenario 2, without the Bay Delta Plan, assumes water supply reductions of approximately 28 percent (from normal year total wholesale agency supply of 184 mgd), starting with the fourth year of a multi-year drought, if the Bay Delta Plan Amendment cutbacks are not applied to SFPUC's water supply. Using the two SFPUC assumptions, BAWSCA developed water shortage cutback allocations for each BAWSCA water agency. The drought allocation cutback calculations use actual historic and forecast water demands through 2045.

Regulatory changes, such as the Bay Delta Plan Amendment, can significantly impact the reliability of the City's water supply. Consequently, the City through BAWSCA is continuing to participate in discussions about the development of the Bay Delta Plan implementation. Additionally, the City is working collaboratively with BAWSCA and its agencies to identify regional mitigation measures during severe water shortages to improve reliability for regional and local water supplies and meet its customers' water needs.

SFPUC Alternative Water Supply Planning Program[27]

The SFPUC is increasing and accelerating its efforts to acquire additional water supplies and explore other projects that would increase overall water supply resilience through the Alternative Water Supply Planning Program. The drivers for the program include: (1) the adoption of the Bay-Delta Plan Amendment and the resulting potential limitations to RWS supply during dry years, (2) the net supply shortfall following the implementation of WSIP, (3) San Francisco's perpetual obligation to supply 184 mgd to the Wholesale Customers, (4) adopted Level of Service (LOS) Goals to limit rationing to no more than 20 percent system-wide during droughts, and (5) the potential need to identify water supplies that would be required to offer permanent status to interruptible customers. Developing additional supplies through this program would reduce water supply shortfalls and reduce rationing associated with such shortfalls. The planning priorities guiding the framework of the Alternative Water Supply Planning Program are as follows:

1. Offset instream flow needs and meet regulatory requirements
2. Meet existing obligations to existing permanent customers
3. Make interruptible customers permanent
4. Meet increased demands of existing and interruptible customers

In conjunction with these planning priorities, the SFPUC considers how the program fits within the LOS Goals and Objectives related to water supply and sustainability when considering new water supply opportunities. The key LOS Goals and Objectives relevant to this effort are as follows:

- Meet dry-year delivery needs while limiting rationing to a maximum of 20 percent system-wide reduction in water service during extended droughts.
- Diversify water supply options during non-drought and drought periods.
- Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers.
- Meet, at a minimum, all current and anticipated legal requirements for protection of fish and wildlife habitat.
- Maintain operational flexibility (although this LOS Goal was not intended explicitly for the addition of new supplies, it is applicate here).

In addition to the Daly City Recycled Water Expansion project[28], the SFPUC has taken action to fund the study of potential additional water supply projects. Capital projects under consideration to develop additional water

[27] Draft Common Language, SFPUC, February 3, 2021.

[28] While this potential project was identified in the 2015 UWMP, it has since been approved by Daly City following environmental review and has a higher likelihood of being implemented. Source: SFPUC, February 3, 2021.

supplies include surface water storage expansion, recycled water expansion, water transfers, desalination, and potable reuse.

The capital projects that are under consideration by SFPUC would be costly and are still in the early feasibility or conceptual planning stages. Because these water supply projects would take 10 to 30 years to implement, and because required environmental permitting negotiations may reduce the amount of water that can be developed, the yields from these projects are not currently incorporated into SFPUC's supply projections. SFPUC plans to pursue state and federal grants and other financing opportunities for eligible projects, to the extent feasible, to offset costs borne by ratepayers. The main regional projects include:

- Daly City Recycled Water Expansion (Regional, Normal- and Dry-Year Supply)
- ACWD-USD Purified Water Partnership (Regional, Normal- and Dry-Year Supply)
- Crystal Springs Purified Water (Regional, Normal- and Dry-Year Supply)
- Los Vaqueros Reservoir Expansion (Regional, Dry Year Supply)
- Bay Area Brackish Water Desalination (Regional, Normal- and Dry-Year Supply)
- Calaveras Reservoir Expansion (Regional, Dry Year Supply)
- Groundwater Banking (Regional, Dry-Year Supply) in the Modesto Irrigation District and Turlock Irrigation District service areas could be used to provide some additional water supply to meet instream releases in dry years reducing water supply impacts.
- Inter-Basin Collaborations (Regional, Dry-Year Supply) Establish a partnership between interests on the Tuolumne River and those on the Stanislaus River, which would allow responsibility for streamflow to be assigned variably based on the annual hydrology.

Details of these projects can be found in the SFPUC UWMP.

If all the projects identified through the current planning process can be implemented, there would still be a supply shortfall to meet projected needs. Furthermore, each of the supply options being considered may have its own inherent challenges and uncertainties that may affect the SFPUC's ability to implement it.

Given the limited availability of water supply alternatives - unless the supply risks are significantly reduced or BAWSCA service area needs change significantly - the SFPUC will continue to plan, develop and implement all project opportunities that can help bridge the anticipated water supply gaps during droughts. In 2019, the SFPUC completed a survey among water and wastewater agencies within the service area to identify additional opportunities for purified water. Such opportunities remain limited, but the SFPUC continues to pursue all possibilities.

SFPUC's Water System Improvement Program (WSIP) Dry Year Water Supply Projects

The WSIP authorized the SFPUC to undertake a number of water supply projects to meet dry-year demands with no greater than 20 percent system-wide rationing in any one year.

In order to achieve its target of meeting at least 80 percent of its customer demand during droughts with a system demand of 265 mgd, the SFPUC must successfully implement the dry-year water supply projects included in the WSIP.

Details of these projects can be found in the SFPUC UWMP.

Constraints on the Valley Water System

Valley Water Standard Text

Groundwater

Constraints on groundwater:

Valley Water manages the Santa Clara and Llagas subbasins for the benefit of its groundwater customers and the county at large. Since the 1930s, Valley Water's water supply strategy has been to maximize conjunctive use of surface water and groundwater supplies to enhance water supply reliability and avoid land subsidence. Local groundwater resources make up the foundation of the county's water supply, but they need to be augmented by Valley Water's comprehensive water management activities to reliably meet the needs of county residents, businesses, agriculture, and the environment. These activities include managed recharge of imported and local supplies and in-lieu groundwater recharge through the provision of treated surface water and raw water, acquisition of supplemental water supplies, and water conservation and recycling.

Groundwater supply is largely constrained by hydrologic variability and the estimated 548,000 AF of operational storage capacity within the subbasins. The inflows to the groundwater subbasins are constrained by Valley Water's managed aquifer recharge program and natural recharge. Valley Water has about 144,000 AFY of managed recharge capacity, including more than 90 miles of in-stream recharge and 102 off-stream recharge ponds. Maintaining Valley Water's managed recharge program requires ongoing operational planning for the distribution of local and imported water to recharge facilities; maintenance and operation of reservoirs, diversion facilities, distribution systems, and recharge ponds; and the maintenance of water supply contracts, water rights, and relevant environmental clearance. Valley Water's managed recharge program is critical to maintaining groundwater supply, because natural recharge is insufficient to meet groundwater demands. However, protecting natural recharge capacity is also important. Valley Water's District Act and Board policy help preserve open space that supports agriculture and natural recharge capacity.

- Groundwater quality can also be a constraint on groundwater supply. In general, the Santa Clara and Llagas Subbasins have high-quality groundwater, except for nitrate, which is elevated in some wells in the Coyote Valley and Llagas Subbasin from historic and ongoing sources including fertilizers, septic systems, and animal waste. However, nitrate concentrations are generally stable or declining and Valley Water has many programs to protect groundwater quality, including several targeted to improve nitrate in groundwater. Additional details about constraints on groundwater supply and quality and Valley Water's comprehensive groundwater management strategies are described in the 2016 Groundwater Management Plan https://www.valleywater.org/your-water/where-your-water-comes-from/groundwater/sustainable-groundwater-management.

The City's water quality may also be affected if SFPUC's sources of water change significantly. The City's current water quality is characterized in the Annual Water Quality Report and can be found online: https://www.ci.milpitas.ca.gov/_pdfs/2019-Water-Quality-Report.pdf. Specific expected changes will be identified when alternative water supplies are considered for implementation.

7.2.4 Year Type Characterization

Water Supply – All Year Types

The SFPUC historically has met demand in its service area in all year types from its watersheds, which consist of:

- Tuolumne River watershed
- Alameda Creek watershed
- San Mateo County watersheds.

In general, 85 percent of the SFPUC supply comes from the Tuolumne River through Hetch Hetchy Reservoir and the remaining 15 percent comes from the local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos and San Andreas Reservoirs. SFPUC's adopted WSIP retains this mix of water supply for all year types.

Details about the projected projects and mix of water supply from SFPUC's watersheds can be found in the 2020 SFPUC UWMP.

Types of Years

In its 2020 UWMP Guidebook, DWR uses the terms *normal* and *average* interchangeably when addressing the water year type. DWR requires, as part of the water service reliability assessment in the DRA, that water suppliers include three types of years with specific hydrologic conditions. These include:

Normal Year. Normal Year. This condition represents the normal/average water supplies from SFPUC for BAWSCA agencies, and Valley Water for its water contractors This condition represents the normal/average water supplies from SFPUC for BAWSCA agencies, 67,160 MG (184 mgd).

Single Dry Year. The single dry year represents the year with the lowest water supply available from SFPUC to the City. As can be seen in Tables 7-1a through 7-1e, with Bay Delta Plan for each of the base years from SFPUC for the City, the available water supply in a single-dry year.

Five-Consecutive-Year Drought. The five-consecutive year drought for the DRA is the driest five-year historical sequence for the water supply (Water Code Section 10612). For the water service reliability assessment, the City is using 2020 as its base year, because the City's demand volume is based on the actual 2020 purchases from

Valley Water Standard Text

The greatest challenge to Valley Water's water supply reliability is multiple dry years, such as those that occurred in 1988 through 1992 and in 2012 through 2016. The five dry-year period used in this analysis is 1988 to 1992, which was an extended drought within historic record and WEAP modeling period. The most recent 2012-2016 drought is more severe, but imported water allocations are not available from DWR DCR 2019 for the analysis. The analysis indicates that with existing and planned projects' supplies, Valley Water's diverse water supplies are sufficient to meet demands throughout the full five-year drought in all demand years without having to call for short-term water use reductions.

SFPUC and Valley Water. As recommended by DWR, the City uses the same five-year sequence (2021–2025) for its water service reliability assessment. Note that the SFPUC derived the five-year consecutive drought based on the driest five-year sequence in the hydrologic record. This supply condition is a requirement of Water Code Section 10612. The SFPUC has provided information about the likelihood of this severe condition in their 2020 UWMP.

Submittal Tables

DWR requests that suppliers provide their supply reliability for a normal year, a single dry year, and multiple (five) consecutive dry years. The City has reported this information in Table 7-1.

The reduction measures for all levels of the City's WSCP are discussed in the WSCP provide in Appendix I.

Table 7-1a. Basis of Water Year Data (SFPUC 2020 Base Year with Bay-Delta Plan)

Submittal Table 7-1a Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2020 Base Year with Bay-Delta Plan			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available MGY	**% of Average Supply**
Average Year	2020	2162	100%
Single-Dry Year	2021	2148	
Consecutive Dry Years 1st Year	2021	2148	
Consecutive Dry Years 2nd Year	2022	1950	
Consecutive Dry Years 3rd Year	2023	1034	
Consecutive Dry Years 4th Year	2024	1034	
Consecutive Dry Years 5th Year	2025	1034	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation, dated April 1, 2021, Table F2 Individual Agency Drought Allocations, base year 2020, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045.			

Table 7-1b. Basis of Water Year Data (SFPUC 2025 Base Year with Bay-Delta Plan)

Submittal Table 7-1b Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2025 Base Year with Bay-Delta Plan			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available MGY	**% of Average Supply**
Average Year	2025	2407	100%
Single-Dry Year	2026	1538	
Consecutive Dry Years 1st Year	2026	1538	
Consecutive Dry Years 2nd Year	2027	1319	
Consecutive Dry Years 3rd Year	2028	1319	
Consecutive Dry Years 4th Year	2029	1319	
Consecutive Dry Years 5th Year	2030	1319	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation, dated April 1, 2021, Table G2 Individual Agency Drought Allocations, base year 2025, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045.			

Table 7-1c. Basis of Water Year Data (SFPUC 2030 Base Year with Bay-Delta Plan)

Submittal Table 7-1c Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2030 Base Year with Bay-Delta Plan			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available MGY	**% of Average Supply**
Average Year	2030	2465	100%
Single-Dry Year	2031	1571	
Consecutive Dry Years 1st Year	2031	1571	
Consecutive Dry Years 2nd Year	2032	1348	
Consecutive Dry Years 3rd Year	2033	1348	
Consecutive Dry Years 4th Year	2034	1348	
Consecutive Dry Years 5th Year	2035	1348	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation, dated April 1, 2021, Table H2 Individual Agency Drought Allocations, base year 2030, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045.			

Table 7-1d. Basis of Water Year Data (SFPUC 2035 Base Year with Bay-Delta Plan)

Submittal Table 7-1d Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2035 Base Year with Bay-Delta Plan			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available MGY	**% of Average Supply**
Average Year	2035	2568	100%
Single-Dry Year	2036	1633	
Consecutive Dry Years 1st Year	2036	1633	
Consecutive Dry Years 2nd Year	2037	1399	
Consecutive Dry Years 3rd Year	2038	1399	
Consecutive Dry Years 4th Year	2039	1399	
Consecutive Dry Years 5th Year	2040	1282	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation, dated April 1, 2021, Table I2 Individual Agency Drought Allocations, base year 2035, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045.			

Table 7-1e. Basis of Water Year Data (SFPUC 2040 Base Year with Bay-Delta Plan)

Submittal Table 7-1e Retail: Basis of Water Year Data (Reliability Assessment) - SFPUC 2040 Base Year with Bay-Delta Plan			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available MGY	**% of Average Supply**
Average Year	2040	2655	100%
Single-Dry Year	2041	1687	
Consecutive Dry Years 1st Year	2041	1687	
Consecutive Dry Years 2nd Year	2042	1446	
Consecutive Dry Years 3rd Year	2043	1446	
Consecutive Dry Years 4th Year	2044	1275	
Consecutive Dry Years 5th Year	2045	1275	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: There is no historical basis for supply availability since the future supplies are not based on historical water years. Based on SFPUC Drought Allocation, dated April 1, 2021, Table J2 Individual Agency Drought Allocations, base year 2040, with Bay Delta Plan, which present supplies by projected years in five-year increments for single and multiple dry years. Average year based on SFPUC Drought Allocations Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2024, 2035, 2040, and 2045.			

Valley Water has historically met demand in its service in all year types from its watersheds except for the recent drought in 2017 where they had a 20% cutback.

Table 7-1f. Basis of Water Year Data (Valley Water)

Submittal Table 7-1f Retail: Basis of Water Year Data (Reliability Assessment) - Valley Water			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	1922-2015		100%
Single-Dry Year	1977		100%
Consecutive Dry Years 1st Year	1987		100%
Consecutive Dry Years 2nd Year	1988		100%
Consecutive Dry Years 3rd Year	1989		80%
Consecutive Dry Years 4th Year	1990		80%
Consecutive Dry Years 5th Year	2017		80%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: Source per Valley Water Draft 2020 UWMP March 29, 2021 Chapter 7. Based on historic cutbacks and Valley Water's 2019 Supply Master Plan, the City would expect 20% cutbacks from Valley Water supplies in dry years 3, 4, and 5.			

Table 7-1g. Basis of Water Year Data (Recycled Water)

Submittal Table 7-1g Retail: Basis of Water Year Data (Reliability Assessment) - Recycled Water			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2020		100%
Single-Dry Year	2020		100%
Consecutive Dry Years 1st Year	2020		100%
Consecutive Dry Years 2nd Year	2020		100%
Consecutive Dry Years 3rd Year	2020		100%
Consecutive Dry Years 4th Year	2020		100%
Consecutive Dry Years 5th Year	2020		100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: Recycled water supplies in any dry year align with 2020 supplies.			

Table 7-1g. Basis of Water Year Data (Recycled Water)

Submittal Table 7-1g Retail: Basis of Water Year Data (Reliability Assessment) - Recycled Water			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2020		100%
Single-Dry Year	2020		100%
Consecutive Dry Years 1st Year	2020		100%
Consecutive Dry Years 2nd Year	2020		100%
Consecutive Dry Years 3rd Year	2020		100%
Consecutive Dry Years 4th Year	2020		100%
Consecutive Dry Years 5th Year	2020		100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: Recycled water supplies in any dry year align with 2020 supplies.			

Table 7-1f. Basis of Water Year Data (Groundwater)

Submittal Table 7-1f Retail: Basis of Water Year Data (Reliability Assessment) - Groundwater			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP.
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year	2030	0	100%
Single-Dry Year	2030	1314	
Consecutive Dry Years 1st Year	2030	1314	
Consecutive Dry Years 2nd Year	2031	1314	
Consecutive Dry Years 3rd Year	2032	1314	
Consecutive Dry Years 4th Year	2033	1314	
Consecutive Dry Years 5th Year	2034	1314	
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES: One or more groundwater wells pumping at 1.2 mgd will be developed for use in all dry year types only as supply augmentation to reduce shortfall. Possibly 4 wells by year 2035. Volume to be developed based on shortfall magnitude. Assume 3 emergency wells will be converted to dry year supply wells by 2030. This assumes a drought year aquifer will produce sustainable yields.			

7.2.5 Water Service Reliability

Every urban water supplier is required to include an assessment of its water service reliability to its customers through at least 2040, in five-year increments, during normal, dry, and multiple dry water years [Water Code Section 10635(a)].

Reliability of the SFPUC Regional Water System

Since the City purchases over 60% of its water from the SFPUC, it is highly dependent on the SFPUC RWS infrastructure reliability. The SFPUC's nearly completed Water System Improvement Program (WSIP) provides improvements in reliability for water delivery and supply through the SFPUC RWS. The SFPUC's 2020 Capital Improvement Program (CIP) includes various projects to enhance reliability of the SFPUC RWS.29

In addition to SFPUC's infrastructure reliability for the RWS, the imported water available to SFPUC's retail and wholesale customers is constrained by climate, geology, hydrology, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir and snow-pack storage to manage its water supplies. A summary of SFPUC's vulnerability assessment related to climate change is included in Section 6.2.10.1.

[29] SFPUC 2020 Capital Improvement Plan, adopted February 11, 2020. San Francisco Public Utilities Commission : 2020 Agendas-Minutes

In 2008, the SFPUC adopted Level of Service (LOS) Goals and Objectives in conjunction with the adoption of WSIP. The SFPUC updated the LOS Goals and Objectives in February 2020.30

The SFPUC's LOS Goals and Objectives related to water supply are:

Program Goal	System Performance Objective
Water Supply – *meet customer water needs in non-drought and drought periods*	▪ Meet all state and federal regulations to support the proper operation of the water system and related power facilities. ▪ Meet average annual water demand for the regional system of 265 mgd and for wholesale suppliers (BAWSCA agencies) of 184 mgd from the SFPUC watersheds for customers during non–drought years for system demands consistent with the 2009 Water Supply Agreement. ▪ Meet dry-year delivery needs while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts. ▪ Diversify water supply options during non-drought and drought periods. ▪ Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers.

These performance objectives serve as the basis for water supply planning by SFPUC for the RWS.

In planning for water service reliability during droughts, BAWSCA worked with SFPUC to develop a two Tier, Tier One and Tier Two drought allocation plan. The two Tiers are discussed below.

SFPUC's Tier One Plan for drought allocations

SFPUC's "Tier One Plan" applies only to water shortages less than 20 percent and when the SFPUC determines that a system-wide water shortage exists, and a declaration of a water shortage emergency is issued under California Water Code Section 350. Separate from a declaration of a water shortage emergency, the SFPUC may opt to request voluntary cutbacks from its Retail and Wholesale Customers to achieve necessary water use reductions during drought periods. The SFPUC's Tier One Plan allows for voluntary transfers of shortage allocations between the SFPUC and any Wholesale Customer as well as between Wholesale Customers themselves. In addition, water "banked" by a Wholesale Customer, through reductions in usage greater than required, may also be transferred.

As amended in 2018, the Tier One Plan requires SFPUC's Retail Customers to conserve a minimum of 5 percent during droughts. If SFPUC's Retail Customer demands are lower than the Retail Customer allocation (resulting in a "positive allocation" to Retail[31]) then the excess percentage would be re-allocated to the Wholesale Customers' share. The additional water conserved by SFPUC Retail Customers up to the minimum 5 percent level is deemed to remain in storage for allocation in future successive dry years.

BAWSCA's Tier Two Drought Allocations

BAWSCA agencies have negotiated and adopted the Tier Two Plan that applies only to water shortages less than 20 percent. Once SFPUC identifies a Tier One shortage, then BAWSCA allocates the collective Wholesale Customer share from the available SFPUC Tier One Plan supply among each of the 26 Wholesale Customers for drought shortages. These Tier Two allocations are based on a formula which takes into account multiple factors for each Wholesale Customer including the following:

[30] Reliability of the Regional Water System, SFPUC, February 3, 2021.

[31] See Water Supply Agreement, Water Shortage Allocation Plan (Attachment H), Section 2.1.

- Individual Supply Guarantee (ISG; the City's ISG is 9.232 mgd or 3,370[32] MG/year)
- Seasonal use of all available water supplies
- Residential per capita use

The water made available to the Wholesale Customers collectively is allocated among them in proportion to each Wholesale Customer's Allocation Basis, expressed in millions of gallons per day (mgd), which in turn is the weighted average of two components. The first component is the Wholesale Customer's Individual Supply Guarantee, as stated in the Water Supply Agreement (WSA), and is fixed. The second component, the Base/Seasonal Component, is variable and is calculated using the monthly water use for three consecutive years prior to the onset of the drought for each of the Wholesale Customers for all available water supplies. The second component is accorded twice the weight of the first, fixed component in calculating the Allocation Basis. Minor adjustments to the Allocation Basis are then made to ensure a minimum cutback level, a maximum cutback level, and a sufficient supply for certain Wholesale Customers.

The Allocation Basis is used in a fraction, as numerator, over the sum of all Wholesale Customers' Allocation Bases to determine each wholesale customer's Allocation Factor. The final shortage allocation for each Wholesale Customer is determined by multiplying the amount of water available to the Wholesale Customers' collectively under the Tier One Plan, by the Wholesale Customer's Allocation Factor.

The Tier Two Plan requires that the Allocation Factors be calculated by BAWSCA each year in preparation for a potential water shortage emergency. As the Wholesale Customers change their water use characteristics (e.g., increases or decreases in SFPUC purchases and use of other water sources, changes in monthly water use patterns, or changes in residential per capita water use), the Allocation Factor for each Wholesale Customer will also change. However, for long-term planning purposes, each Wholesale Customer shall use as its Allocation Factor, the value identified in the Tier Two Plan when adopted for water shortages that are up to 20 percent. The Tier Two Plan, which initially expired in 2018, has been extended by the BAWSCA Board of Directors every year since for one additional calendar year. In November 2020, the BAWSCA Board voted to extend the Tier Two Plan through the end of 2021.

Additional BAWSCA Efforts to Facilitate Water Supply Reliability

BAWSCA, on behalf of its member agencies, facilitates local projects that augment water supply reliability. BAWSCA's key water management objective is to ensure that a reliable, high quality supply of water is available where and when people within the BAWSCA service area need it. A reliable supply of water is required to support the health, safety, employment, and economic opportunities of the existing and expected future residents in the BAWSCA service area and to supply water to the agencies, businesses, and organizations that serve those communities.

In 2018, BAWSCA began working with SFPUC to amend the 2009 Water Supply Agreement (WSA) between SFPUC and BAWSCA's member agencies. One amendment to the 2009 WSA requires the SFPUC to formally engage with BAWSCA during the SFPUC's development of its 10-year CIP. This element will enhance the CIP development and focus attention on facilities that continue to improve reliability of the SFPUC RWS. An updated and restated WSA (also termed the 2019 WSA) was executed by the SFPUC and BAWSCA's member agencies in August 2019.[33]

In June 2020, BAWSCA completed its Demand Study that presents updated information about the BAWSCA service area demands and demand management as part of its strategy for a long-term reliable supply. The Demand Study identifies demand management measures for the commercial, irrigation, and residential sectors, and system water loss management.

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[32] The City of Milpitas's ISG value is rounded from 9.232 million gallons per day.

[33] BAWSCA Capital Improvement Planning Comparison Study, September 2019, page 1. http://bawsca.org/uploads/userfiles/files/CIP%20Comparison%20Study%20_09-2019_V_Final_9_10_19.pdf

BAWSCA Updated 2020 UWMP Drought Cutbacks based on SFPUC January 2021 Water Supply Reliability

As discussed in earlier chapters, BAWSCA's role in representing the interests of its 26 member agencies. is to work with SFPUC to ensure that the SFPUC meets its contractual obligations to maintain its infrastructure and provide a reliable, high quality, potable water supply at a fair price.

The updated drought cutback allocations that BAWSCA developed for the 2020 UWMPs are based on SFPUC's Scenario 1 and Scenario 2 (see Appendix L). BAWSCA's drought allocation cutback calculations use the SFPUC Regional Water System supply reliability models under extreme hydrologic conditions and on actual historic supply.

Note that the SFPUC derived the five-year consecutive drought based on the driest five-year sequence in the hydrologic record. This supply condition is a requirement of Water Code Section 10612. SFPUC has provided information about the likelihood of this severe condition in the SFPUC 2020 UWMP.[34]

Individual Supply Guarantee

San Francisco has a perpetual commitment (Supply Assurance) to deliver 184 mgd to its 24 permanent Wholesale Customers collectively. San Jose and Santa Clara are not included in the Supply Assurance commitment and each has temporary and interruptible water supply contracts with San Francisco. The Supply Assurance is allocated among the 24 permanent Wholesale Customers through Individual Supply Guarantees (ISG), which represent each Wholesale Customer's allocation of the 184 mgd Supply Assurance.

The City of Milpitas's ISG is 9.232 mgd

The City's ISG is of critical importance to its current and future customers for long-term vitality of its community, economy, and security.

SFPUC's Water Supply Reliability Evaluation[35]

In general, 85 percent of the Regional Water System (RWS) supply comes from the Tuolumne River through Hetch Hetchy Reservoir and the remaining 15 percent comes from the local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos and San Andreas Reservoirs. The adopted Water System Improvement Program (WSIP) retains this mix of water supply for all year types.

To evaluate its supply reliability, SFPUC closely monitors the hydrologic conditions impacting its watersheds in the Sierras and the San Francisco Bay Area. Based on hydrologic conditions, SFPUC routinely provides updates about its water supply that may impact water supply for BAWSCA agencies. Annual weather trends and long-term impacts from a changing climate are part of SFPUC's on-going analyses and are included in long-term planning for a reliable RWS water supply.

Unlike previous SFPUC water supply reliability forecasts that were mostly based on hydrologic conditions and projects that impacted infrastructure, in January 2021 SFPUC provided BAWSCA with two forecasts (Scenario 1 and Scenario 2) for the reliability of its water supply. The 2021 SFPUC water supply reliability evaluation incorporates potential extreme impacts to its RWS supply from regulatory changes due to the Bay Delta Plan Amendment (Bay Delta Plan) as well as a reference comparison with the current supply regime.[36] The Bay Delta

[34] SFPUC, April 2021, Likelihood of a five-year drought sequence as provided in their UWMP.

[35] 2020 UWMP SFPUC Common Language, February 3, 2021.

[36] Bay Delta Plan Update: Amendments and Substitute Environmental Document (SED) for lower San Joaquin River and Southern Delta– Adoption and approval of plan amendments and final SED. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/2018_sed/

Plan Amendment requires the release of 30-50% of the "unimpaired flow"[37] on the three tributaries from February through June in every year type. In SFPUC modeling of the new flow standard, it is assumed that the required release is 40% of unimpaired flow. As a result, the SFPUC has established an Alternative Water Supply Planning program to evaluate several regional and local water supply options. Through this program, the SFPUC will conduct feasibility studies and develop an Alternative Water Supply Plan by July 2023 to support the continued development of water supplies to meet future needs.

The State Water Board has stated that it intends to implement the Bay Delta Plan on the Tuolumne River by the year 2022, assuming all required approvals are obtained by that time. In its guidance for 2020 UWMPs, SFPUC assumes the impacts of the Bay Delta Plan will start in 2023, and during drought years after 2023, will reduce its supplies significantly. But implementation of the Bay Delta Plan is uncertain for multiple reasons that are presented in Section 7.2.1, Service Reliability – Constraints on Water Sources.

The SFPUC historically has met demand in its service area in all year types from its watersheds. For the 2020 UWMPs, SFPUC provided BAWSCA with two scenarios for water supply reliability forecasts. SFPUC's Scenario 1 presents water supply conditions with "The Bay Delta Plan" Amendment that requires drought cutbacks for BAWSCA agencies of more than 50 percent. SFPUC's Scenario 2 is "Without the Bay Delta Plan" and requires cutbacks to BAWSCA agencies of less than 20 percent.

For the 2020 UWMPs agencies are required to develop a Drought Risk Assessment (DRA) that assumes a single year and multiple years of drought, starting with 2021 through 2025. SFPUC provided tables with its forecast for Scenario 1 and 2 that provide specific water supply data to address the DRA. SFPUC's 2021 forecasts include drastic water supply cutbacks during droughts for BAWSCA wholesale agencies, as discussed in Section 7.2.1.

For prior drought planning for SFPUC wholesale water shortages of less than 20 percent, SFPUC and BAWSCA have developed the Water Shortage Allocation Plan (WSAP) to allocate shortages between the SFPUC and the Wholesale Customers collectively. In the two-tier drought allocation plan, Tier One applies to SFPUC and Tier Two applies to BAWSCA. They are explained in Section 7.2.3, Water Service Reliability.

However, the BAWSCA Tier two plan was not intended for shortages of more than 20 percent. Therefore, for the shortage scenarios and assumptions in SFPUC's Scenario 1 "with Bay Delta Plan Amendment" that reduce water use in dry years by almost 60 percent for its wholesale customers, BAWSCA developed an alternate drought cutback formula.[38] BAWSCA's alternate drought cutback formula method is used for the City's 2020 UWMP is explained in Section 7.2.3, Water Service Reliability.

Information Sources for Projected SFPUC RWS and Wholesale Purchases

SFPUC supply provides its projected supply availability and reliability based on hydrologic conditions and modeling, and regulatory and infrastructure constraints. wholesale supply allocations are based on projected BAWSCA wholesale purchases provided by BAWSCA member agencies. Active conservation by BAWSCA agencies is treated as a source of supply by BAWSCA, therefore projected wholesale purchases are after passive and active conservation.

Following the completion of BAWSCA's Demand Study in June 2020,[39] BAWSCA used the results to develop a table for each member agency listing possible supplies and total demand for 2025, 2030, 2035, 2040, and 2045. BAWSCA populated the tables with total water demand after passive conservation and entered active

[37] "Unimpaired flow represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds." (Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Dec. 12, 2018) p.17, fn. 14, available at https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.)

[38] BAWSCA Attachment B: Updated 2020 UWMP Drought Cutbacks, BAWSCA, March 1, 2021.

[39] BAWSCA Demand Study, June 2020.

conservation, as calculated in each agency's DSS Model. The BAWSCA 2020 Demand Study was completed prior to ABAG publishing the final RHNA numbers and therefore was not included in the DSS Model.

Each year agencies are offered the opportunity to review and, if needed, revise their purchase forecasts in January. BAWSCA Agencies have provided BAWSCA with similar updates to projected purchases annually for the past 10 years. On January 15, 2021, BAWSCA transmitted agency purchase requests for SFPUC's use in their 2020 UWMP. This annual reporting is part of the SFPUC's wholesale rate setting process.

In the City's 2015 UWMP, the wholesale supply forecasts from SFPUC used the established Tier 1 drought allocation formula of up to 20 percent cutbacks. However, as explained above, a new drought cutback allocation method had to be developed by BAWSCA for the 2020 UWMPs in response to SFPUC's proposed wholesale customer cutbacks of up to 60 percent from normal supply during dry years.

For 2020 UWMPs, BAWSCA developed a new method to allocate SFPUC's wholesale available supply during dry years. BAWSCA's method results in an equal percent reduction shared across all wholesale customers when average wholesale customers' RWS shortages are 10 percent or less or greater than 20 percent.[40] This allocation method is intended to serve the purposes of the 2020 UWMP supply reliability analysis. It does not imply an agreement by BAWSCA member agencies as to the exact allocation methodology. BAWSCA member agencies are in discussions about jointly developing an allocation method that would consider additional multiple equity factors in the event that SFPUC is not able to deliver its contractual supply volume, and its cutbacks on RWS exceed 20 percent.

Key Findings of the Water Service Reliability Analysis

BAWSCA/SFPUC Reliability

The results of the current water reliability assessment affect the City's short- and long-term water management decisions. The City is working with BAWSCA and its member agencies to identify regional mitigation measures to improve reliability for regional and local water supplies and meet its customers' water needs.

However, implementation of feasible projects developed under the SFPUC's Alternative Water Supply Planning Program (discussed in Chapter 6 and the 2020 SFPUC UWMP) is not yet reflected in the supply reliability scenarios and may reduce the cutback allocations.

If conditions for large drought cutbacks to BAWSCA wholesale agencies persist, such as those presented by SFPUC in Scenario 1, the City will need to implement additional demand management practices to invoke strict restrictions on potable water use, and obtain funding to accelerate developing alternate supplies of water.

Due to the continued uncertainty for the SFPUC water supply during droughts and impacts from the implementation of the Bay Delta Plan on its water supply reliability, in its 2020 UWMP, the City presents information for water supply reliability using SFPUC Scenario 1, with the Bay Delta Plan.

SFPUC is continuing negotiations with the California State Water Board on implementation of the Bay Delta Plan for water supply cutbacks, particularly during droughts. SFPUC is developing a collaborative approach to protect the environment and plan for a reliable and high-quality future potable water supply. This is a dynamic situation and drought cutback allocations may need to be revised before the City's 2025 UWMP.

With this uncertainty, the City could update its DRA (see Section 7.3) prior to the 2025 UWMP update if significant new information becomes available. The Water Code Section 10635(b) permits urban water suppliers to conduct an interim update or updates to their DRA within the five-year cycle of its UWMP update. The City anticipates that by the 2025 UWMP update, SFPUC will provide more specific information about the Alternative Water Supply Planning Program, with estimated water supply contributions from such projects. Additionally, the

[40] BAWSCA. (2021). BAWSCA Common Language, March 1, 2021, Attachment B, page 8.

City expects that SFPUC will provide more specific information and a refined estimate of the Bay Delta Plan impacts to the SFPUC supply.

The City recommends that users of its 2020 UWMP contact City staff for potential updates about the City's water supply reliability and the Drought Risk Assessment (DRA) before using the 2020 UWMP drought cutback projections for their planning projects and referencing the drought allocations.

Valley Water's Water Supply Reliability Evaluation

Valley Water Standard Text

Demand and Supply Assessment

Valley Water maintains diverse water supply sources to meet countywide demands. Major sources of supply for Valley Water include natural groundwater recharge, local surface water, imported water from the State and Federal projects, and recycled and purified water. Below is a summary of the constraints to Valley Water's water supply sources.

Imported water – Valley Water's SWP and CVP water supplies are subject to hydrologic variability and a number of additional constraints including regulatory constraints, seismic threats to the Delta levee system, sea level rise, climate change, and water quality variations.

Groundwater – The groundwater supply is largely constrained by hydrologic variability and the estimated operational storage capacity within the subbasins. The inflows to the groundwater subbasins are constrained by Valley Water's managed aquifer recharge program and natural recharge. Groundwater quality can also be a constraint on groundwater supply.

Local surface water – Local surface water supplies are vulnerable to hydrologic variability and constrained by environmental regulations and permit requirements. Climate change may cause decreases in the ability to utilize local surface water supplies.

Recycled and Purified Water – The constraints on future recycled water deliveries include infrastructure capacity and the availability of recycled water. Some of the potential constraints on the development of potable reuse include reverse osmosis concentrate disposal, public acceptance, permitting, hydrogeologic conditions, wastewater availability from other agencies (Valley Water is not a wastewater agency), and cost.

Water Service Reliability

Valley Water's water service reliability was assessed by comparing supplies and demands under three hydrologic conditions – an average year, a single dry year, and five consecutive dry years. Valley Water uses the Water Evaluation and Planning (WEAP) model to evaluate water supply reliability under these conditions. Developed by the Stockholm Environment Institute, WEAP is a deterministic, integrated water resources management model that uses water demand and supply information and accounts for multiple and competing uses and priorities. Valley Water uses the WEAP model as a tool to support its long-term water supply planning. The WEAP model simulates Valley Water's water supply system comprised of facilities to recharge the county's groundwater subbasins, operation of reservoirs and creeks, treatment and distribution facilities, and raw water conveyance facilities. The model also accounts for non-Valley Water sources and distribution, such as supplies from the SFPUC, non-potable recycled water, and local water developed by other agencies, such as the San Jose Water Company. In essence, the model was formulated to simulate the management of the current and future water resources within the county.

Valley Water Standard Text (cont.)

Valley Water's WEAP water supply planning model operates on a monthly time-step that simulates the water supply and demand over 94 years, using the historic hydrologic sequence of 1922 through 2015. The model tracks water resources throughout the county and delivery of water to meet demands according to availability and priority. Average water supply reliability for average year, a single dry year, and five consecutive dry year sequence was based on the model results of the corresponding years in the 94-year model period.

Average Year Supply Reliability

Valley Water uses the average annual supply over the 94 modeled years to represent the average year condition. Under average conditions, Valley Water's projected water supplies exceed projected demand through 2045 in all demand years

Single Dry Year Supply Reliability

The single driest year in the 94 model years occurred in 1977, based on the historic hydrological record. Supplies appear to be sufficient to meet demands during a single dry year through 2045. This assumes that reserves are at healthy levels at the beginning of the year and that the projects and programs identified in the Valley Water's Water Supply Master Plan 2040 (WSMP) are implemented. Supplies available for this single year drought represent water needed not only for that single drought year, but also water that may be needed for a prolonged drought. Valley Water would manage the supplies reported in the table assuming the drought may continue beyond a single year, and thus not all supplies are expected to be used by retailers during the single year drought.

Multiple Dry Year Supply Reliability

The greatest challenge to Valley Water's water supply reliability is multiple dry years, such as those that occurred in 1988 through 1992 and in 2012 through 2016. The five dry-year period used in this analysis is 1988 to 1992, which was an extended drought within historic record and WEAP modeling period. The most recent 2012-2016 drought is more severe but imported water allocations are not available from DWR DCR 2019 for the analysis. The analysis indicates that with existing and planned projects' supplies, Valley Water's diverse water supplies are sufficient to meet demands throughout the full five-year drought in all demand years without having to call for short-term water use reductions.

Valley Water's basic water supply strategy to compensate for supply variability is to store excess wet year supplies in the groundwater basin, local reservoirs, San Luis Reservoir, and/or Semitropic Groundwater Bank, and draw on these reserve supplies during dry years to help meet demands. These reserves, along with existing and planned future projects in the WSMP, help Valley Water meet demands during a prolonged drought. Valley Water's Board updated its long-term water supply reliability level of service goal in January 2019. The goal is to develop supplies to meet 100% of annual water demand during non-drought years and at least 80% of annual water demand in drought years. Future projects and programs recommended in the WSMP, including additional long-term water conservation savings, water reuse, recharge capacity, storm water capture and reuse, and banking and storage, were developed in accordance with this policy to minimize the need to call for water use reductions greater than 20%.

City of Milpitas Service Reliability

The City's water service reliability assessment is based on historic and current information about water use in its service area, SFPUC's RWS water sources and SFPUC's water supply reliability and Valley Water Sources and

Valley Water's water supply reliability. In its assessment, the City also includes impacts from climate change projections.

The City's Tables 7-2, 7-3, and 7-4 summarize the water supply reliability for a normal (average) year, a single dry year, and five- consecutive dry years, respectively, for 2025, 2030, 2035, 2040, and 2045.

Summary information and location of details is also included with the tables (notes).

In its reliability assessment, the City considers:

- The potential for acquiring supplemental water supplies.
- The potential for increased demands due to increased irrigation use due to low rainfall.
- Expected demand reduction due to increased implementation of demand management measures.
- Implementation of its updated 2020 WSCP with six shortage levels.
- Savings from local ordinances and standards.
- Increased drought messaging.

In Section 7.2.4, Description of Management Tools and Options, the City discusses potential management actions that it may take in response to the SFPUC shortages in the City's Tables 7-5a and 7-5b. These two tables show projected shortages of SFPUC supply compared with the City's projected demand.

DWR's Optional Planning Tool

DWR provided an optional Planning Tool Worksheet for 2020 UWMP preparation. DWR's optional Planning Tool was introduced earlier in Chapter 4.

The City is not using the Planning Tool, instead the City is using information from SFPUC, BAWSCA, and its demand projections from the 2020 DSS Model, and January 2021 updates. The City's planning for drought cutbacks includes historical, current, and forecasts about water use, water sector growth, population, jobs, and conservation.

Water Service Reliability – Normal Year

In Table 7-2, DWR requests suppliers to provide their normal year supply and demand for comparison, in five-year increments through at least 2040. The normal year supply for BAWSCA agencies is 100 percent of SFPUC's Supply Agreement, that is 184 mgd. Therefore, in Table 7-2, under the City's normal supply is 100 percent of its ISG, that is 9.232 mgd. SFPUC normal year supply will meet the City's projected demands for 2025, 2030, 2035, 240, and 2045.

Table 7-2. Normal Year Supply and Demand Comparison

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	4,325	4,475	4,626	4,776	4,917
Demand totals *(autofill from Table 4-3)*	4,325	4,475	4,626	4,776	4,917
Difference	0	0	0	0	0

Water Service Reliability – Single Dry Year

In Table 7-3, DWR requests suppliers to provide their single dry year supply and demand for comparison, in five-year increments through at least 2040.

In Table 7-3, the City includes its supply reliability using SFPUC scenarios, with Bay Delta Plan for a single dry year through 2045. The City is using SFPUC Regional Water Supply Reliability, dated April 1, 2021 Updated Drought Allocations Based on SFPUC April 1, 2021 Letter, Tables G-2, H-2, I-2, J-2, and K-2 for 1st dry year allocation with Bay Delta Plan.

As can be seen in Table 7-3, with Bay Delta Plan, for a single dry year Supply and Demand Comparison, the City will experience significant water supply cutbacks, with the SFPUC supply. These SFPUC supply shortfalls will invoke the City's WSCP. The City will have to work closely with its customers. WSCP measures discussed in Section 7.2.5. The reduction measures for all levels of the City's WSCP are discussed in the WSCP in Appendix I.

The City submitted Table 7-3, with Bay Delta Plan, in the WUE portal to comply with the 2020 UWMP requirements and to be consistent with its supplier, SFPUC.

Table 7-3. Single Dry Year Supply and Demand Comparison, with Bay Delta Plan

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	3,460	4,475	4,626	4,776	4,917
Demand totals*	4,325	4,475	4,626	4,776	4,917
Difference	(865)	0	0	0	0

NOTES:
1. Supply by year based on specific SFPUC supply with Bay Delta Plan and no cutbacks on Valley Water, recycled water and additional conservation supplies per Table 6-9.
2. Valley Water has not had any cutbacks in a single dry year, therefore no cutbacks in Valley Water supplies.
3. SFPUC supply source: Regional Water Supply Reliability dated April 1, 2021 Updated Drought Allocations Based on SFPUC April 1, 2021 Letter tables G-2, H-2, I-2, J-2, and K-2 1st dry year allocations. Milpitas's water supply from SFPUC is cutback in all year projections for a single dry year drought.
4. One or more groundwater wells pumping at 1.2 mgd will be developed for use in all dry year types as supply augmentation to reduce shortfall. Assume 3 wells online by 2030 and 4 wells by 2035. Assume groundwater well supplies will only be used as needed to offset shortfall.
5. Under shortfall conditions, it is assumed that water use reductions will be achieved by dry water year 2 and thereafter, and NOT in a single dry year. This is outlined in the WSCP and Table 8-2.

Water Service Reliability – Five Consecutive Dry Years

In Table 7-4, DWR requests suppliers to provide their multiple dry years supply and demand comparison multi-dry year (five) consecutive supply and demand for comparison, from 2025 through at least 2040.

In Table 7-4, the City includes its supply reliability using SFPUC scenarios with Bay Delta Plan for five multiple dry years (starting in 2025, 2030, 2035, 2040, and 2045). The City is using SFPUC Regional Water Supply Reliability, dated April 1, 2021 Updated Drought Allocations Based on SFPUC April 1, 2021 Letter, Tables G-2, H-2, I-2, J-2, and K-2 for 1st, 2nd, 3rd, 4th, and 5th dry year allocations with Bay Delta Plan.

Note that the SFPUC derived the five-year consecutive drought based on the driest five-year sequence in the hydrologic record. This supply condition is a requirement of Water Code Section 10612. SFPUC has provided information about the likelihood of this severe condition in 2020 SFPUC UWMP.

As can be seen in Table 7-4, with Bay Delta Plan, for multiple dry years supply and demand comparison, from 2025 through 2045, the City will experience significant water supply cutbacks.

Table 7-4. Multiple Dry Years Supply and Demand Comparison, with Bay Delta Plan

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First Year	Supply Totals	3,450	4,475	4,626	4,776	4,917
	Demand Totals	4,325	4,475	4,626	4,776	4,917
	Difference	(875)	0	0	0	0
Second Year	Supply Totals	3,230	4,475	4,626	4,776	4,917
	Demand Totals	4,325	4,475	4,626	4,776	4,917
	Difference	(1,095)	0	0	0	0
Third Year	Supply Totals	2,940	4,370	4,626	4,776	4,917
	Demand Totals	4,325	4,475	4,626	4,776	4,917
	Difference	(1,385)	(105)	0	0	0
Fourth Year	Supply Totals	2,940	4,370	4,626	4,776	4,870
	Demand Totals	4,325	4,475	4,626	4,776	4,917
	Difference	(1,385)	(105)	0	0	(47)
Fifth Year	Supply Totals	2,940	4,370	4,626	4,776	4,870
	Demand Totals	4,325	4,475	4,626	4,776	4,917
	Difference	(1,385)	(105)	0	0	(47)

NOTES:
1. Valley Water supply source: Based on historic cutbacks and Valley Water's 2019 Supply Master Plan, the City expects 20% cutbacks from Valley Water supplies in dry years 3, 4, and 5.
2. SFPUC supply source: Regional Water Supply Reliability 4-1-2021 Updated Drought Allocations Based on SFPUC 4-1-2021 Letter Tables G-2, H-2, I-2, J-2, and K-2 1st, 2nd, 3rd, 4th, and 5th dry year allocations. Milpitas's water supply from SFPUC is reduced in all dry year projections.
3. There are no cutbacks in recycled water and active conservation supplies expected in all dry year types.
4. One or more groundwater wells pumping at 1.2 mgd will be developed for use in all dry year types as supply augmentation to reduce shortfall. Assume 3 wells online by 2030 and 4 wells by 2035. Assume groundwater well supplies will only be used as needed to offset shortfall.
5. Under shortfall conditions, it is assumed that water use reductions will be achieved by dry water year 2 and thereafter, and NOT in a single dry year or multiple dry year 1. This is outlined in the WSCP and Table 8-2.

The reduction measures for all levels of the City's WSCP are discussed in the WSCP in Appendix I.

DWR requires that suppliers only use one scenario to input data into the Water Use efficiency Data (WUE) portal. The City submitted Table 7-4, with Bay Delta Plan in the WUE portal to comply with the 2020 UWMP requirements and to be consistent with its supplier, SFPUC.

SFPUC Rate Impacts for Wholesale Customers During Water Shortages [41]

The SFPUC includes a variable component to water rates for most customer classes. As a result, as sales decrease, revenues are lost on a per unit basis. Because the marginal cost of water production is relatively small, as production is reduced, the cost of service remains the same. For both retail and wholesale customers, a reduction in water purchases – whether voluntary or mandated – would require the SFPUC to raise rates, cut costs, or use existing fund balance reserves to cover its expenses. The financial planning and rate-setting process is complex and iterative. While major impacts of a water shortage on rates are described below, the full process, especially for large water shortages, would incorporate significant stakeholder discussion about tradeoffs and financial impacts.

The SFPUC's current retail water rates have a provision for a "drought surcharge" that automatically increases adopted rates in the event of a declared water shortage. The drought surcharge is calculated so that, accounting for the expected reduction in retail water usage, total revenues are equal to what they would have been without the reduction. The drought surcharge protects the SFPUC's financial stability during water shortages, and provides customers an incentive to meet conservation targets.

For wholesale customers, the rate-setting process is governed by the terms of the WSA, which provides that, in the event of a water shortage emergency, the Commission may adjust wholesale rates in an expedited way concurrently with the imposition of drought surcharges on retail customers. Beyond drought rate setting and emergency rate setting, rates are set annually in coordination with the SFPUC annual budget process and are based on the forecasted wholesale share of regional water system expenditures and total purchases. If wholesale customer usage is expected to decrease – either voluntarily, or due to shortages – this would be incorporated into the wholesale rate forecast, and rates may increase.

7.2.6 Description of Management Tools and Options

According to Water Code Section 10620(f), urban water suppliers are required to describe management tools and options used that will maximize resources and minimize the need to import water from other regions.

BAWSCA agencies have long-term contracts with SFPUC to purchase water. The 26 BAWSCA agencies rely on SFPUC imported water as a significant source of high-quality potable water that is not pumped from groundwater basins or directly diverted from the Sacramento Bay Delta.[42] Several of the BAWSCA agencies (not including the City of Milpitas) do not have alternate water supplies and solely rely on SFPUC to supply water for their service area. Over the past decade, the City has taken significant demand management measures to reduce its water demand. The City's GPCD, 108 GPCD (Table 5-2), is evidence that the City's demand management tools are successful. The City continues to implement advanced technology and other measures to reduce demand on its SFPUC supply.

Below is a summary of the City's water management tools that are being implemented and planned to minimize the need for imported SFPUC water.

The City will have to work closely and continuously with its customers when implementing the Level 6 WSCP measures. Since extended emergency reductions of more than 50 percent are unprecedented and will be very difficult to sustain. Additional alternate supplies and measures may be necessary.

In recent years, the City has invested in modern technologies and implemented the following measures:

- The City may pursue a managed groundwater well extraction program similar to neighboring water agencies, Alameda County Water District to the north and City of Santa Clara and San Jose Water Company to the south. The south-western portion of the City of Milpitas overlays a groundwater aquifer

[41] SFPUC, 2020 UWMP Rate Impacts of Water Shortages Common Language, Final, March 4, 2021.

[42] SFPUC, 2020 UWMP.

which is adequately productive therefore, in-pipe blending with SFPUC and Valley Water is a viable option for augmenting supply shortages. Four wells at an average withdrawal rate of 1.2 million gallons per day (450 million gallons per year) can produce up to 5 million gallons per day of new water supply or the City. The extraction rate and volume is based on preliminary production tests of McCandless Well and Curtis Well which have indicated the aquifer in this zone produces 500-1,200 gallons per minute or an average of 850 gallons per minute. Prior to use, a State Water Quality Report must be completed, as well as treatment (if necessary) and disinfection. Assuming new wells would be of similar quality to that of Pinewood Well (the primary municipal well for Milpitas' emergency water supply), treatment for contaminants would be minimal. Issues to be resolved include both mineral and odor concerns which will require treatment or in-pipe blending with current water supplies. Planning for future wells, while an increase to the infrastructure costs, allows for better long-term supply reliability by expanding the City's water supply portfolio which will allow the City to supplement water supply cutbacks in some or all drought scenarios. Wells also provide the City storage credits to offset above grade water storage requirements which also include infrastructure and land acquisition costs.

Sustainability of wells and groundwater aquifers are based on aquifer recharge, as currently performed by Valley Water. The City, in concert with Valley Water, should study the feasibility of offsetting SFPUC supply reductions, as outlined in the Bay Delta Plan and this UWMP, to determine the approximate quantity of groundwater and the rate at which groundwater can be extracted from the aquifer during various drought scenarios. If it is determined the aquifer has the capacity to offset most if not all of the supply cutbacks from SFPUC, the City should develop a Water Supply Augmentation Feasibility Report to determine the recommended number and location of wells.

The table below provides a preliminary estimate of the number of wells which would be required to offset all of the SFPUC supply cutbacks with the assumption that each well will produce approximately 850 gallons per minute and Valley Water determines no adverse impacts will be realized as a result of extracting groundwater at the rate and volume identified above.

Table 7-5. Groundwater Wells Required to Supplement Multiple Dry Years Supply

Proposed Number of Groundwater Wells for Consecutive Dry Year Supply Augmentation					
	2025	2030	2035	2040	2045 (Opt)
First Dry Year	2	2	2	2	3
Second Dry Year	2	3	3	3	3
Third Dry Year	3	3	3	3	4
Fourth Dry Year	3	3	3	4	4
Fifth Dry Year	3	3	4	4	4
NOTES: The number of wells needed to augment multiple dry year supply without cutbacks based on well capacity of 1.2 mgd.					

- By 2022, 100% of Advanced Metering Infrastructure (AMI) meters will be installed in the City's service area for near real-time metering of water use. In the past 2 years, the City has invested $14M in this advanced technology to:
    - Continuously track all meters and water use,
    - Engage with customers about their water use and identify potential leaks through an email and text alert 'ping' within hours, rather than through a bi-monthly bill with potentially abnormally high consumption and cost to customers,

    - provide almost real-time water consumption data for its customers through the City's AMI customer portal,
- Investment in modern technologies: Supervisory Control and Data Acquisition (SCADA) for:
    - Pressure zone management
    - Spatial identification of maintenance areas for improved visibility of service areas requiring a higher level of maintenance
    - Spatial identification of line breaks and break frequency to prioritize line replacement
    - Spatial identification of abnormally high water use to prioritize leak investigations and/or identify areas for water conservation measures
- Evaluate, assess and implement Ordinances that target water efficiency:
    - Prohibition on water waste
- Geographic Information Systems (GIS), is being used for system mapping.
- Increased implementation of demand management measures.
- Coordinate the use of additional recycled water
- Coordinate with other water agencies to share regional water resources.

BAWSCA Water Conservation Programs

BAWSCA implements two programs intended to promote water efficiency: (1) the Core program and (2) the Subscription Program, as discussed below.[43]

The Core Program is funded through the annual BAWSCA budget and contains those conservation measures that benefit from regional implementation and that provide regional benefits, irrespective of individual agency jurisdictions. The Subscription Program is fully funded by the individual agency that elects to participate in the program. The extent of funding is based on agency participation level and includes conservation measures whose benefits can be realized in individual water agency service areas.

Valley Water Demand Management Reduced Delta Reliance Requirement

Valley Water Standard Text

Valley Water, with the support of all retailers including the City has made significant investments in demand management and local supplies to reduce Santa Clara County's and thus the City's reliance on the Delta. These investments include:

- Conservation measures
- Recycled water
- Stormwater capture
- Dam Improvements/Seismic Retrofits of local reservoirs

Through careful management and conjunctive use of local surface water and groundwater supplies, and increasing conservation and use of recycled water, Santa Clara County (and by extension XX retailer) is reducing reliance on the Delta.

[43] BAWSCA Annual Conservation Program Report for FY 2018-19. https://bawsca.org/uploads/pdf/BAWSCA_Annual_Conservation_Programs_Report_FY2018-19_FINAL.pdf

7.3 Drought Risk Assessment (DRA)

The DRA is new in the 2020 UWMP requires that every urban water supplier includes a drought risk assessment for its water service and develops demand management measures (DMMs) and water supply projects and programs [Water Code Section 10635(b)].

The Water Code Section 10635(b) permits urban water suppliers to conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. This allows Suppliers to modify the DRA as more information becomes available, supplies or uses change, and in the event of unforeseen circumstances.

This new provision of the Water Code directs Suppliers to prepare a DRA and requires that the DRA includes a description of the following:

- Data and methods used
- Basis for the supply shortage conditions
- Determination of the reliability of each source
- Comparison of total water supplies and uses during the drought

In accordance with Water Code Section 10612, the DRA evaluation is based on the five driest consecutive years on record. However, Water Code Section 10635 also requires that the analysis includes plausible changes in climate, regulations, and other locally applicable criteria.

For the DRA, the SFPUC derived the five-year consecutive drought based on the driest five-year sequence in the hydrologic record and provided two scenarios for BAWSCA agencies to choose from. The supply conditions provided by SFPUC satisfy the Water Code requirements. SFPUC has provided information about the likelihood of this severe condition in their UWMP. The historic five driest consecutive years on record provided by SFPUC are required to be presented as if they occur over the next five years, 2021 through 2025 in the DRA. They are analyzed in this Section.

DWR requires suppliers to use the new Table 7-5 to demonstrate water supply reliability during the long-term drought. In Table 7-5, the Drought Risk Assessment (DRA), DWR requests suppliers to provide their five-year drought Risk Assessment (five-year drought sequence, supply and demand for comparison), from 2021 through 2025, including planned Water Shortage Contingency Plan (WSCP) Actions, to address Water Code Section 10635(b).

In Table 7-5, the DRA, the City includes its supply reliability using SFPUC scenario with Bay Delta Plan . The SFPUC projects that in multiple dry years, with the Bay Delta Plan, the wholesale volume available will range from 86 percent of normal in the first year, 72 percent in the second year, and starting the third year to fifth year 40 percent of normal (Data Sources: SFPUC: Regional Water Supply Reliability, Table 3).[44] The SFPUC's projections for available supplies for wholesale agencies translate to significant cutback allocations for all BAWSCA agencies (BAWSCA Attachment B: Updated 2020 UWMP Drought Cutbacks, Tables C, D, 3/1/2021).

The City will experience significant water supply shortfalls with the Bay Delta Plan, for multiple (five) dry years. These shortfalls will invoke the City's WSCP in the second year (2022) through fifth year (2025) of a multi-year drought. To reduce the need for continued extreme use reductions, the City will need to accelerate seeking additional water supplies, including recycled water.

Water Shortage Contingency Plan (WSCP) Actions, to address Water Code Section 10635(b)

To achieve reductions of SFPUC supply during shortages, the City with invoke all elements of WSCP Level 5. The City's measures could include, but not be limited to the following:

- Extremely restricted water supplies

[44] SFPUC: January 22, 2021, Regional Water Supply Reliability, Table 3.

- Mandatory reductions on indoor water uses
- Per Capita allocations for indoor use for health and safety
- Prioritize water use for essential domestic sanitation and other critical needs
- No irrigation with domestic water permitted
- No outdoor domestic water use, except for fire-fighting and critical needs
- Increase water shortage emergency rates using the City's Ordinance 112, Attachment 103A, Schedule of Rates and Fees with Ordinances 111 and 113
- Strict enforcement of waste prohibitions

During the 2014 through 2017 drought, the City sustained more than 20 percent reductions. The City invoked multiple water reduction measures, including continued public notifications, rebates for water -efficient fixtures and turf removal, indoor and outdoor water use restrictions. However, staff could not identify specific savings from specific measures. Clearly outdoor water use restrictions contributed significantly to water use reductions. Additionally, since the City has invested in AMI technology, it will have almost real-time consumption data that can help with water use monitoring and pressure zone management for water use reductions.

The key means by which the City will be able to sustain more than 40 percent reductions, for extended periods of time, without additional supplies, will require severe restrictions of potable use outdoors and lowering its water losses. For prolonged reductions of 40-50%, the City could achieve approximately 41 percent reductions. Using its 2020 domestic water production and wastewater discharge data:

- The City's production: 3,430 MG/year
- Wastewater to SVCW: 2,032 MG/year
- Non-sewered use including Irrigation water = Production (3,430) – [wastewater (2,032)+ water loss (39)] = 1,359 MG/year

Therefore, non-sewered use in 2020 was approximately 1,359 MG/year in 2020 or almost 40% of the City's 2020 water demand. Although savings of 41 percent from non-sewered are unlikely, the potential for the highest potable water savings are from outdoor and other non-potable uses.

These cutbacks follow the Water Supply Agreement (WSA) and are contractually within SFPUC's planned Level of Service, limiting supply cutbacks to less than 20 percent for its wholesale customers. During a five-year drought, shortages of water supply result for the City service area.

DWR requires that suppliers only use one scenario to input data into the Water Use efficiency Data (WUE) portal.

The City submitted Table 7-5, with Bay Delta Plan in the WUE portal to be in compliance with the 2020 UWMP requirements and to be consistent with its supplier, SFPUC. The City's DRA may be revised outside of its 2020 UWMP.

Table 7-6. Five-year Drought Risk Assessment to Address Water Code Section 10635(b) – With Bay Delta Plan

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	3,710
Total Supplies	3,592
Surplus/Shortfall w/o WSCP Action	(118)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	-118
Resulting % Use Reduction from WSCP action	0%

2022	**Total**
Total Water Use	3,860
Total Supplies	3,512
Surplus/Shortfall w/o WSCP Action	(348)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	348
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	9%

2023	**Total**
Total Water Use	4,010
Total Supplies	2,468
Surplus/Shortfall w/o WSCP Action	(1,542)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,542
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	38%

2024	**Total**
Total Water Use	4,170
Total Supplies	2,566
Surplus/Shortfall w/o WSCP Action	(1,604)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,604

Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	38%

2025	Total
Total Water Use	4,325
Total Supplies	2,660
Surplus/Shortfall w/o WSCP Action	(1,665)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	1,665
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	39%

NOTES:
1. Valley Water supply source: Based on historic cutbacks and Valley Water's 2019 Supply Master Plan, the City expects 20% cutbacks from Valley Water supplies in dry years 3, 4, and 5.
2. SFPUC supply source: Regional Water Supply Reliability 4-1-2021 Updated Drought Allocations Based on SFPUC 4-1-2021 Letter Tables G-2, H-2, I-2, J-2, and K-2 1st, 2nd, 3rd, 4th, and 5th dry year allocations. Milpitas's water supply from SFPUC is reduced in all dry year projections.
3. There are no cutbacks expected in dry years for recycled water and active conservation supplies.
4. One or more groundwater wells pumping at 1.2 mgd will be developed for use in all dry year types as supply augmentation to reduce shortfall. Assume 3 wells online by 2030 and 4 wells by 2035. So, this future dry year supply is not applicable to this table.
5. Under shortfall conditions, it is assumed that water use reductions will be achieved by dry water year 2 and thereafter, and NOT in a single dry year or multiple dry year 1. This is outlined in the WSCP and Table 8-2.

7.3.1 Data, Methods, and Basis for Water Shortage Condition

DWR requires that suppliers provide a description of the data used for the DRA. Although the SFPUC and BAWSCA data are described earlier in this chapter, because the DRA can be updated separately from the UWMP five-year plan cycle, DWR requires a description of the data in the DRA.

In its DRA, the City includes information and the tables about the SFPUC and BAWSCA source(s) of data. The SFPUC has developed hydrologic models based on the DWR-required scenarios for a multi-year drought. All documentation received from the SFPUC and BAWSCA for decisions to determine supply shortage conditions, used for the City DRA is provided in Appendix K. Details about SFPUC's RWS models are included in SFPUC's Draft 2020 UWMP. [45]

All the Scenario 1 tables presented earlier in this chapter assume full implementation by the SFPUC of the Bay Delta Plan Amendment beginning in 2023. All BAWSCA tables assume that the wholesale customers may purchase up to 184 mgd from the RWS through 2045. When 184 mgd, 100 percent of SFPUC's water supply is available to the wholesale customers, 100 percent of the City's ISG is available to the City, 9.232 mgd per year. Assumptions about the status of the dry-year water supply projects included in SFPUC's Water System

[45] SFPUC. (2021). Draft 2020 UWMP.

Improvement Program (WSIP) are provided in the table 'WSIP Project Assumptions'.[46] The tables reflect instream flow requirements at San Mateo and Alameda Creeks.

7.3.2 DRA Individual Water Source Reliability

DWR requires suppliers to include an assessment of the reliability of each water source over the five-consecutive-year drought under a variety of water shortage conditions in the DRA. In contrast, the water service reliability assessment only requires an assessment of total water supply.

In its DRA, the City presents the potential challenges to its normal year supplies. Unlike the previous drought cutbacks, if the Bay Delta Plan is implemented, as SFPUC presents it in its extreme supply reductions, using Scenario 1, during multi-year droughts, severe cutbacks from the normal wholesale supply are projected to result. SFPUC projects reductions in their wholesale supply of up to 60 percent. The RWS-wide supply reductions translate to the most severe cutbacks during multi-year droughts for the City, of more than 50 percent.

The cutback values presented in this chapter are uncertain and could change, therefore users and readers of the City's 2020 UWMP are cautioned to contact the City to obtain updated information prior to making decisions based on water supply and demand values in this plan.

The regulatory conditions and negotiations about the Bay Delta Plan are continually evolving, therefore conditions could change from those documented in SFPUC's and the City's 2020 UWMPs. The SFPUC's two scenarios present contrasting results. Based on the current negotiations between SFPUC and the State Water Board, as well as other stakeholders, neither of the two scenarios appears to be final.

With this uncertainty, the City may consider an update to its DRA (see Section 7.3) prior to the 2025 UWMP update if significant new information becomes available. The Water Code Section 10635(b) permits urban water suppliers to conduct an interim update or updates to their DRA within the five-year cycle of its UWMP update.

The City will have to work closely with BAWSCA and continuously with its customers when implementing Levels 5 and 6 WSCP measures. Since extended emergency reductions of more than 50 percent are unprecedented and will be very difficult to sustain.

Even implementation of the strongest mitigation measures in Level

6 of the City's 2020 WSCP, will likely require augmentation with alternate water supplies.

Separate Potable and Non-Potable.

The City does not have a non-potable source of water; therefore, its DRA is for its SFPUC and Valley Water potable water supply.

Monthly or Other Time-Step. DWR recommends that suppliers conduct their DRA on a time-step that best illuminates water supply and use constraints that may affect water shortage conditions.

For its DRA, the City uses an annual "time-step" for its DRA, because the City's SFPUC supply is based on an annual allocation, rather than a monthly allocation. Due to the Mediterranean climate in the City's service area, variability in seasonal temperatures and rainfall are normal, therefore monthly variability in water use is typical for the service area.

Instructions for Using the Optional Planning Tool

The City is not using the Optional Planning Tool DRA Worksheet for reasons already stated.

[46] SFPUC Regional Water System supply reliability letter from SFPUC, Table 1 , January 22, 2021.

Figures 7-1 through 7-5. Optional Tool Supply Worksheets for the DRA.

The City is not using the optional Planning Tool DRA Worksheet for reasons already stated.

8 WATER SHORTAGE CONTINGENCY PLAN

Layperson Description

Water shortage contingency planning is a strategic planning process in which the City of Milpitas engages to prepare for and respond to water shortages. A water shortage, when water supply available is insufficient to meet the normally expected customer water use at a given point in time, may occur due to a number of reasons, such as water supply quality changes, climate change, drought, and catastrophic events (e.g., earthquake). The City's WSCP provides real-time water supply availability assessment and structured steps designed to respond to actual conditions. This level of detailed planning and preparation will help maintain reliable supplies and reduce the impacts of supply interruptions.

The California Water Code (CWC) Section 10632 requires every urban water supplier that serves more than 3,000 acre-feet per year or has more than 3,000 connections to prepare and adopt a standalone Water Shortage Contingency Plan as part of its urban water management plan. The WSCP is required to plan for a greater than 50% supply shortage. This WSCP is due to be updated, based on new requirements, every five years and will be adopted as a current update for submission to the California Department of Water Resources by July 1, 2021.

8.1 Overview of the WSCP

The WSCP serves as the operating manual that the City will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. The WSCP contains documented processes and procedures, which are given legal authority through the Water Shortage Contingency Response Ordinance. This way, when shortage conditions arise, the City's governing body, its staff, and the public can easily identify and efficiently implement pre-determined steps to mitigate a water shortage to the level appropriate for the degree of water shortfall anticipated. Figure 8.1 illustrates the interdependent relationship between the three procedural documents related to planning for and responding to water shortages.

Figure 8-1. Water Shortage Contingency Plan Flow of Information

A copy of the City's Water Shortage Contingency Plan is provided in Appendix I. It includes the steps to assess if a water shortage is occurring, and what level of shortage drought actions to trigger the best response as appropriate to the water shortage conditions. The WSCP has prescriptive elements, including an analysis of water supply reliability; the drought shortage actions for each of the six standard water shortage levels that correspond to water shortage percentages ranging from 10 percent to greater than 50 percent; an estimate of potential to close supply gap for each measure; protocols and procedures to communicate identified actions for any current or predicted water shortage conditions; procedures for an annual water supply and demand assessment; monitoring and reporting requirements to determine customer compliance; and reevaluation and improvement procedures for evaluating the WSCP.

8.2 Summary of Water Shortage Response Strategy and Required DWR Tables

This WSCP is organized into three main sections with Section 3 aligned with the California Water Code Section 16032 requirements. In addition to the WSCP, Section 6.2 of this UWMP has further details on the City's water supply systems.

Section 1 Introduction and WSCP Overview gives an overview of the WSCP fundamentals.

Section 2 Background provides information on the City's water service area.

Section 3.1 Water Supply Reliability Analysis provides a summary of the water supply analysis and water reliability findings from the 2020 UWMP.

Section 3.2 Annual Water Supply and Demand Assessment Procedures provide a description of procedures to conduct and approve the Annual Assessment.

Section 3.3 Six Standard Water Shortage Levels explains the WSCP's six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, 50, and more than 50 percent shortages.

Section 3.4 Shortage Response Actions describes the WSCP's shortage response actions that align with the defined shortage levels.

Section 3.5 Communication Protocols addresses communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding any current or predicted shortages and any resulting shortage response actions.

Section 3.6 Compliance and Enforcement describes customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions.

Section 3.7 Legal Authorities is a description of the legal authorities that enable the City to implement and enforce its shortage response actions

Section 3.8 Financial Consequences of the WSCP provides a description of the financial consequences of and responses for drought conditions.

Section 3.9 Monitoring and Reporting describes monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements**.**

Section 3.10 WSCP Refinement Procedures addresses reevaluation and improvement procedures for monitoring and evaluating the functionality of the WSCP.

Section 3.11 Special Water Feature Distinction.

Section 3.12 Plan Adoption, Submittal, and Implementation provides a record of the process the City followed to adopt and implement its WSCP.

The WSCP is based on adequate details of demand reduction and supply augmentation measures that are structured to match varying degrees of shortage will ensure the relevant stakeholders understand what to

expect during a water shortage situation. The City has documented the minimum supply over the next 5 years (Table 8-4) and adopted water shortage levels consistent with the requirements identified in Water Code Section 10632 (a)(3)(A) (Table 8-1).

The supply augmentation actions that align with each shortage level are described in Table 8-3. These augmentations represent short-term management objectives triggered by the WSCP and do not overlap with the long-term new water supply development or supply reliability enhancement projects.

The demand reduction measures that align with each shortage level are described in Table 8-2. This table also estimates the extent to which that action will reduce the gap between supplies and demands to demonstrate that the chosen suite of shortage response actions can be expected to deliver the expected outcomes necessary to meet the requirements of a given shortage level.

See Appendix I. Tables will be updated after final WSCP adoption.

Table 8-1. Water Shortage Contingency Plan Levels

Submittal Table 8-1 **Water Shortage Contingency Plan Levels**		
Shortage Level	Complete Both	
	Percent Shortage Range[1] *Numerical value as a percent*	Water Shortage Condition (*Narrative description)*
Add additional rows as needed		
1	Up to 10%	
2	Up to 20%	
3	Up to 30%	
4	Up to 40%	
5	Up to 50%	
6	>50%	
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

Table 8-2. Demand Reduction Actions

DRAFT Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.*	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
Add additional rows as needed				
NOTES:				

Table 8-3. Supply Augmentation and Other Actions

Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUE data online submittal tool*	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
NOTES:			

9 DEMAND MANAGEMENT MEASURES

Lay Description

This chapter communicates the City of Milpitas's efforts to promote conservation, reduce demand on water supplies and implement several demand management measures, including similar information from Valley Water, the City's wholesaler.

The City's conservation program is guided by a mix of agency and City policy directives and state and local water efficiency requirements that have evolved over time. On the state level, these shifted from meeting BMPs to the state per capita water reduction targets set by the Water Conservation Action of 2009 (SB X7-7) to new water efficiency targets mandates by AB 1668 and SB 606 that urban suppliers will need to meet starting in 2023 based on standards for efficient indoor, outdoor water use and supply side water loss. The City has been implementing conservation measures for decades. Through the City's efforts to promote conservation and educate its residents and retail customers on efficient and appropriate uses of water, the City was able to exceed its 2020 confirmed SB X7-7 target. As discussed in Chapter 5, the City's 2020 confirmed GPCD target was 146. However, its actual 2020 GPCD was 108, which was well below its state SB X7-7 per capita use target.

Although not a member of the California Water Efficiency Partnership (formerly CUWCC), the City submitted annual reports to the California Urban Water Conservation Council (CUWCC)'s in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California" (MOU) for the duration of its existence from 1991 to 2016, agreeing to voluntarily meet and report on conservation Best Management Practices (BMPs). During that time, the City implemented conservation measures in accordance with CUWCC BMP compliance goals and met requirements for biannual BMP reporting. In 2016, the CUWCC underwent an organizational transformation and decided to sunset in response to social, economic, environmental, regulatory and political conditions that changed substantially over its 25 years of existence, including passage of California's Water Conservation Act of 2009 mandating a 20 percent reduction in statewide urban per capita water use by 2020 followed by new state water conservation mandates (Executive Order B-37-16) and reporting requirements. In 2017, it relaunched as a new organization, the California Water Efficiency Partnership (CalWEP), dedicated to advancing water efficiency in the state through research, assistance, tools, and education but not through a MOU requiring member compliance with specific BMPs. Although the City is not a member of CalWEP, it continues to implement numerous Demand Management Measures (DMM) in the form of conservation programs, most of which builds from and meet the goals of the last iteration of the CUWCC's foundational and programmatic BMPs.

In addition, the City participates in all rebates and offers that are available from Valley Water including cost-sharing on the landscape rebate program, which allows residential customer to receive higher rebate amounts. Due to this participation with Valley Water, the City does not participate in any BAWSCA rebate programs. However, the City does work with BAWSCA to hold Landscape Workshops (usually four each period).

Valley Water Standard Text

Valley Water has made significant investments to manage demands for water, and water savings from conservation and stormwater capture were about 74,200 acre-feet per year (AFY) in 2020. Valley Water's Water Supply Master Plan 2040 establishes the target to increase these savings to 99,000 AFY by 2030 and to 110,000 AFY by 2040.

Valley Water develops water supplies and infrastructure to meet the County's water needs and achieve Valley Water Board's Ends Policies for water supply reliability, water conservation, and water recycling. These policies, in conjunction with Valley Water's Water Supply Master Plan 2040, establish broad water supply objectives:

- There is a reliable, clean water supply for current and future generations.
- Water supplies meet at least 100 percent (%) of average annual water demands in non-drought years and water use reductions greater than 20% are not called for during drought years.

9.1 Demand Management Measures for Retail Suppliers

The goal of the Demand Management Measures (DMM) section is to provide a comprehensive description of the water conservation programs that a supplier has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets.

9.1.1 Water Waste Prevention Ordinances

The City's water waste prevention ordinance is in place and prohibitions are included in response to shortages. The water waste prevention ordinance which is currently in effect (Ordinance 240.6 attached in the WSCP Appendix I) reflects permanent restrictions. The City is in the process of drafting an updated water shortage ordinance that will reflect the response actions outlined in the City's 2020 Water Shortage Contingency Plan.

9.1.2 Metering

The City maintains water use information for residential, commercial, industrial, institutional/governmental, and irrigation (potable and recycled) water users. All customer accounts are metered. Table 4-1 gives actual water deliveries for 2020. By 2022, 100% of Advanced Metering Infrastructure (AMI) meters will be installed in the City's service area for near real-time metering of water use.

9.1.3 Conservation Pricing

The City water rate structure is consistent with a recent consultant report and current ordinance. The uniform rates for the quantity charges are billed bimonthly and imposed per hundred cubic feet ("HCF") for metered water service. The rates and the effective dates for the bimonthly water meter charges, are determined on the basis of the size of the water meter. The rates and effective dates for the bimonthly fire service charges, determined on the basis of the size of the fire service. Current rates can be found in the City Ordinance[47].

[47] Ord. No. 120.48, § 2, 2/19/19
https://library.municode.com/ca/milpitas/codes/code_of_ordinances?nodeId=TITVIIIPUWO_CH1WASY_S6WASECH_VIII-1-6.13QUCH

9.1.4 Public Education and Outreach

The City conducts its conservation program in conjunction with resources provided by Valley Water and BAWSCA. Programs implemented through the partnerships with these agencies may include free showerheads and aerators, the Irrigation Hardware Upgrades Rebate Program, Landscape Conversion Rebate Program, Rainwater Capture Program, Graywater Laundry to Landscape Rebates and Water Wise House Calls and Water Efficient Gardening workshops. The City contributes to these programs indirectly through wholesale water costs and wastewater treatment purchases. The City cost-shares with Valley Water on the Landscape Rebate program which includes the conversion and rainwater harvesting rebates. The City also distributes educational information to schools, various fairs and other public events. Conservation-related workshops and opportunities are also posted on the City's website as well as drought information.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

City maintenance crews investigate and repair water leaks, the majority of which occur in service laterals. Long-term plans to reduce water loss include the following:

- Replace existing meters with smart meters
- Implement supervisory control and data acquisition system
- Replace selected water pipe with upgraded design criteria to withstand seismic events
- Maintain an active cathodic protection system

9.1.6 Water Conservation Program Coordination and Staffing Support

As part of the City's response to the drought, the City established a Water Conservation Program. The program was structured to facilitate and respond to reports of water waste and violations of local water use restrictions. It also provides an opportunity to educate home and business owners on water conservation. To facilitate the community's ability to report water waste, various reporting options were developed including email, a water–waste hotline, the City's website and through a mobile application. The Water Conservation Coordinator is:

Linda Grand
1265 N. Milpitas Blvd
Milpitas, CA 95035
408- 586-2619
lgrand@ci.milpitas.ca.gov

9.2 Implementation over the Past Five Years

The following water demand management measures have been implemented to achieve water use targets. The City communicates these programs to all Milpitas residents through newsletter distribution, local advertisements, and City media.

Water Survey Programs for Single Family and Multiple-Family Residential Customers

Valley Water developed this program to target and market home water-use surveys to single-family and multifamily residential customers of participating water retailers including the City of Milpitas. The water surveys consist of educating customers on how to read their water meter; checking flow rates of showerheads, faucet aerators and toilets; checking for leaks; installing low-flow showerheads, aerators, and/or toilet flappers if necessary; checking irrigation system efficiency; measuring landscaped area; developing an efficient irrigation schedule for the different seasons; and providing customers with evaluation results, water savings recommendations, and other education materials. Recently the program was enhanced for increased program efficiency and participation by using landscape measurements, from this program as an initial qualifying step for the Landscape Rebate program.

Residential Plumbing Retrofit

Valley Water has provided free low-flow showerheads and faucet aerators to Santa Clara County residents via its water retailers, residential water surveys, and public events. City staff offers these free water-saving devices to Milpitas residents via distribution at city-sponsored events, City media, and residential newsletters. In addition to the showerheads and aerators directly distributed by Valley Water, the City has distributed thousands of low-flow showerheads and aerators. The City also offers Water Conservation Kits that include a low-flow showerhead, aerators and a hose nozzle.

Residential Ultra-Low Flush Toilet (ULFT) Replacement Programs

Effective 1992, Valley Water offered various residential ULFT replacement programs for single-family and multi-family residences, in conjunction with 13 participating water retailers. In 2004, Valley Water shifted to a high-efficiency toilet (HET) program, which offered a rebate of $125. In response to California's new requirement, Valley Water implemented its strictest standard for HETs, in 2014. Only Premium HETs would qualify for the $125 rebate for the remainder of the program's lifespan. The program was phased out in 2016 to reprioritize funds to other programs with greater opportunities for water savings.

System Water Surveys, Leak Detection and Repair

All connections within the City are metered, except for some City maintenance activities such as street sweeping, fireflow testing, and sewer hydro/vac truck filling. To minimize leaks from residential, business, and irrigation connections, City maintenance crews replace all leaking meters, repair water service and main leaks, and calibrate compound or multi-head meters annually. The City will continue to conduct its meter calibration and replacement program.

This 2020 UWMP includes water loss audit distribution system losses for the past 5 years (see Section 4.2.4). The City has a small and a large meter testing program to better understand meter accuracy. In addition, the City is in the process of drafting a system-wide Water Loss Control Plan to identify future actions that can be taken to further reduce water loss.

Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

All water connections in the City are metered, and separate irrigation meters are required for non-residential customers and new large-scale multi-family developments. Commercial, industrial, and institutional customers are required to have fire sprinkler systems with separate meters. The City has also installed separate meters for recycled water services. Rebates for the installation of submeters as well as switching from a mixed-use meter to a dedicated landscape meter are offered through Valley Water. The submeter program provides $150 per submeter installed at multi-family housing complexes. Valley Water plans to continue to offer this program in the future to reach the region's long-term water conservation goals.
The City will continue to install and read meters for all new services.

Landscape Rebate Program Conversion & Rainwater Harvesting Rebates

Valley Water began to focus on water efficient landscapes by launching a program in early 2005. The original program offered rebates to residential and commercial sites for the replacement of approved high water using landscape with low water use plants, mulch and permeable hardscape. Participants could receive up to $0.75 per square foot of irrigated turf grass with a maximum rebate of $1000 and $10,000 for residential and commercial sites respectively. In an effort to expedite program participation, the Valley Water Board approved doubling the maximum rebate from $1000 up to $2000 for residents and from $10,000 up to $20,000 for commercial sites in 2009. The rebate cap for commercial, institutional, and multi-family (5 or more units) sites was then increased to $50,000 on January 1, 2020.

Currently, Santa Clara County single family, multi-family and business properties with qualifying high water using landscape can receive rebates for converting to qualifying low water using landscape with a minimum of 50% qualifying plant coverage, 2 to 3 inches of mulch, and a conversion from overhead irrigation to drip/micro spray/bubbler or no irrigation. In January 2014, the Landscape Conversion rebate was increased from $.75 per

square foot to $1.00 per square foot. However, in April 2014, in direct response to the drought, the Valley Water Board approved additional funding to the program to support a rebate of $2.00 per square foot with no maximum rebate. On July 1, 2016, the rebate rate returned to $1/sq ft and the rebate caps were reinstituted. In January of 2019, Valley Water added Rainwater Capture Rebates to the Landscape Rebate Program. Customers now have the opportunity to receive rebates for the installation of rain barrels, cisterns, and rain gardens. Valley Water plans to continue to offer this rebate in the future in order to reach the region's long term water conservation goals. A cost-sharing agreement between the City and Valley Water increases the rainwater harvesting and landscape conversion rebate amounts for the City's residential customers.

Landscape Water Surveys

Valley Water has offered and provided large landscape water surveys. Landscape managers have been provided water-use analyses, scheduling information, in-depth irrigation evaluation, a site-specific water budget, and recommendations for affordable irrigation upgrades. Each site received a detailed report upon completion of the survey. Previously a stand-alone program, starting in 2015 the program was offered through the Landscape Water Use Evaluation Program. Participants from this program are encouraged to participate in the Landscape Rebate Program.

High-Efficiency Clothes Washers Rebate Program

Valley Water offered a residential high-efficiency washer rebate between July 1995 and December 2016. In October 2001, Valley Water began participating in the regional Bay Area Water Utility Clothes Washer Rebate Program, which has been successfully partnering with PG&E between January 2008 and December 2016. To address concerns for local water quality, washers that utilized silver-ion technology did not qualify for this program regardless of their efficiency. In mid-2014, a multi-tiered combined rebate was implemented to transition program participants to more stringent fixture standards:

- Purchasing Energy Star Most Efficient (ESME) washers resulted in the combined rebate increasing to $200 ($125 of which was from Valley Water).
- Purchasing the Consortium for Energy Efficiency's (CEE's) Tier 3 washers received a reduced Valley Water contribution of only $50 with the goal of promoting washers that qualify for the more efficient standard.

In January 2015, qualifying standards were adjusted to streamline requirements to only rebate for qualifying ESME washers at a combined rebate of $150 ($100 of which was from Valley Water) until the program ended on December 31, 2016. The program ended in response to the vast improvement of federal Energy Star program's efficiency standards over the years. By the end of the program, Valley Water's Water Conservation Savings Model estimated nearly 60% of all single-family homes had efficient clothes washers within its service area.

Public Information Programs

Valley Water operates an extensive public information program and associated school program, which provide materials, speakers, and outreach activities to the general public. Outreach activities include publications and website development, public meetings, participation at community events, multi-media campaigns, inter-agency partnerships, corporate environmental fairs, professional trade shows, landscaping workshops and seminars. In addition to Valley Water's public information program, City staff also disseminates information to the public through City media, the City's annual Consumer Confidence Report, and City sponsored events.

In the spring of 2018, Valley Water embarked on an effort to establish a Community-Based Social Marketing strategy to supplement the Conservation campaign. Community-Based Social Marketing, or CBSM for short, is a strategy designed by behavioral scientists (sociologists, psychologists, etc.) to obtain behavior change by removing barriers and establishing social norms. CBSM was initially designed to enhance sustainable and environmentally conscious behaviors. Valley Water's Conservation CBSM Campaign had two objectives: to increase the number of participants in the Landscape Rebate Program and specifically increase lawn conversions;

and to increase the number of Graywater Rebate Program participants. Valley Water employed a variety of outreach methods. An evaluation of these methods is expected to be completed in 2021.

Due to the COVID-19 pandemic during 2020 and part of 2021, most public outreach has been focused on online content.

School Education Programs

Valley Water has a full-time staff to coordinate the school education programs and contract with the Youth Science Institute for additional instructors and coordination. Valley Water provides free classroom presentations, puppet plays, and tours of district facilities to schools within the county. The objective is to teach students about water conservation, water supply, watershed stewardship and flood protection. Valley Water also provides school curricula to area educators, including workbooks and videos, as well as hands-on training for teachers. Students range from pre-kindergarten through college. Included in the educational services is Project WET (Water Education for Teachers) to train teachers how to lead their own classroom activities to independently educate students on water-related topics into the future.

Due to the COVID-19 pandemic, most educational programs have been moved to online platforms.

Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts

Water Efficient Technology Rebate Program

The Water Efficient Technology Rebate (WET Rebate or WET Program; formerly known as the Custom/Measured Rebate Program) provides rebates for process, technology, and equipment retrofits that save water. To encourage all commercial and industrial businesses to implement permanent water reduction measures, unique projects that meet program requirements are eligible for a rebate of either $4 per hundred cubic feet (CCF) of water saved or 50% of equipment costs excluding taxes and labor, whichever is less, up to $50,000. Projects must save at least 100 cubic feet of water annually. Examples of such projects are generally unique to specific industries such as ozone laundry systems or technologies to reduce potable water use when maintaining ice rinks, with myriad other examples. In January 2014, these rebates were temporarily increased to $8 per CCF to promote participation during the drought before returning to $4 per CCF. Cost sharing agreements increase the rate and maximum rebate in some areas.

In 2021, Valley Water will adjust the program so that the rebate will be based on either the lesser of $4 per CCF or up to 100% of equipment costs excluding taxes and labor, up to $100,000. This doubles the potential proportion of equipment costs covered by the rebate in addition to doubling the maximum rebate. The WET Rebate continues to be one of Valley Water's most cost-effective programs in meeting the region's long-term water conservation goals.

Commercial Toilet Program

Valley Water offered an Ultra Low Flush Toilet (ULFT) Rebate Program in commercial, industrial, and institutional (CII) sites since 1994. In FY 2005 the District switched to High-Efficiency Toilets (HETs) and recently initiated a urinal program to replace old flush valves. The CII toilet rebate programs have frequently been offered in tandem with various iterations of high-efficiency urinal (HEU) programs, HET and HEU direct install programs, and retrofit programs for urinal valve installation.

In order to increase efficiency and cost effectiveness, Valley Water created a successful pilot program in 2020 which replaced fifty-nine (59) 1.6 gpf toilets with 0.8 gpf toilets in a low-income apartment complex. This pilot will serve as the basis for a new Fixture Replacement Program to launch in 2021 to replace or retrofit toilets, urinals, and more for multi-family residences and commercial, industrial, and institutional properties.

Commercial Faucet Aerator Program

Since 2010, Valley Water has offered free 0.5 gallon per minute faucet aerators to qualifying businesses and schools. Much of the recent distribution is due to a direct distribution program called WaterLink (described

below), which was administered by a local non-profit organization, Ecology Action, and focused on water and energy efficiency direct installation measures.

Pre-Rinse Spray Valve Program

Pre-rinse spray valves are designed to remove food waste from dishes prior to dishwashing and are often used in commercial kitchens. In previous years, Valley Water partnered with other agencies to offer a direct installation program for high-efficiency pre-rinse spray valves (PRSVs). In 2010 Valley Water purchased a quantity of PRSVs with a flow rate of 1.15 gallons per minute for distribution to commercial sites, especially those identified through Valley Water's previous CII Water Survey Program. Valley Water plans to continue distributing these devices to meet the region's long-term water conservation goals.

WaterLink Program

In collaboration with Ecology Action, Valley Water funded a program called WaterLink, a water/energy savings program that provided turnkey water/energy upgrades to residents, businesses, schools, and public agencies throughout Santa Clara County. Efforts were focused within Disadvantaged Community Census tracts (defined by scoring 76% and above using California Environmental Screening Tools version 2.0). To achieve significant water and energy savings, the WaterLink program delivered a suite of direct installation projects that produced persistent water/energy savings and tangible economic benefits by reducing utility bills. Direct installation equipment included efficient showerheads and aerators, clothes washers, pre-rinse spray valves, and ozone laundry systems. Additionally, the program included replacing turfgrass with low-water using landscape. The WaterLink program has concluded.

Wholesale Agency Assistance Program

Valley Water, through a unique cooperative partnership with its retailers, offers regional implementation of a variety of water conservation programs in an effort to permanently reduce water use in Santa Clara County. It continues to collaborate with water retailers to implement various water conservation programs on a regional basis, ensuring its long-term water supply reliability goals are met as well as assisting its water retailers in meeting their goals, including compliance with recent legislation calling for 20% reduction per capita water use by 2020.

Conservation Coordinator

As noted in Section 9.1, as part of the City's response to the most recent drought, the City established a Water Conservation Program.

Water Waste Prohibition

In May 1994, the City adopted a Water Conservation Ordinance No. 240, amended it in August 2005, and further amended it in June 2017 (Ordinance No. 240.6 see UWMP Appendix I in the WSCP), which describes water use prohibitions. The City is currently drafting a new ordinance to align with its updated WSCP.

9.3 Planned Implementation to Achieve Water Use Targets

As discussed in Chapter 5, the City of Milpitas has met its water use targets. The City will continue to promote Valley Water's conservation programs and BAWSCA's landscape classes to the community.

9.4 Members of the California Water Efficiency Partnership

The City is not a member of the California Urban Water Conservation Council (Council). However, the City has submitted annual reports to the Council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, as amended.

9.5 Water Use Objectives (Future Requirements)

Beginning in 2023, Urban Water Suppliers are required to calculate and report their annual urban water use objective (WUO), submit validated water audits annually, and to implement and report best management practice (BMP) CII performance measures.

Urban Water Use Objective

An Urban Water Supplier's urban WUO is based on efficient water use of the following:

- Aggregate estimated efficient indoor residential water use
- Aggregate estimated efficient outdoor residential water use
- Aggregate estimated efficient outdoor irrigation landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use
- Aggregate estimated efficient water losses
- Aggregate estimated water use for variances approved by the State Water Board
- Allowable potable reuse water bonus incentive adjustments

Valley Water and the City offers a suite of programs, described in detail throughout this chapter, that will help the City meet and calculate the WUO.

The following table describes the City's programs that will assist the City in meeting its WUO through both direct measures: programs/activities that result in directly quantifiable water savings; and indirectly: programs that provide resources promoting water efficiencies to the public that are impactful but not directly measurable.

Table 9-1 Programs to Assist in Meeting Water Use Objectives

WUO Component	Calculation	Program	Impact
Indoor Residential	Population and GPCD standard	Direct Impact • Plumbing Devices Giveaways Indirect Impact • Water efficiency surveys • Public and School Education	Direct Impact: Increase of indoor residential efficiencies and reductions through GPCD use Indirect Impact: Provide information, resources, and education to promote efficiencies in the home
Outdoor Residential	Irrigated/irrigable area measurement and a percent factor of local ETo	Direct Impact • Landscape Conversion • Weather-Based Irrigation Controller upgrade • In-line drip conversion Indirect Impact • Landscape Surveys	Direct Impact: Increase outdoor residential efficiencies and reductions of gallons per ft2 of irrigated/ irrigable area use Indirect Impact: Provide information, resources, and education to

		• Public and School Education	promote efficiencies in the landscape
Outdoor Dedicated Irrigation Meters	Irrigated/irrigable area measurement and a percent factor of local ETo	Direct Impact • Turf Removal • Landscape incentives Indirect Impact • Public and School Education • Landscape Survey	Direct Impact: Increase outdoor residential efficiencies and reductions of gallons per ft2 of irrigated/ irrigable area used Indirect Impact: Provide information, resources, and education to promote efficiencies in the landscape
Water Loss	Following the AWWA M36 Water Audits and Water Loss Control Program, Fourth Edition and AWWA Water Audit Software V	Direct Impact • Water Balance Validation • Customer Meter Accuracy Testing • Distribution System Pressure Surveys • Distribution System Leak Detection • No-Discharge Distribution System Flushing • Water Audit Compilation • Component Analysis	Direct Impact: Identify areas of the distribution system that need repair, replacement, or other action

10 PLAN ADOPTION, SUBMITTAL AND IMPLEMENTATION

Lay Description

Procedures for adopting and implementing the UWMP in a transparent and stakeholder-accessible manner are important for good governance of water resources. It is important for customers to have the opportunity to understand how water is managed and how reliable it is. Supporting a public process through adequate notifications and public hearings also allows for the interested public to submit comments and suggest revisions affecting reliability and future investments in local water management. Adopting the plan makes it part of the formal management of the Supplier, which is often important for justifying investment decisions and potential rate restructuring over the near- and long-term. In this chapter, information is provided on the processes the City of Milpitas followed for the UWMP public hearing, adoption, submission of the adopted UWMP and its public availability, plan implementation and amending an adopted UWMP.

This 2020 UWMP also includes a Water Shortage Contingency Plan as required under the provisions of AB 11X of (1991) and addresses changes required by subsequent legislation including the Water Conservation Act of 2009 (SB X7-7). The WSCP also incorporates the water conservation initiatives that the City has implemented.

If any update is made to this 2020 UWMP or the WSCP, the City will follow the amendment process outlined in Section 10.6 of this UWMP.

As required by Section 10621 (a) of the Water Code, the City will update the UWMP again for the 2025 UWMP process.

10.1 Notice of Public Hearing

A public hearing before the City Council was held on June 15, 2021, to discuss and receive comments/input regarding the City's 2020 UWMP and WSCP prior to its adoption. The public hearing was advertised in *The Milpitas Post* 14 days and 7 days prior to the hearing. See Appendix E for a copy of the newspaper notice.

10.1.1 Notice to Cities and Counties

This section describes the notice to cities, county and other entities that the City of Milpitas distributed. The notice included the location where the 2020 UWMP could be viewed, the UWMP revision schedule and the City's contact information. A copy of this notice is included in Appendix D. Table 10-1 lists the specific entities notified.

Table 10-1. Notification to Cities and Counties

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
City of Brisbane	Yes	Yes
City of Burlingame	Yes	Yes
City of Daly City	Yes	Yes
City of East Palo Alto	Yes	Yes
City of Foster City	Yes	Yes
City of Gilroy	Yes	Yes
City of Hayward	Yes	Yes
City of Hillsborough	Yes	Yes
City of Menlo Park	Yes	Yes
City of Millbrae	Yes	Yes
City of Morgan Hill	Yes	Yes
City of Mountain View	Yes	Yes
City of Palo Alto	Yes	Yes
City of Redwood City	Yes	Yes
City of San Bruno	Yes	Yes
City of San Jose	Yes	Yes
City of Santa Clara	Yes	Yes
City of Sunnyvale	Yes	Yes
Alameda County Water District	Yes	Yes
BAWSCA	Yes	Yes
California Water Service	Yes	Yes
Coastside County Water District	Yes	Yes
Great Oaks Water Company	Yes	Yes
Mid-Peninsula Water District	Yes	Yes
Milpitas Chamber of Commerce	Yes	Yes
Milpitas Unified School District	Yes	Yes
Montara Water and Sanitary District	Yes	Yes
North Coast County Water District	Yes	Yes
Purissima Hills Water District	Yes	Yes
SFPUC - Wholesaler	Yes	Yes
San Jose Water	Yes	Yes
Stanford University	Yes	Yes
Valley Water - Wholesaler	Yes	Yes
Westborough Water District	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Santa Clara County	Yes	Yes

10.1.2 Notice to the Public

The public was notified on May 28, 2021 and June 4, 2021 prior to the public hearing that the City would be reviewing and considering amendments to the UWMP. The public hearing was placed in a local newspaper for two successive weeks (14 calendar days) or two separate one-week timeframes with at least five days between publication dates, as prescribed in Government Code Section 6066.[48] This notice included time and place of hearing as well as the location where the UWMP was available for public inspection. Notification came through a display advertisement in *The Milpitas Post* (see Appendix E) and by posting the 2020 UWMP on the City's website (https://www.ci.milpitas.ca.gov/2020_uwmp/) by June 2, 2021.

10.2 Public Hearing and Adoption

This section details the public hearing and adoption processes for the 2020 UWMP and WSCP.

10.2.1 Public Hearing

The public hearing allowed for community input, consideration of economic impacts and adoption of a method for determining the City's urban water use target. As part of the public hearing, the City provided information on its baseline values, water use targets and compliance and implementation plan required in the Water Conservation Act of 2009.

10.2.2 Adoption

This 2020 UWMP was presented to the City Council for review and adopted on June 15, 2021, thereby superseding the existing plan prepared in 2015. The adopted 2020 UWMP has been filed with the Water Efficiency Office in the Department of Water Resources, the California State Library, the Bay Area Water Supply & Conservation Agency, the City offices, Santa Clara County and the Cities of Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Gilroy, Hayward, Hillsborough, Menlo Park, Millbrae, Morgan Hill, Mountain View, Palo Alto, Redwood City, San Bruno, San Jose, Santa Clara and Sunnyvale, as required by law, and will be used by the City staff during the current five-year planning cycle.

A copy of the resolution adopting the 2020 UWMP is provided in Appendix F.

10.3 Plan Submittal

To satisfy California Water Code Sections 10635(c), 10644(a)(1) and (2) and 10645(a) and (b), within 30 days of adoption, the City submitted a copy of the 2020 UWMP and WSCP to DWR, the California State Library Government Publications Section (Sacramento) and to any city or county to which the City provides water.

10.3.1 Submitting a UWMP and WSCP to DWR

To satisfy DWR requirements, all UWMPs and WSCPs must be submitted to DWR within 30 days of adoption and prior to July 1, 2021. The City met this requirement as outlined in the following sections.

10.3.2 Electronic Data Submittal

The City submitted its 2020 UWMP and WSCP to DWR electronically. Documentation confirming the City's 2020 UWMP and WSCP submittal can be found in Appendix G.

[48] California State Legislature. (1949). Government Code Section 6066. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=6066

10.3.3 Submitting a UWMP to the California State Library

The City submitted a CD or hard copy of its adopted 2020 UWMP to the California State Library within 30 days of adoption.

10.3.4 Submitting a UWMP to Cities and Counties

The City submitted a copy of its adopted 2020 UWMP to any city or county served by the City within 30 days of adoption.

10.4 Public Availability

Within 30 days after filing the 2020 UWMP and WSCP with DWR, the documents were made available for public review on the City's website.

10.5 Notification to Public Utilities Commission

Per Water Code Section 10621(c), Suppliers that are regulated by the California Public Utilities Commission (CPUC) must submit their UWMP and WSCP to the CPUC as part of its general rate case filings. Since this was not applicable to the City, the plans were not submitted to the CPUC.

10.6 Amending an Adopted UWMP or WSCP

Should any changes be made to the 2020 UWMP and/or the WSCP, per Water Code Sections 10621(d) and 10644(a)(1), within 30 days after adoption, the City must submit copies of the amendments or changes to DWR, the California State Library and any city or county to which the City supplies water.

10.6.1 Amending a UWMP

If the City amends the adopted 2020 UWMP, each of the steps for notification, public hearing, adoption and submittal must also be followed for the amended UWMP.

10.6.2 Amending a WSCP

Specific to Water Code Section 10644(b), if the City revises its WSCP after DWR has approved the 2020 UWMP, the City must submit to DWR an electronic copy of the revised WSCP within 30 days of adoption.

11 REFERENCES

All links below were accessed in June 2021 unless otherwise indicated.

Ackerly, David, Andrew Jones, Mark Stacey, Bruce Riordan (University of California, Berkeley). (2018.) *San Francisco Bay Area Summary Report.* California's Fourth Climate Change Assessment. Publication number: CCCA4-SUM-2018-005. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-005_SanFranciscoBayArea_ADA.pdf

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APPENDIX A - UWMP CHECKLIST

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficientuses, reclamation, and demand management activities.	Introduction and Overview	Section 1.2
Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally,a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Start of Each Chapter
Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management planwithin one year after it has become an urban water supplier.	Plan Preparation	Chapter 1 and Section 2.1
Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share acommon source, water management agencies, and relevant public agencies, to theextent practicable.	Plan Preparation	Sections 2.1, 2.3, and 10.1
Section 2.6.2	10642	Provide supporting documentationthat the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.6.2
Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Section 4.2.6

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	N/A (Wholesale Only)
Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Sections 3.1 and 3.2
Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
Section 3.4	10631(a)	Provide population projections for2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4.1
Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	3.4.2
Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.4.1
Section 3.5	10631(a)	Describe the land uses within theservice area.	System Description	Section 3.5
Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Sections 4.2.3, 4.2.5, and 4.2.6

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.2.4
Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings fromadopted codes, plans, and other policies or laws.	System Water Use	Section 4.2.6 and Appendix C
Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.2.6 and Appendix C
Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.3.2
Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.4
Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Sections 4.5 and 7.3.1, Appendix K and L
Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Sections 5.3 and 5.6
Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31,2020.	Baselines and Targets	Section 5.7.1

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A (Wholesale Only)
Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.7.2
Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-yearbaseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.6
Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shallbe reported using a standardized form in the SB X7-7 2020 Compliance Form.	Baselines and Targets	Section 5.7.2
Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year,and a drought lasting five years,as well as more frequent and severe periods of drought.	System Supplies	Sections 7.2.3, 7.2.5, and 7.3
Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year,and a drought lasting five years,as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Sections 7.2.3, 7.2.5, and 7.3
Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identifiedsupplies.	System Supplies	Sections 6.2.1, 6.2.2, 6.2.5, and 6.2.11

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Sections 6.2.6, 6.2.7, and 6.2.9
Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Sections 6.2.9
Section 6.2	10631(b)	Indicate whether groundwater isan existing or planned source of water available to the supplier.	System Supplies	Section 6.2.2
Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy ofthe plan or authorization.	System Supplies	Section 7.2.3
Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.2
Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy ofthe court order or decree and a description of the amount of water the supplier has the legal right topump.	System Supplies	Section 6.2.2
Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.2
Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.2

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2.2 and 6.2.9
Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 6.2.7
Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the endof 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms ofacre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.2.5

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.2.6
Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systemsin the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.2.5
Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average,single-dry, and for a period of drought lasting 5 consecutivewater years.	System Supplies	Section 6.2.8
Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code,that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.4
Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.2.3
Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.2.6
Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available tothe water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.2

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 7.3	10635(b)	Provide a drought risk assessment as part of informationconsidered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.3
Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.3.1
Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Sections 7.2.5 and 7.3
Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.3
Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Sections 7.2.3 and 7.3.1
Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	2020 UWMP Appendix I 2020 WSCP
Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	2020 WSCP Section 3.1
Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	2020 WSCP Section 3.11

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 8.2	10632(a)(2)(A)	Provide the written decision- making process and other methods that the supplier will useeach year to determine its water reliability.	Water Shortage Contingency Planning	2020 WSCP Section 3.2
Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	2020 WSCP Section 3.2.2
Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40,50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophicinterruption of supply.	Water Shortage Contingency Planning	2020 WSCP Section 3.3
Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	N/A – using six standard categories
Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	2020 WSCP Section 3.4.2
Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	2020 WSCP Section 3.4.1
Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	2020 WSCP Section 3.4.3

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific wateruse practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	2020 WSCP Section 3.4.4
Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	2020 WSCP Sections 3.4.1 and 3.4.2
Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	2020 WSCP Section 3.5
Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	2020 WSCP Section 3.6 and WSCP Appendix B
Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	2020 WSCP Section 3.6 and WSCP Appendix B
Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	2020 WSCP Section 3.7 and WSCP Appendix A
Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	2020 WSCP Section 3.8
Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	2020 WSCP Section 3.8
Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local	Water Shortage Contingency Planning	2020 WSCP Section 3.8

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
		emergency.		
Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	2020 WSCP Section 3.9
Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage responseactions.	Water Shortage Contingency Planning	2020 WSCP Section 3.9
Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	2020 WSCP Section 3.9
Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures thatensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	2020 WSCP Section 3.10
Section 8.11	10632(b)	Analyze and define water featuresthat are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	2020 WSCP Section 3.12
Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.3.4 2020 WSCP Section 3.12
Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30after adopted the plan.	Water Shortage Contingency Planning	Sections 10.3.4 and 10.4 2020 WSCP Section 3.12

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	N/A (Wholesale Only)
Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.1 and 9.2
Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10.2.1
Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported inTable 10-1.	Plan Adoption, Submittal, and Implementation	Sections 2.6.3 and 10.1.1
Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.3.1
Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan andcontingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.1.2 and Appendix E
Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.1.2 and Appendix E
Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Appendix F of the UWMP and Appendix D of the WSCP

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location
Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2 and 10.3.3
Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2 and 10.3.4
Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.3.2
Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.4
Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normalbusiness hours.	Plan Adoption, Submittal, and Implementation	Section 10.4
Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general ratecase filings.	Plan Adoption, Submittal, and Implementation	N/A – The City of Milpitas is not regulated by the Public Utilities Commission
Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10.6.2

American Water Works Association
California-Nevada Section

CA-NV AWWA Water Loss Technical Assistance Program

Wave 4 Water Audit Level 1 Validation Document

Validator Provided

Audit Information:

Utility: Milpitas PWS ID: 4310005

System Type: Potable Audit Period: Calendar 2016

Utility Representation: Courtney Rubin, Dante Ong, Joon Hong, Harris Siddiqui

Validation Date: 8/7/2017 Call Time: 9:00am Sufficient Supporting Documents Provided: Yes

(amended 9/27/2017 with supporting document correction of BMAC volume)

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 55 Data Validity Band (Level): Band III (51-70)

ILI: 2.35 Real Loss: 47.75 (gal/conn/day) Apparent Loss: 22.38 (gal/conn/day)

Non-revenue water as percent of cost of operating system: 13.0

Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Validator Information:

Water Audit Validator: Will Jernigan Validator Qualifications: Contractor for CA-NV AWWA Water Loss TAP

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WSO CAVANAUGH Stewardship Through Innovation

American Water Works Association
California-Nevada Section

CA-NV AWWA Water Loss Technical Assistance Program

Wave 4 Water Audit Level 1 Validation Document

Utility Provided

Water System Name: Milpitas Water System ID Number: 431005 Water Audit Period: Calendar 2016

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

The City of Milpitas put a meter replacement budget in place, and began tracking water meter replacement calibration tests. The City initiated research and began laying the foundation to implement an Advanced Metering Infrastructure (AMI). A line of communication was opened with wholesalers to track water supply, and better understand meter reading and calibration practices.

Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

TONY NDAH	DEPUTY PUBLIC WORKS DIRECTOR		9/27/2017
Executive Name (Print)	Executive Position	Signature	Date

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WSO | CAVANAUGH
Stewardship Through Innovation

Level 1 Validation Certificate

WSO

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 9/10/2018

Water Supplier

Supplier Name:	City of Milpitas
Supplier Participants:	Tony Ndah, Harris Siddiqui

Validator

Validator:	Kate Gasner, Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

Key Audit Metrics

Data Validity Score:	64	
ILI:	0.66	
Real Loss:	13.4	gal / conn / day
Apparent Loss:	16.8	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	4.0%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	City of Milpitas
Water Supplier Public Water System ID:	431005
Water Audit Period:	Calendar 2017

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

The City of Milpitas continues to replace meters, and track water meter replacement calibration test. The City initiated a condition assessment study through the implementation of a city-wide corrosivity survey. Appropriations have been made for the current and following fiscal year budgets to develop a Water Master Plan.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):	Tony Ndah
Executive Position:	Public Works Director
Signature:	
Date	10/1/2018

Level 1 Validation Certificate

WSO

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 8/8/2019

Water Supplier

Supplier Name:	City of Milpitas
Supplier Participants:	Tony Ndah, Glen Campi, Harris Siddiqui, Teddy Alicante

Validator

Validator:	Colin Stief Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

Key Audit Metrics

Data Validity Score:	63	
ILI:	2.19	
Real Loss:	42.67	gal / conn / day
Apparent Loss:	11.14	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	2.8%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	City of Milpitas
Water Supplier Public Water System ID:	4310005
Water Audit Period:	Calendar 2018

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

The City of Milpitas continues to replace meters and track meter replacement calibration tests. New meters installed within the audit period were equipped with AMI transponder technology. The City of Milpitas launched a city-wide soil corrosivity survey and an RFP was prepared for water master planning.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):	Tony Ndah
Executive Position:	Public Works Director
Signature:	
Date	9/25/2019

Level 1 Validation Certificate

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 9/24/2020

Water Supplier

Supplier Name:	City of Milpitas
Supplier Participants:	Tony Ndah, Glen Campi, Harris Siddiqui, Teddy Alicante

Validator

Validator:	Kevin Burgers, Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

Key Audit Metrics

Data Validity Score:	60	
ILI:	2.27	
Real Loss:	45.83	gal / conn / day
Apparent Loss:	12.03	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	4.1%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	City of Milpitas
Water Supplier Public Water System ID:	4310005
Water Audit Period:	Calendar 2019

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

The City of Milpitas continues to track meter calibration test results and replace meters as needed. New meters installed within the audit period were equipped with AMI transponder technology. In addition, the first phase of the Leak Detection Survey project took place in December 2019 and was intended to identify potential water system leaks within specific regions of the City. The City of Milpitas intends to carry on with the next phase of the Leak Detection Survey in 2020.

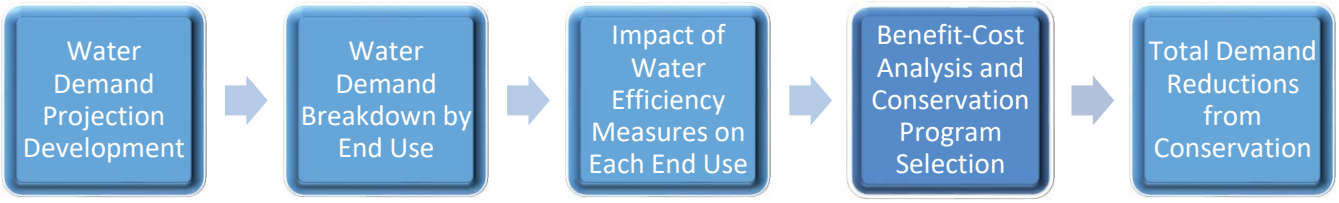
Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):	Tony Ndah
Executive Position:	Public Works Director
Signature:	
Date	9/29/2020

APPENDIX C- DEMAND & PASSIVE SAVINGS METHODOLOGY

C.1 DSS Model Overview



DSS Model Overview: The Least Cost Planning Decision Support System Model (DSS Model) is used to prepare long-range, detailed demand projections. The purpose of the extra detail is to enable a more accurate assessment of the impact of water efficiency programs on demand and to provide a rigorous and defensible modeling approach necessary for projects subject to regulatory or environmental review.

Originally developed in 1999 and continuously updated, the DSS Model is an "end-use" model that breaks down total water production (water demand in the service area) to specific water end uses, such as plumbing fixtures and appliances. The model uses a bottom-up approach that allows for multiple criteria to be considered when estimating future demands, such as the effects of natural fixture replacement, plumbing codes, and conservation efforts. The DSS Model may also use a top-down approach with a utility-prepared water demand forecast.

Demand Forecast Development and Model Calibration: To forecast urban water demands using the DSS Model, customer demand data is obtained from the water agency being modeled. Demand data is reconciled with available demographic data to characterize water usage for each customer category in terms of number of users per account and per capita water use. Data is further analyzed to approximate the split of indoor and outdoor water usage in each customer category. The indoor/outdoor water usage is further divided into typical end uses for each customer category. Published data on average per capita indoor water use and average per capita end use is combined with the number of water users to calibrate the volume of water allocated to specific end uses in each customer category. In other words, the DSS Model checks that social norms from end studies on water use behavior (e.g., flushes per person per day) are not exceeded or drop below reasonable use limits.

Passive Water Savings Calculations: The DSS Model is used to forecast service area water fixture use. Specific end-use type, average water use, and lifetime are compiled for each fixture. Additionally, state and national plumbing codes and appliance standards are modeled by customer category. These fixtures and plumbing codes can be added to, edited, or deleted by the user. This process yields two demand forecasts, one with plumbing codes and one without plumbing codes.

Active Conservation Measure Analysis Using Benefit-Cost Analysis: The DSS Model evaluates active conservation measures using benefit-cost analysis with the present value of the cost of water saved ($/Million Gallons or $/Acre-Feet). Benefits are based on savings in water and wastewater facility operations and maintenance (O&M) and any deferred capital expenditures. The figures on the previous page illustrate the processes for forecasting conservation water savings, including the impacts of fixture replacement due to existing plumbing codes and standards.

Figure C-2. Sample Benefit-Cost Analysis Summary

Conservation Measures

Benefit Cost Analysis

Previo Conser AMI RES WC IRR CIIR NO MU LDS PRV LEA UHE UHE TOI HO RAI RAI SPR Lan SCH GEN DIP B/C Next

Review Data

Benefit Cost Analysis

Util Cost Five Year Start Year 2020 Water Savings Year 2030 Units AF

	Measure	Present Value of Water Utility Benefits	Present Value of Community Benefits	Present Value of Water Utility Costs	Present Value of Community Costs	Water Utility Benefit to Cost Ratio	Community Benefit to Cost Ratio	Five Years of Water Utility Costs 2020-2025	Water Savings in 2030 (afy)	Cost of Savings per Unit Volume ($/af)
AMI	Full AMI Implementation	$3,976,434	$16,635,194	$1,566,069	$5,893,340	2.54	2.82	$320,000	133.764878	$324
RESH	Residential Rebates for HECW	$139,312	$365,447	$95,879	$200,665	1.45	1.82	$50,325	5.124572	$824
WC	Water Checkup	$7,648,165	$30,288,419	$6,005,949	$7,665,564	1.27	3.95	$1,382,995	239.652915	$877
IRREV	Irrigation Evaluations	$1,589,488	$1,589,488	$1,918,184	$4,332,779	0.83	0.37	$443,824	98.051821	$646
CIIRe	CII Water Survey Level 2 and Customized Rebate	$910,720	$3,313,109	$915,904	$2,581,185	0.99	1.28	$193,725	18.753753	$1,055
NOZZ	Free Sprinkler Nozzle Program	$277,886	$277,886	$329,386	$455,933	0.84	0.61	$103,145	23.005687	$680
MULC	Mulch Program	$80,739	$80,739	$287,676	$287,676	0.28	0.28	$66,932	4.554625	$2,000
LDS	Water Conserving Landscape and Irrigation Codes	$1,055,819	$1,055,819	$350,316	$7,979,608	3.01	0.13	$78,568	46.098525	$161
PRV	Pressure Reduction Valve Rebate	$102,170	$193,972	$49,161	$132,223	2.08	1.47	$37,818	8.503521	$425
LEAK	Leak Detection Device Rebate	$174,130	$847,416	$306,843	$1,288,743	0.57	0.66	$80,053	6.065394	$1,895
UHET	Ultra-High Efficiency Toilet Rebate	$538,624	$538,624	$405,529	$761,556	1.33	0.71	$362,736	16.287780	$921

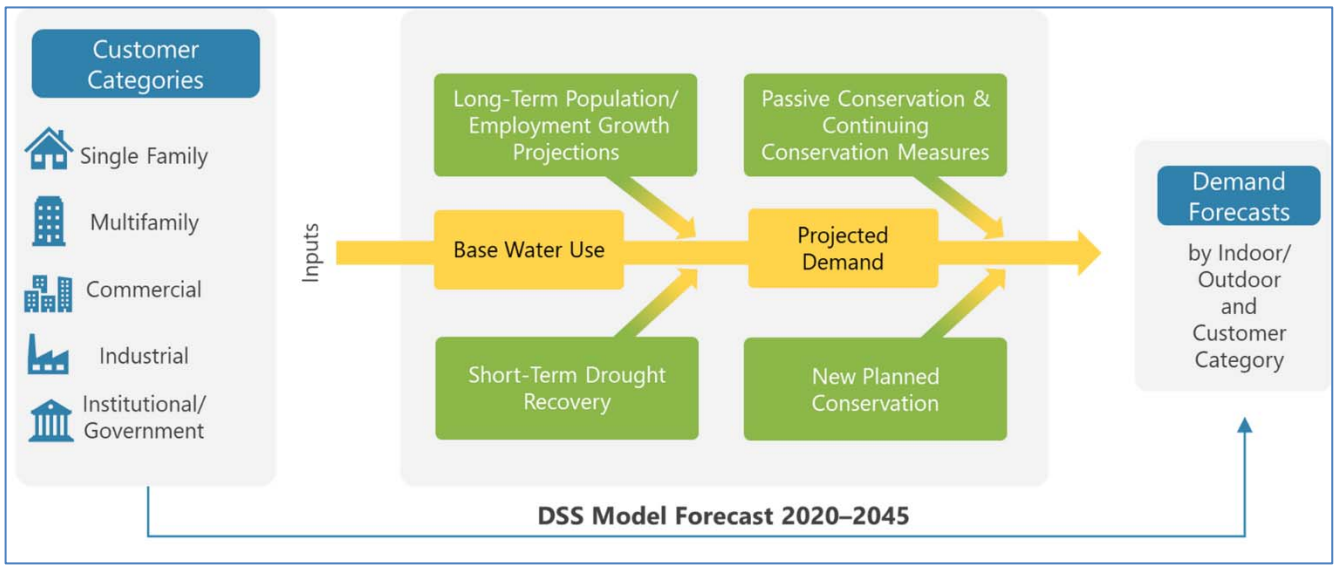
Model Use and Validation: The DSS Model has been used for over 20 years for practical applications of conservation planning in over 300 service areas representing 60 million people, including extensive efforts nationally and internationally in Australia, New Zealand, and Canada.

Figure C-3. DSS Model Analysis Locations in the U.S.

The California Water Efficiency Partnership, or CalWEP (formerly the CUWCC), has peer reviewed and endorsed the model since 2006. It is offered to all CalWEP members for use to estimate water demand, plumbing code, and conservation program savings.

The DSS Model can use one of the following: 1) a statistical approach to forecast demands (e.g., an econometric model); 2) a forecasted increase in population and employment; 3) predicted future demands; or 4) a demand projection entered into the model from an outside source. The following figure presents the flow of information in the DSS Model Analysis.

Figure C-4. DSS Model Analysis Flow



C.2 DSS Model Methodology

Each conservation measure targets a particular water use, such as indoor single family water use. Targeted water uses are categorized by water user group and by end use. Targeted water user groups include single family residential; multi-family residential; commercial, industrial, and institutional; and so forth. Measures may apply to more than one water user group. Targeted end uses include indoor and outdoor use. The targeted water use is important to identify because the water savings are generated from reductions in water use for the targeted end use. For example, a residential retrofit conservation measure targets single family and multi-family residential indoor use, and in some cases specifically shower use. When considering the water savings potential generated by a residential retrofit, one considers the water saved by installing low-flow showerheads in single family and multi-family homes.

The market penetration goal for a measure is the extent to which the product or service related to the conservation measure occupies the potential market. Essentially, the market penetration goal identifies how many fixtures, rebates, surveys, and so forth that the wholesale customer would have to offer or conduct over time to reach its water savings goal for that conservation measure. This is often expressed in terms of the number of fixtures, rebates, or surveys offered or conducted per year.

The potential for error in market penetration goal estimates for each measure can be significant because the estimates are based on previous experience, chosen implementation methods, projected utility effort, and funds allocated to implement the measure. The potential error can be corrected through reevaluation of the measure as the implementation of the measure progresses. For example, if the market penetration required to achieve specific water savings turns out to be different than predicted, adjustments to the implementation efforts can be made. Larger rebates or additional promotions are often used to increase the market penetration. The process is iterative to reflect actual conditions and helps to ensure that market penetration and needed savings are achieved regardless of future variances between estimates and actual conditions.

In contrast, market penetration for mandatory ordinances can be more predictable with the greatest potential for error occurring in implementing the ordinance change. For example, requiring dedicated irrigation meters for new accounts through an ordinance can assure an almost 100% market penetration for affected properties.

The City is constantly examining when a measure might reach saturation. Baseline surveys are the best approach to having the most accurate information on market saturation. This was considered when analyzing individual conservation measures where best estimates were made. MWM was not provided with any baseline surveys for this analysis, but discussions were held with the City regarding what the saturation best estimates were within its service area.

C.3 Present Value Analysis and Perspectives on Benefits and Costs

The determination of the economic feasibility of water conservation programs involves comparing the costs of the programs to the benefits provided using the DSS Model, which calculates the cost effectiveness of conservation measure savings at the end-use level. For example, the model determines the amount of water a toilet rebate program saves in daily toilet use for each single family account.

Present value analysis using present day dollars and a real discount rate of 3% is used to discount costs and benefits to the base year. From this analysis, benefit-cost ratios of each measure are computed. When measures are put together in programs, the model is set up to avoid double counting savings from multiple measures that act on the same end use of water. For example, multiple measures in a program may target toilet replacements. The model includes assumptions to apportion water savings between the multiple measures.

Economic analysis can be performed from several different perspectives, based on which party is affected. For planning water use efficiency programs for utilities, perspectives most commonly used for benefit-cost analyses are the “utility” perspective and the “community” perspective. The “utility” benefit-cost analysis is based on the benefits and costs to the water provider. The “community” benefit-cost analysis includes the utility benefit and

costs together with account owner/customer benefits and costs. These include customer energy and other capital or operating cost benefits plus costs of implementing the measure beyond what the utility pays.

The utility perspective offers two advantages. First, it considers only the program costs that will be directly borne by the utility. This enables the utility to fairly compare potential investments for saving versus supplying increased quantities of water. Second, revenue shifts are treated as transfer payments, which means program participants will have lower water bills and non-participants will have slightly higher water bills so that the utility's revenue needs continue to be met. Therefore, the analysis is not complicated with uncertainties associated with long-term rate projections and retail rate design assumptions. It should be noted that there is a significant difference between the utility's savings from the avoided cost of procurement and delivery of water and the reduction in retail revenue that results from reduced water sales due to water use efficiency. This budget impact occurs slowly and can be accounted for in water rate planning. Because it is the water provider's role in developing a water use efficiency plan that is vital in this study, the utility perspective was primarily used to evaluate elements of this report.

The community perspective is defined to include the utility and the customer costs and benefits. Costs incurred by customers striving to save water while participating in water use efficiency programs are considered, as well as benefits received in terms of reduced energy bills (from water heating costs) and wastewater savings, among others. Water bill savings are not a customer benefit in aggregate for reasons described previously. Other factors external to the utility, such as environmental effects, are often difficult to quantify or are not necessarily under the control of the utility. They are therefore frequently excluded from economic analyses, including this one.

The time value of money is explicitly considered. Typically, the costs to save water occur early in the planning period whereas the benefits usually extend to the end of the planning period. A long planning period of over 30 years is often used because costs and benefits that occur beyond these 25 years (beyond the year 2045 in this Plan) have very little influence on the total present value of the costs and benefits. The value of all future costs and benefits is discounted to the first year in the DSS Model (the base year) at the real interest rate of 3.01%. The DSS Model calculates this real interest rate, adjusting the current nominal interest rate (assumed to be approximately 6.1%) by the assumed rate of inflation (3.0%).

The formula to calculate the real interest rate is:

(nominal interest rate – assumed rate of inflation) / (1 + assumed rate of inflation)

Cash flows discounted in this manner are herein referred to as "Present Value" sums.

C.4 Measure Cost and Water Savings Assumptions

In Suisun-Solano Water Authority's DSS Model, to evaluate each water conservation measure, assumptions regarding the following variables were made for each measure:

- **Targeted Water User Group End Use** – Water user group (e.g., single family residential) and end use (e.g., indoor or outdoor water use).
- **Utility Unit Cost** – Cost of rebates, incentives, and contractors hired to implement measures. The assumed dollar values for the measure unit costs were closely reviewed by staff and are found to be adequate for each individual measure. The values in most cases are in the range of what is currently offered by other water utilities in the region.
- **Retail Customer Unit Cost** – Cost for implementing measures that is paid by retail customers (i.e., the remainder of a measure's cost that is not covered by a utility rebate or incentive).
- **Utility Administration and Marketing Cost** – The cost to the utility for administering the measure, including consultant contract administration, marketing, and participant tracking. The mark-up is sufficient (in total) to cover conservation staff time, general expenses, and overhead.

Costs are determined for each of the measures based on industry knowledge, past experience, and data provided by Suisun-Solano Water Authority. Costs may include incentive costs, usually determined on a per-participant

basis; fixed costs, such as marketing; variable costs, such as the cost to staff the measures and to obtain and maintain equipment; and a one-time set-up cost. The set-up cost is for measure design by staff or consultants, any required pilot testing, and preparation of materials that are used in marketing the measure. Measure costs are estimated each year through 2045. Costs are spread over the time period depending on the length of the implementation period for the measure and estimated voluntary customer participation levels.

Lost revenue due to reduced water sales is not included as a cost because the water use conservation measures evaluated herein generally take effect over a long span of time. This span is sufficient to enable timely rate adjustments, if necessary, to meet fixed cost obligations and savings on variable costs such as energy and chemicals.

The unit costs vary according to the type of customer account and implementation method being addressed. For example, a measure might cost a different amount for a residential single family account than for a residential multi-family account, and for a rebate versus an ordinance requirement or a direct installation implementation method. Typically, water utilities have found there are increased costs associated with achieving higher market saturation, such as more surveys per year. The DSS Model calculates the annual costs based on the number of participants each year. The general formula for calculating annual utility costs is:

- Annual Utility Cost = Annual market penetration rate x total accounts in category x unit cost per account x (1+administration and marketing markup percentage)
- Annual Customer Cost = Annual number of participants x unit customer cost
- Annual Community Cost = Annual utility cost + annual customer cost

Data necessary to forecast water savings of measures include specifics on water use, demographics, market penetration, and unit water savings. Savings normally develop at a measured and predetermined pace, reaching full maturity after full market penetration is achieved. This may occur 3 to 10 years after the start of implementation, depending upon the implementation schedule.

For every water use efficiency activity or replacement with more efficient devices, there is a useful life. The useful life is called the “Measure Life” and is defined to be how long water use conservation measures stay in place and continue to save water. It is assumed that measures implemented because of codes, standards, or ordinances (e.g., toilets) would be “permanent” and not revert to an old inefficient level of water use if the device needed to be replaced. However, some measures that are primarily behavior-based, such as residential surveys, are assumed to need to be repeated on an ongoing basis to retain the water savings (e.g., homeowners move away, and the new homeowners may have less efficient water using practices). Surveys typically have a measure life on the order of five years.

C.5 National Plumbing Code

The Federal Energy Policy Act of 1992, as amended in 2005, mandates that only fixtures (as listed below) meeting the following standards can be installed in new buildings:

Toilet – 1.6 gal/flush maximum

Urinals – 1.0 gal/flush maximum

Showerhead – 2.5 gal/min at 80 pounds per square inch (psi)

Residential faucets – 2.2 gal/min at 60 psi

Public restroom faucets – 0.5 gal/min at 60 psi

Dishwashing pre-rinse spray valves – 1.6 gal/min at 60 psi

Replacement of fixtures in existing buildings is also governed by the Federal Energy Policy Act, which mandates that only devices with the specified level of efficiency (as shown above) can be sold as of 2006. The net result of

the plumbing code is that new buildings will have more efficient fixtures and old inefficient fixtures will slowly be replaced with new, more efficient models. The national plumbing code is an important piece of legislation and must be carefully taken into consideration when analyzing the overall water efficiency of a service area.

In addition to the plumbing code, the U.S. Department of Energy regulates appliances, such as residential clothes washers, further reducing indoor water demands. Regulations to make these appliances more energy efficient have driven manufactures to dramatically reduce the amount of water these machines use. Generally, front-loading washing machines use 30-50% less water than conventional (top-loading) models, which are still available but are becoming more water efficient.

In this analysis, the DSS Model forecasts a gradual transition to high efficiency clothes washers (using 12 gallons or less) so that by the year 2025 that will be the only type of machine available for purchase. In addition to the industry becoming more efficient, rebate programs for washers have been successful in encouraging customers to buy more water-efficient models. Given that machines last about 10 years, eventually all machines on the market will be the more water-efficient models. Energy Star washing machines have a water factor of 6.0 or less – the equivalent of using 3.1 cubic feet (or 23.2 gallons) of water per load. The maximum water factor for residential clothes washers under current federal standards is 6.5 (equates to approximately 19 gallons per load based on an average 2.9 cubic ft. tub). The water factor equals the number of gallons used per cycle per cubic foot of capacity.

Water Factor (WF) = gallons per load/tub volume

OR

washer capacity (cubic ft.)/average tub volume

Prior to the year 2000, the water factor for a typical new residential clothes washer was around 12 (equates to approximately 35 gallons per load based on an average 2.9 cubic ft. tub). In March 2015, the federal standard reduced the maximum water factor for top- and front-loading machines to 8.4 and 4.7, respectively. In 2018, the maximum water factor for top-loading machines was further reduced to 6.5. For commercial washers, the maximum water factors were reduced in 2010 to 8.5 and 5.5 for top- and front-loading machines, respectively. Beginning in 2015, the maximum water factor for Energy Star certified washers was 3.7 for front-loading and 4.3 for top-loading machines. In 2011, the U.S. Environmental Protection Agency estimated that Energy Star washers comprised more that 60% of the residential market and 30% of the commercial market (Energy Star, 2011). A new Energy Star compliant washer uses about two-thirds less water per cycle than washers manufactured in the 1990s.

C.6 State Plumbing Code

This section describes California state codes applicable to Suisun-Solano Water Authority's water use.

C.6.1 California State Law – AB 715

Plumbing codes for toilets, urinals, showerheads, and faucets were initially adopted by California in 1991, mandating the sale and use of ultra-low flush toilets (ULFTs) using 1.6 gpf, urinals using 1 gpf, and low-flow showerheads and faucets. AB 715 led to an update to California Code of Regulations Title 20 (see Section C.5.3) mandating that all toilets and urinals sold and installed in California as of January 1, 2014 must be high efficiency versions having flush ratings that do not exceed 1.28 gpf (toilets) and 0.5 gpf (urinals).

C.6.2 California State Laws – SB 407 and SB 837

SB 407 addresses plumbing fixture retrofits on resale or remodel. The DSS Model carefully considers the overlap with SB 407, the plumbing code (natural replacement), CALGreen, AB 715 and rebate programs (such as toilet rebates). SB 407 (enacted in 2009) requires that properties built prior to 1994 be fully retrofitted with water conserving fixtures by the year 2017 for single family residential houses and 2019 for multifamily and commercial properties. SB 407 program length is variable and continues until all the older high flush toilets have been replaced in the service area. The number of accounts with high flow fixtures is tracked to make sure that the situation of replacing more high flow fixtures than actually exist does not occur. Additionally, SB 407 conditions issuance of building permits for major improvements and renovations upon retrofit of non-compliant plumbing fixtures. SB 837 (enacted in 2011) requires that sellers of real estate property disclose on their Real Estate Transfer Disclosure Statement whether their property complies with these requirements. Both laws are intended to accelerate the replacement of older, low efficiency plumbing fixtures, and ensure that only high efficiency fixtures are installed in new residential and commercial buildings.

C.6.3 2019 CALGreen and 2015 CA Code of Regulations Title 20 Appliance Efficiency Regulations

Fixture characteristics in the DSS Model are tracked in new accounts, which are subject to the requirements of the 2019 California Green Building Code and 2015 California Code of Regulations Title 20 Appliance Efficiency Regulations adopted by the California Energy Commission (CEC) on September 1, 2015. The CEC 2015 appliance efficiency standards apply to the following new appliances, if they are sold in California: showerheads, lavatory faucets, kitchen faucets, metering faucets, replacement aerators, wash fountains, tub spout diverters, public lavatory faucets, commercial pre-rinse spray valves, urinals, and toilets. The DSS Model accounts for plumbing code savings due to the effects these standards have on showerheads, faucet aerators, urinals, toilets, and clothes washers.

Showerheads – July 2016: 2.0 gallons per minute (gpm); July 2018: 1.8 gpm

Wall Mounted Urinals – January 2016: 0.125 gpf (pint)

Lavatory Faucets and Aerator – July 2016: 1.2 gpm at 60 psi

Kitchen Faucets and Aerator – July 2016: 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi

Public Lavatory Faucets – July 2016: 0.5 gpm at 60 psi

In summary, the controlling law for **toilets** is AB 715, requiring high efficiency toilets of 1.28 gpf sold in California beginning in 2014. The controlling law for wall-mounted urinals is the 2015 CEC efficiency regulations requiring that ultra-high efficiency pint **urinals** (0.125 gpf) be exclusively sold in California beginning January 1, 2016. This is an efficiency progression for urinals from AB 715's requirement of high efficiency (0.5 gpf) urinals starting in 2014.

Standards for **residential clothes washers** fall under the regulations of the U.S. Department of Energy. In 2018, the maximum water factor for standard top-loading machines was reduced to 6.5.

Showerhead flow rates are regulated under the 2015 California Code of Regulations Title 20 Appliance Efficiency Regulations adopted by the CEC, which requires the exclusive sale in California of 2.0 gpm showerheads at 80 psi as of July 1, 2016 and 1.8 gpm showerheads at 80 psi as of July 1, 2018. The WaterSense specification applies to showerheads that have a maximum flow rate of 2.0 gpm or less. This represents a 20% reduction in showerhead flow rate over the current federal standard of 2.5 gpm, as specified by the Energy Policy Act of 1992.

Faucet flow rates likewise have been regulated by the 2015 CEC Title 20 regulations. This standard requires that the residential faucets and aerators manufactured on or after July 1, 2016 be exclusively sold in California at 1.2 gpm at 60 psi; and public lavatory and kitchen faucets/aerators sold or offered for sale on or after July 1, 2016

be 0.5 gpm at 60 psi and 1.8 gpm at 60 psi (with optional temporary flow of 2.2 gpm), respectively. Previously, all faucets had been regulated by the 2010 California Green Building Code at 2.2 gpm at 60 psi.

C.7 Key Baseline Potable Demand Inputs, Passive Savings Assumptions, and Resources

The following tables present the key assumptions and references that are used in the DSS Model in determining projected demands with plumbing code savings. The assumptions having the most dramatic effect on future demands are the natural replacement rate of fixtures, how residential or commercial future use is projected, and the percent of estimated real water losses.

Table C-1. List of Key Assumptions

Parameter	Model Input Value, Assumptions, and Key References				
Model Start Year for Analysis	2020				
Water Demand Factor Year (Base Year)	2016 - 2019				
Population Projection Source	2020 Department of Finance, 2025 – 2035 City of Milpitas 2035 General Plan, 2040 Association of Bay Area Governments				
Employment Projection Source	2020 – 2035 2017 DSS Model, 2035 – 2040 City of Milpitas 2035 General Plan				
Avoided Cost of Water	$10,360/MG				
Potable Water System Base Year Water Use Profile					
Customer Categories	**Start Year Accounts**	**Total Water Use Distribution**	**Demand Factors (gpd/account)**	**Indoor Use %**	**2020 Residential Indoor Water Use (GPCD)**
Single Family	11,879	33.1%	216	72%	43
Multifamily	1,851	21.1%	879	97%	44
Commercial	554	15.7%	2,189	92%	N/A
Industrial	277	13.3%	3,717	87%	N/A
Institutional	32	3.4%	8,354	77%	N/A
Irrigation	505	11.3%	1,732	0%	N/A
City	117	2.0%	1,302	38%	N/A
Total/Avg	**15,254**	**100%**	**N/A**	**N/A**	**N/A**

Table C-2. Key Assumptions Resources

Parameter	Resource
Residential End Uses	Key Reference: CA DWR Report "California Single Family Water Use Efficiency Study," (DeOreo, 2011 – Page 28, Figure 3: Comparison of household end-uses) and AWWA Research Foundation (AWWARF) Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Table 2-A. Water Consumption by Water-Using Plumbing Products and Appliances - 1980-2012. PERC Phase 1 Report. Plumbing Efficiency Research Coalition. 2013. http://www.map-testing.com/assets/files/PERC%20Report_Final_Phase%20One_Nov%202011_v1.1.pdf Model Input Values are found in the "End Uses" section of the DSS Model on the "Breakdown" worksheet.
Non-Residential End Uses, percent	Key Reference: AWWARF Report "Commercial and Institutional End Uses of Water" (Dziegielewski, 2000 – Appendix D: Details of Commercial and Industrial Assumptions, by End Use). Santa Clara Valley Water District Water Use Efficiency Unit. "SCVWD CII Water Use and Baseline Study." February 2008. Model Input Values are found in the "End Uses" section of the DSS Model on the "Breakdown" worksheet.
Efficiency Residential Fixture Current Installation Rates	U.S. Census, housing age by type of dwelling plus natural replacement plus rebate program (if any). Key Reference: GMP Research, Inc. (2019). 2019 U.S. WaterSense Market Penetration Industry Report. Key Reference: Consortium for Efficient Energy (www.cee1.org). Model Input Values are found in the "Codes and Standards" green section of the DSS Model by customer category fixtures.
Water Savings for Fixtures, gal/capita/day	Key Reference: AWWARF Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Key Reference: CA DWR Report "California Single Family Water Use Efficiency Study" (DeOreo, 2011 – Page 28, Figure 3: Comparison of household end-uses). Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model.
Non-Residential Fixture Efficiency Current Installation Rates	Key Reference: 2010 U.S. Census, Housing age by type of dwelling plus natural replacement plus rebate program (if any). Assume commercial establishments built at same rate as housing, plus natural replacement. California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014.

	Santa Clara Valley Water District Water Use Efficiency Unit. "SCVWD CII Water Use and Baseline Study." February 2008. Model Input Values are found in the "Codes and Standards" green section of the DSS Model by customer category fixtures.
Residential Frequency of Use Data, Toilets, Showers, Faucets, Washers, Uses/user/day	Key Reference: AWWARF Report "Residential End Uses of Water, Version 2 - 4309" (DeOreo, 2016). Summary values can be found in the full report: https://www.waterrf.org/research/projects/residential-end-uses-water-version-2 Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Key Reference: Alliance for Water Efficiency, The Status of Legislation, Regulation, Codes & Standards on Indoor Plumbing Water Efficiency, January 2016. Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model and confirmed in each "Service Area Calibration End Use" worksheet by customer category.
Non-Residential Frequency of Use Data, Toilets, Urinals, and Faucets, Uses/user/day	Key References: Estimated based on AWWARF Report "Commercial and Institutional End Uses of Water" (Dziegielewski, 2000 – Appendix D: Details of Commercial and Industrial Assumptions, by End Use). Key Reference: California Energy Commission, Staff Analysis of Toilets, Urinals and Faucets, Report # CEC-400-2014-007-SD, 2014. Fixture uses over a 5-day work week are prorated to 7 days. Non-residential 0.5gpm faucet standards per Table 2-A. Water Consumption by Water-Using Plumbing Products and Appliances - 1980-2012. PERC Phase 1 Report. Plumbing Efficiency Research Coalition, 2012. http://www.map-testing.com/assets/files/PERC%20Report_Final_Phase%20One_Nov%202011_v1.1.pdf Model Input Values are found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model and confirmed in each "Service Area Calibration End Use" worksheet by customer category.
Natural Replacement Rate of Fixtures (percent per year)	Residential Toilets 2%-4%
	Non-Residential Toilets 2%-3%
	Residential Showers 4% (corresponds to 25-year life of a new fixture)
	Residential Clothes Washers 10% (based on 10-year washer life). Key References: "Residential End Uses of Water" (DeOreo, 2016) and "Bern Clothes Washer Study, Final Report" (Oak Ridge National Laboratory, 1998).
	Residential Faucets 10% and Non-Residential Faucets 6.7% (every 15 years). CEC uses an average life of 10 years for faucet accessories (aerators). A similar assumption can be made for public lavatories, though no hard data exists and since CII fixtures are typically replaced less frequently than residential, 15 years is assumed. CEC, Analysis of Standards Proposal for Residential Faucets and Faucet Accessories, a report prepared under CEC's Codes and Standards Enhancement Initiative, Docket #12-AAER-2C, August 2013.

	Model Input Value is found in the "Codes and Standards" green section on the "Fixtures" worksheet of the DSS Model.
Residential Future Water Use	Increases Based on Population Growth and Demographic Forecast
Non-Residential Future Water Use	Increases Based on Employment Growth and Demographic Forecast

C.7.1 Fixture Estimates

Determining the current level of efficient fixtures in a service area while evaluating the passive savings in the DSS Model is part of the standard process and is called "initial fixture proportions." MWM reconciled water-efficient fixtures and devices installed within the Suisun-Solano Water Authority service area and estimated the number of outstanding inefficient fixtures.

MWM used the DSS Model to perform a saturation analysis for toilets, urinals, showerheads, faucets, and clothes washers. The process included a review of age of buildings from census data, number of rebates per device, and assumed natural replacement rates. MWM presumed the fixtures that were nearing saturation and worth analysis would include residential toilets and residential clothes washers, as both have been included in recommended water use efficiency practices for over two decades.

In 2014, the Water Research Foundation updated its 1999 Residential End Uses of Water Study (REUWS). Water utilities, industry regulators, and government planning agencies consider it the industry benchmark for single family home indoor water use. This incorporates recent study results that reflect the change to the water use profile in residential homes including adoption of more water-efficient fixtures over the 15 years that transpired from 1999 to 2014. REUWS results were combined with Suisun-Solano Water Authority historical rebate and billing data to enhance and verify assumptions made for all customer accounts, including saturation levels on the above-mentioned plumbing fixtures.

The DSS Model presents the estimated current and projected proportions of these fixtures by efficiency level within Suisun-Solano Water Authority's service area. These proportions were calculated by:

Using standards in place at the time of building construction,

Taking the initial proportions of homes by age (corresponding to fixture efficiency levels),

Adding the net change due to natural replacement, and

Adding the change due to rebate measure minus the "free rider effect."

Further adjustments were made to initial proportions to account for the reduction in fixture use due to lower occupancy and based on field observations. The projected fixture proportions do **not** include any future active water use efficiency measures implemented by Suisun-Solano Water Authority. More information about the development of initial and projected fixture proportions can be found in the DSS Model "Codes and Standards" section.

The DSS Model is capable of modeling multiple types of fixtures, including fixtures with different designs. For example, currently toilets can be purchased that flush at a rate of 0.8 gpf, 1.0 gpf or 1.28 gpf. The 1.6 gpf and higher toilets still exist but can no longer be purchased in California. Therefore, they cannot be used for replacement or new installation of a toilet. So, the DSS Model utilizes fixture replacement rates to determine what type of fixture should be used for a new construction installation or replacement. The replacement of the fixtures is listed as a percentage within the DSS Model. A value of 100% would indicate that all the toilets installed would be of one particular flush volume. A value of 75% means that three out of every four toilets installed would be of that particular flush volume. All the Fixture Model information and assumptions were carefully reviewed and accepted by Suisun-Solano Water Authority staff.

The DSS Model provides inputs and analysis of the number, type, and replacement rates of fixtures for each customer category (e.g., single family toilets, commercial toilets, residential clothes washing machines.). For example, the DSS Model incorporates the effects of the 1992 Federal Energy Policy Act and AB 715 on toilet fixtures. A DSS Model feature determines the “saturation” of 1.6 gpf toilets as the 1992 Federal Energy Policy Act was in effect from 1992-2014 for 1.6 gpf toilet replacements. AB 715 now applies for the replacement of toilets at 1.28 gpf. Further consideration and adjustments were made to replacement rates to account for the reduction in fixture use and wear, due to lower occupancy and based on field observations.

APPENDIX D - NOTICE OF INTENT TO UPDATE UWMP

From: Milpitas Works <milpitasworks@ci.milpitas.ca.gov>
Sent: Tuesday, February 23, 2021 9:55 AM
To: <*email list removed due to space and privacy issues*>
Subject: City of Milpitas - Notice of Preparation of 2020 Urban Water Management Plan and Water Shortage Contingency Plan - 2020 Update

Subject: City of Milpitas - Notice of Preparation of 2020 Urban Water Management Plan and Water Shortage Contingency Plan - 2020 Update

Dear Water Suppliers,

The Urban Water Management Planning Act (California Water Code §10608–10656) requires the City of Milpitas ("the City") to update its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) every 5 years. The City of Milpitas is currently reviewing its existing UWMP and associated WSCP, which were updated in 2016, and considering revisions to the documents. The updated UWMP and WSCP are due to the California Department of Water Resources by July 1, 2021. We invite your agency's participation in this revision process.

A draft of the 2020 UWMP and WSCP will be made available for public review and a public hearing will be scheduled in May 2021. In the meantime, if you would like more information regarding the City's 2015 UWMP and WSCP and the schedule for updating these documents, or if you would like to participate in the preparation of the 2020 UWMP and WSCP, please contact me.

Sincerely,

Tony Ndah
Director of Public Works
City of Milpitas
Phone: (408) 586-2600
milpitasworks@ci.milpitas.ca.gov

APPENDIX E - NOTICE OF PUBLIC HEARING

From: Milpitas Works <milpitasworks@ci.milpitas.ca.gov>
Sent: Wednesday, May 26, 2021 11:33 AM
To: *<email list removed due to space and privacy issues>*
Subject: City of Milpitas - Notice of Public Hearing for the 2020 Urban Water Management Plan and Water Shortage Contingency Plan

Dear Water Suppliers,

The Urban Water Management Planning Act (California Water Code §10608–10656) requires the City of Milpitas ("the City") to update its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) every 5 years. As part of the 2020 UWMP, the City expanded its Water Shortage Contingency Plan (WSCP) to be a standalone document to establish actions and procedures for managing water shortages. The UWMP and WSCP are required to be submitted to the California Department of Water Resources by July 1, 2021.

The City will hold a public hearing on June 15, 2021 at 7:00 p.m. by virtual meeting to consider proposed revisions and updates to the UWMP and associated WSCP. We invite your agency's participation in the process.

The UWMP and associated WSCP will be made available for public review by June 1, 2021 at https://www.ci.milpitas.ca.gov/2020_uwmp. Please visit http://www.ci.milpitas.ca.gov/our-government/city-council/city-council-agendas-and-minutes-2/ for the City Council meeting agenda and links to the virtual public hearing.

If you have any questions about the 2020 UWMP or WSCP or the process for updating these documents, please contact me.

Sincerely,

Tony Ndah
Director of Public Works
City of Milpitas
Phone: (408) 586-2600
milpitasworks@ci.milpitas.ca.gov

Notice of Public Hearing
City of Milpitas 2020 Urban Water Management Plan

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing via teleconference/zoom webinar on Tuesday, June 15, 2021, starting at or soon after 7:00 p.m. to receive public comment regarding adoption of the 2020 Urban Water Management Plan (UWMP).

The 2020 UWMP is a water supply planning tool describing the service area, the existing and planned sources, existing and planned customer demands, a comparison of actual water usage against State-mandated per capita water use targets, and the Water Shortage Contingency Plan. The 2020 UWMP is available for public review and comment through the end of the public hearing described above. A copy of the 2020 UWMP is accessible on the City's website:

https://www.ci.milpitas.ca.gov/2020_uwmp/

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code Section 65009, that any legal challenge of this matter in court may be limited to only those issues raised at the public hearing described in this notice or in written or e-mailed correspondence delivered to the City Council at, or prior to, thepublic hearing. Challenges shall also be in compliance with Water Code Sections 10650-10656.

ANY PERSONS who wish to comment are encouraged to attend the online public hearing where oral comments may be given by registering for the zoom webinar as attendee (see meeting agenda) or to submit written comments via e-mail to the City Council prior to the hearing. The City encourages the active involvement of the diverse social, cultural, and economic elements of the population within the service area. Written comments may be sent by e-mail to wwood@ci.milpitas.ca.gov.

Wendy Wood
City Clerk
Publication Dates: May 28 and June 4, 2021

FRIDAY, MAY 28, 2021

Notice of Public Hearing
City of Milpitas 2020 Urban Water Management Plan

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing via teleconference/zoom webinar on Tuesday, June 15, 2021, starting at or soon after 7:00 p.m. to receive public comment regarding adoption of the 2020 Urban Water Management Plan (UWMP).

The 2020 UWMP is a water supply planning tool describing the service area, the existing and planned sources, existing and planned customer demands, a comparison of actual water usage against State-mandated per capita water use targets, and the Water Shortage Contingency Plan. The 2020 UWMP is available for public review and comment through the end of the public hearing described above. A copy of the 2020 UWMP is accessible on the City's website:

https://www.ci.milpitas.ca.gov/2020_uwmp/

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code Section 65009, that any legal challenge of this matter in court may be limited to only those issues raised at the public hearing described in this notice or in written or e-mailed correspondence delivered to the City Council at, or prior to, thepublic hearing. Challenges shall also be in compliance with Water Code Sections 10650-10656.

ANY PERSONS who wish to comment are encouraged to attend the online public hearing where oral comments may be given by registering for the zoom webinar as attendee (see meeting agenda) or to submit written comments via e-mail to the City Council prior to the hearing. *The City encourages* the active involvement of the diverse social, cultural, and economic elements of the population within the service area. Written comments may be sent by e-mail to wwood@ci.milpitas.ca.gov.

Wendy Wood
City Clerk
Publication Dates: May 28 and June 4, 2021

APPENDIX F- ADOPTION RESOLUTION

Documentation pending. It will be included in the Final Draft of this 2020 UWMP.

APPENDIX G - DOCUMENTATION OF 2020 UWMP & WSCP SUBMITTAL

Documentation pending. It will be included in the Final Draft of this 2020 UWMP.

APPENDIX H -SB X7-7 2020 COMPLIANCE FORM

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Million Gallons
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	77,961
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use*	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
	3,073	-	-	-	-	-	**3,073**
* **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.							
NOTES:							

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	San Francisco Public Utilities Commission
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	2,159	-	2,159

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	Valley Water
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	914		914

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*									
2020 Compliance Year	**2020 Surface Reservoir Augmentation**					**2020 Groundwater Recharge**			**Total Deductible Volume of Indirect Recycled Water Entering the Distribution System**
	Volume Discharged from Reservoir for Distribution System Delivery[1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss[1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility[1,2]	Transmission/ Treatment Losses[1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
	-	0%	-	-	-	-	-	-	-

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C: 2020 Process Water Deduction Eligibility (For use only by agencies that are deducting process water) Choose Only One	
☐	**Criteria 1**- Industrial water use is equal to or greater than 12% of gross water use. Complete SB X7-7 Table 4-C.1
☐	**Criteria 2** - Industrial water use is equal to or greater than 15 GPCD. Complete SB X7-7 Table 4-C.2
☐	**Criteria 3** - Non-industrial use is equal to or less than 120 GPCD. Complete SB X7-7 Table 4-C.3
☐	**Criteria 4** - Disadvantaged Community. Complete SB x7-7 Table 4-C.4
NOTES: This table is not applicable to City of Milpitas	

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.1: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 1)*

Criteria 1
Industrial water use is equal to or greater than 12% of gross water use

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction	2020 Industrial Water Use	Percent Industrial Water	Eligible for Exclusion Y/N
	3,073	355	12%	NO

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.2: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 2)*

Criteria 2
Industrial water use is equal to or greater than 15 GPCD

2020 Compliance Year	2020 Industrial Water Use	2020 Population	2020 Industrial GPCD	Eligible for Exclusion Y/N
	355	77,961	12	NO

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.3: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 3)*

Criteria 3
Non-industrial use is equal to or less than 120 GPCD

2020 Compliance Year	2020 Gross Water Use Without Process Water Deduction *Fm SB X7-7 Table 4*	2020 Industrial Water Use	2020 Non-industrial Water Use	2020 Population *Fm SB X7-7 Table 3*	Non-Industrial GPCD	**Eligible for Exclusion Y/N**
	3,073	355	2,718	77,961	96	YES

NOTES:

Data from this table will not be entered into WUEdata.
Instead, the entire table will be uploaded to WUEdata as a separate upload in Excel format.

SB X7-7 Table 4-C.4: 2020 Process Water Deduction Eligibility *(For use only by agencies that are deducting process water using Criteria 4)*

Criteria 4

Disadvantaged Community. A "Disadvantaged Community" (DAC) is a community with a median household income less than 80 percent of the statewide average.

SELECT ONE

"Disadvantaged Community" status was determined using one of the methods listed below:

1. IRWM DAC Mapping tool https://gis.water.ca.gov/app/dacs/

☐	If using the IRWM DAC Mapping Tool, include a screen shot from the tool showing that the service area is considered a DAC.

2. 2020 Median Income

	California Median Household Income*		Service Area Median Household Income	Percentage of Statewide Average	**Eligible for Exclusion? Y/N**
☑	**2020**	**$75,235**	$105,500	140%	NO
	*California median household income 2015 -2019 as reported in US Census Bureau QuickFacts.				

NOTES: Service area median household income is four-person household in Santa Clara County in 2013 per the City of Milpitas April 2015 Housing Element Update 2015-2023

Data from these tables will not be entered into WUEdata. Instead, the entire tables will be uploaded to WUEdata as a separate upload in Excel format.
This table(s) is only for Suppliers that deduct process water from their 2020 gross water use.

SB X7-7 Table 4-D: 2020 Process Water Deduction - Volume *Complete a separate table for each industrial customer with a process water exclusion*

Name of Industrial Customer	*Enter Name of Industrial Customer 1*				
Compliance Year 2020	Industrial Customer's Total Water Use *	Total Volume Provided by Supplier*	% of Water Provided by Supplier	Customer's Total Process Water Use*	Volume of Process Water Eligible for Exclusion for this Customer
					-

* **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)

2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
3,073	77,961	**108**

NOTES:

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD [1]	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Enter "0" if Adjustment Not Used			TOTAL Adjustments [1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*		
	Extraordinary Events[1]	Weather Normalization [1]	Economic Adjustment [1]				
108	-	-	-	-	108	146	**YES**

[1] *All values are reported in GPCD*
[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

APPENDIX I - WATER SHORTAGE CONTINGENCY PLAN

Due to the length of the Water Shortage Contingency Plan, it is included as a separate document.

APPENDIX J - CITY OF MILPITAS 2019 WATER QUALITY REPORT

Important contact information

City contacts

City of Milpitas
455 E Calaveras Blvd.
Milpitas, CA 95035
(408) 586-3000; TDD (408) 586-2643
www.ci.milpitas.ca.gov

Hours of operation
8 a.m. to 5 p.m., M–F

Water Emergencies
(408) 586-2600, Business Hours
(408) 586-2400, After Hours

Billing Questions
(408) 586-3100

Water Conservation Hotline
(408) 586-2666

SCVWD Pollution Hotline
(888) 510-5151 (24 Hours)

Resources

Division of Drinking Water
waterboards.ca.gov/drinking_water/
(510) 620-3474

US EPA
water.epa.gov
(800) 426-4791

Department of
Water Resources
www.water.ca.gov

Bay Area Water Supply and
Conservation Agency
bawsca.org

American Water Works
Association
awwa.org or DrinkTap.org

SCVWD valleywater.org

SFPUC sfwater.org

More information

For more information about this report or the City's water quality monitoring program, please contact:
City of Milpitas Public Works Department at
(408) 586-2600; MilpitasCCR@ci.milpitas.ca.gov

How to get involved

City Council meetings are typically held on the first and third Tuesday of every month at 7:00 pm in the City Hall Council Chambers located at 455 E. Calaveras Blvd. Prior to each meeting, Council meeting agendas can be found posted at City Hall and can also be downloaded from the City website: www.ci.milpitas.ca.gov.

COVID-19 and Drinking Water

First, be assured the COVID-19 Virus is not impacting the safety of your drinking water supply, or our ability to supply water ot the City of Milpitas. The World Health Organization has stated that the "presence of COVID-19 virus has not been detected in drinking-water supplies and based on our current evidence, the risk to water supplies is low". The City of Milpitas is continuing to monitor the COVID-19 emergency to ensure we continue our essential work in providing safe, clean water for our community.

CITY OF MILPITAS 2019 Water Quality Report

City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95035
www.ci.milpitas.ca.gov

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Ito ay isang mahalagang impormasyon tungkol sa inyong iniinom na tubig. Isaling-wika ito, o makipag-usap sa isang tao na naiintindihan ito.

Chi tiết này thật quan trọng. Xin nhờ người dịch cho quý vị.

此份有關你的食水報告 內有重要資料和訊息 請找他人為你翻譯及解釋清楚。

यह महत्वपूर्ण जानकारी आपके पीने के पानी के बारे में है। इसका अनुवाद करें, या किसी ऐसे व्यक्ति से बात करें जो इसे समझता हो।

Frequently asked questions

Why is my water brown or not clear?

Stagnant water sitting in aging plumbing may become brown. This should clear up once sitting water is flushed out from the pipes and replaced with fresh water. Brown water could also be from blocked or clogged sink fixture aerators. Aerators are located at the end of a fixture and can be removed and flushed to clear any debris. Once flushed, hand-tighten to reassemble.

Is there fluoride in the water?

The City receives fluoridated water from SFPUC and SCVWD. SFPUC has been fluoridating water since 1995 while SCVWD began fluoridation in December of 2016.

Why has my water pressure dropped suddenly?

Depending on your location, you could receive water pressure between 40 to 140 psi. Water pressure could have dropped for a variety of reasons. If your water pressure drops unexpectedly, please call Milpitas Public Works Department at (408) 586-2600. You can also check for clogged strainers and proper operation of any pressure regulators (setting).

How can I treat my drinking water after a disaster?

If you run out of stored drinking water, strain and treat water from your water heater or toilet reservoir tank (except if you use toilet tank cleaners.) You cannot drink swimming pool or spa water, but it can be used for flushing toilets or washing.

Strain large particles by pouring water through a couple of layers of paper towels or clean cloth. Purify the water by:

- Boiling. Bring to a rolling boil and maintain for 3-5 minutes. To improve the taste, pour it back and forth between two clean containers to add oxygen back into the water.
- Disinfecting. If the water is clear, add 8 drops of bleach per gallon of water. If it is cloudy, add 16 drops. Shake or stir, then let stand for 30 minutes. A slight chlorine taste and smell is to be expected.

What is the state of the drought and what is "Making Water Conservation A California Way of Life"?

On April 7, 2017, Governor Brown issued Executive Order B-40-17, terminating the January 17, 2014 drought State of Emergency for most counties in California. The Order does however direct the Water Board to continue "Making Water Conversation a California Way of Life" and keep certain restrictions to prohibit wasteful practices. These restrictions along with additional water conservation measures set by the City include:

- Apply only as much water as your landscape needs to prevent water runoff onto streets and sidewalks.
- Wash vehicles with a hose that has a shut-off nozzle.
- Use a broom to clean driveways and sidewalks.
- Recirculate potable water in fountains or decorative water features.
- Do not water landscapes during or within 48 hours of measureable rainfall.
- Restaurants to only serve drinking water upon request.
- Guests of hotels and motels can choose not to have towels and linens laundered daily.
- Pools and spas must be covered when not in use to prevent evaporation.

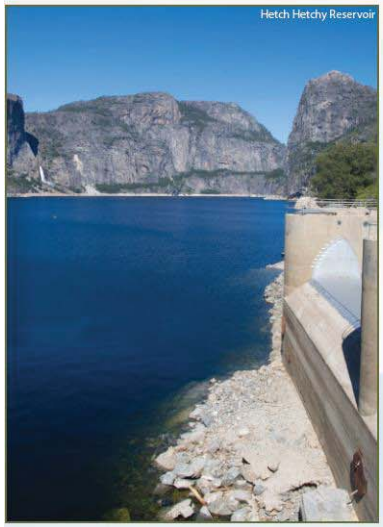
Visit www.savewatermilpitas.org for water conservation tips and water use schedules.

How can I prepare for an emergency?

In a disaster or emergency situation, water supplies may be cut off or contaminated. Store enough water to supply everyone in your family for at least 3-5 days. For general drinking purposes, store one gallon of water per person per day and three gallons of water per person per day for limited cooking and personal hygiene use. If you store tap water, use food grade plastic containers. Replace water at least once every six months. If you buy bottled "spring" or "drinking" water, keep it in its original container. Label bottles with their replacement date and store in a cool, dark place.

In Calendar Year 2019, your tap water met all USEPA and State drinking water health standards.

Our drinking water and how we protect it



The City of Milpitas draws water from two sources that provide clean water to residents and businesses. The water is purchased from two separate wholesalers: treated surface water from the San Francisco Public Utilities Commission (SFPUC) and treated surface water from the Santa Clara Valley Water District (SCVWD). In the event that water supply is interrupted from either SCVWD or SFPUC, the City has the option of utilizing its emergency supply to meet basic water needs for a short duration of time. In 2019, the City supplied an average of 7.1 million gallons of water per day to approximately 16,700 homes and businesses for indoor and outdoor use.

Recycled Water – providing drought-proof, high quality water for our community

In 2019, irrigation and industrial customers in Milpitas used 300 million gallons of recycled water, thereby conserving an equal amount of potable drinking water. Recycled water from the San Jose/Santa Clara Water Pollution Control Plant undergoes an extensive treatment process (including filtration and disinfection) and is delivered to landscape irrigation and industrial customers in Milpitas, San Jose, and Santa Clara. For more information pertaining to recycled water, visit www.sanjoseca.gov/sbwr.

SFPUC Supply

SFPUC water is a combination of Hetch Hetchy water and treated local water. Most of SFPUC's water is sourced from the Hetch Hetchy watershed located in the Sierra Nevada Mountains. This water is exempt from filtration requirements by the United States Environmental Protection Agency (USEPA) and State Water Resources Control Boards' Division of Drinking Water (DDW), due to the protected Sierra spring snow melt water source. Local water is collected within the Alameda watershed at Calaveras Reservoir and San Antonio Reservoir. Local water is treated through filtration and disinfection at the Sunol Valley Water Treatment Plant.

SCVWD Supply

SCVWD water is sourced primarily from the Sacramento-San Joaquin Delta watershed via the South Bay Aqueduct, Dyer Reservoir, Lake Del Valle, and San Luis Reservoir. The water supply is supplemented by local water sources at Anderson and Calero Reservoirs. SCVWD water is treated through filtration and disinfection at Penitencia and Santa Teresa Water Treatment Plants.

Emergency Supplies

The City does not blend or combine SFPUC and SCVWD waters under normal operating conditions. However, the service areas can be interconnected to provide emergency water supply if needed. The City's water system is also interconnected with the Alameda County Water District to the north and San Jose Water Company to the south. In the event that there is an emergency, either or both agencies can provide water to the City. SFPUC and SCVWD share an intertie that can supply water from one wholesaler to the other. The City can also provide temporary emergency water supply using Pinewood Well, located in the southwestern portion of the City.

Drinking Water Source Assessment Program

Drinking Water Source Assessment Programs evaluate the vulnerability of water sources to potential contamination. Both SFPUC and SCVWD have conducted drinking water source assessments for the City's potable water supplies. The assessments are available for review at the State Water Resources Control Board (SWRCB) – Division of Drinking Water District Office. You may request that a summary of the assessments be sent to you by calling (510) 620-3474.

SFPUC conducts an annual watershed sanitary survey for the Hetch Hetchy source as well as five year sanitary surveys for local water sources. These surveys evaluate the sanitary condition, water quality, potential contamination sources, and the results of watershed management activities. The surveys were completed with support from partner agencies, including the National Park Service and US Forest Service. These surveys have identified wildlife, stock, and human activities as potential contamination sources.

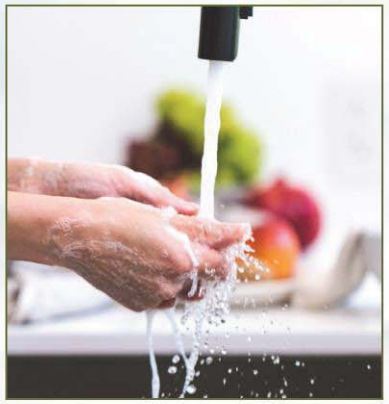
SCVWD's water sources are vulnerable to potential contamination from a variety of land use practices, such as agricultural and urban runoff, recreational activities, livestock grazing, and residential and industrial development. The imported sources are also vulnerable to wastewater treatment plant discharges, seawater intrusion, and wild fires in open space areas. In addition, local sources are also vulnerable to potential contamination from commercial stables and historic mining practices. No contaminants associated with any of these activities have been detected in SCVWD's treated water. The water treatment plants provide multiple barriers for physical removal and disinfection of contaminants.

Contaminants and Regulations

To ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic Contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and Herbicides that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- Organic Chemical Contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive Contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.



Maintaining water quality

The City is dedicated to maintaining the water quality and protecting the water supply. The safegaurds include a combination of preventative and monitoring practices described below.

Hydrant and Water Main Flushing. Flushing of fire hydrants and water mains is performed to remove sediment and keep the distribution system refreshed by circulating water in pipes that would otherwise remain stagnant. As a result, residents in the immediate vicinity may experience temporary discoloration in their water. This discoloration does not affect the safety of the water. If you experience discoloration in your water after City crews have been flushing in your neighborhood, clear the water from your house plumbing by running water faucets for a few minutes prior to use.

Backflow Testing. A backflow preventer is a plumbing device that keeps the water supply safe by preventing water on private property from flowing back into the City's distribution system. Backflow devices are required to be tested annually to ensure they are working properly

Water Sampling. Sampling of the water system is performed in accordance to State and Federal rules and regulations. This requires purging of the water line for a sample to be lab tested. See the third page of this CCR for water quality sampling results.

Littering is throwing it all away

Nearly 80 percent of the debris found in our watersheds, creeks, shorelines, and the South San Francisco Bay is washed, blown, or dumped by humans residing in the vicinity of the water shed. One piece of litter can end up miles from where it was improperly discarded, polluting our water systems and causing a threat to wildlife. The primary sources of litter are: pedestrians, motorists, trucks with uncovered loads, household trash handling and its placement at the curb, loading docks, and demolition sites.

Because we live in a watershed, our community's litter makes a very big impact. A watershed is a land area that drains water into a creek, river, lake, wetland, bay or groundwater aquifer. In the Santa Clara Valley, the water from rain and irrigation (called runoff) picks up litter and carries it directly into storm drains and creeks that flow to San Francisco Bay.

You Can Make a Difference

- Don't litter, ever. Something as small as a cigarette butt thrown on a city street has long term adverse effects on the environment.
- When you see litter, pick it up and dispose of it properly.
- Secure and cover all truckloads of loose debris.
- Make sure your trash can lid is closed securely.
- Always bring a bag for trash when picnicking, hiking, or camping.
- If you own a business, check your dumpster on a regular basis, keep it locked and protect it from illegal dumping.
- Report illegal dumping to the Milpitas Police Department at (408) 586-2400. For solid waste and street sweeping services, call Milpitas Sanitation at (408) 988-4500.
- Call the Santa Clara Countywide Recycling Hotline at (800) 533-8414 or visit www.reducewaste.org to find out where to dispose of or donate large commercial items such as furniture, appliances, etc.

APPENDIX K - APRIL 1ST, 2021 UPDATED DROUGHT ALLOCATIONS BASED ON SFPUC 3.30.21 LETTER

Section 1: Basis for Calculations. Projected Wholesale RWS Purchases Through 2045

Table A: Wholesale RWS Actual Purchases in 2020 and Projected Purchases for 2025, 2030, 2035, 2040, and 2045 (mgd)[a]

Agency	2020 Actual	Projected Wholesale RWS Purchases 2025	2030	2035	2040	2045
ACWD	7.87	7.68	7.68	7.68	7.68	9.11
Brisbane/GVMID	0.64	0.89	0.89	0.88	0.89	0.89
Burlingame	3.48	4.33	4.40	4.47	4.58	4.69
Coastside	1.02	1.40	1.38	1.36	1.33	1.33
CalWater Total	29.00	29.99	29.74	29.81	30.27	30.70
Daly City	3.97	3.57	3.52	3.49	3.46	3.43
East Palo Alto	1.57	1.88	1.95	2.10	2.49	2.89
Estero	4.34	4.07	4.11	4.18	4.23	4.38
Hayward	13.92	17.86	18.68	19.75	20.82	22.14
Hillsborough	2.62	3.26	3.25	3.26	3.26	3.26
Menlo Park	2.96	3.55	3.68	3.87	4.06	4.29
Mid-Peninsula	2.66	2.86	2.84	2.88	2.89	2.93
Millbrae	1.90	2.29	2.50	2.45	2.82	3.20
Milpitas	5.92	6.59	6.75	7.03	7.27	7.53
Mountain View	7.67	8.60	8.90	9.20	9.51	9.93
North Coast	2.37	2.34	2.33	2.34	2.34	2.34
Palo Alto	9.75	10.06	10.15	10.28	10.51	10.79
Purissima Hills	1.75	2.09	2.09	2.12	2.13	2.15
Redwood City	8.76	8.46	8.49	8.64	8.74	8.90
San Bruno	0.95	3.24	3.22	3.20	3.20	3.21
San Jose	4.26	4.50	4.50	4.50	4.50	4.50
Santa Clara	3.27	4.50	4.50	4.50	4.50	4.50
Stanford	1.43	2.01	2.18	2.35	2.53	2.70
Sunnyvale	9.33	9.16	9.30	10.70	11.44	12.10
Westborough	0.82	0.86	0.85	0.85	0.84	0.84
Total	**132.22**	**146.01**	**147.87**	**151.90**	**156.31**	**162.76**

[a] Wholesale RWS purchase projections for 2025, 2030, 2035, 2040, and 2045 were provided to BAWSCA between July 2020 and January 2021 by the Member Agencies following the completion of the June 2020 Demand Study.

Page 1 of 11 *April 1, 2021*

Table B: Basis for the 5-Year Drought Risk Assessment Wholesale RWS Actual Purchases in 2020 and 2021-2025 Projected Purchases (mgd)

Agency	2020 Actual	Projected and Estimated Wholesale RWS Purchases 2021[b]	2022[b]	2023[c]	2024[c]	2025[c]
ACWD	7.87	9.44	9.46	9.46	9.46	9.46
Brisbane/GVMID	0.64	0.62	0.65	0.65	0.65	0.65
Burlingame	3.48	3.34	3.35	3.35	3.35	3.35
Coastside	1.02	1.54	1.23	1.23	1.23	1.23
CalWater Total	29.00	29.66	29.81	29.81	29.81	29.81
Daly City	3.97	4.00	4.01	4.01	4.01	4.01
East Palo Alto	1.57	1.63	1.69	1.69	1.69	1.69
Estero	4.34	4.48	4.51	4.51	4.51	4.51
Hayward	13.92	14.47	15.12	15.12	15.12	15.12
Hillsborough	2.62	2.95	3.05	3.05	3.05	3.05
Menlo Park	2.96	2.92	2.93	2.93	2.93	2.93
Mid-Peninsula	2.66	2.65	2.80	2.80	2.80	2.80
Millbrae	1.90	1.95	2.15	2.15	2.15	2.15
Milpitas	5.92	5.88	5.34	5.34	5.34	5.34
Mountain View	7.67	7.80	8.05	8.05	8.05	8.05
North Coast	2.37	2.58	2.66	2.66	2.66	2.66
Palo Alto	9.75	9.44	9.66	9.66	9.66	9.66
Purissima Hills	1.75	1.97	2.02	2.02	2.02	2.02
Redwood City	8.76	8.72	9.07	9.07	9.07	9.07
San Bruno	0.95	3.39	3.40	3.40	3.40	3.40
San Jose	4.26	4.31	4.51	4.51	4.51	4.51
Santa Clara	3.27	3.29	3.50	3.50	3.50	3.50
Stanford	1.43	1.40	1.54	1.54	1.54	1.54
Sunnyvale	9.33	9.35	9.45	9.45	9.45	9.45
Westborough	0.82	0.84	0.81	0.81	0.81	0.81
Total	**132.22**	**138.61**	**140.77**	**140.77**	**140.77**	**140.77**

[b] Wholesale RWS purchase projections for 2021 and 2022 were provided to Christina Tang, BAWSCA's Finance Manager, by the Member Agencies in January 2021.

[c] The SFPUC's supply reliability tables assume the Bay-Delta Plan takes effect in 2023. In the event of a shortage, the Tier 2 Plan specifies that each agencies' Allocation Factor would be calculated once at the onset of a shortage based on the previous year's use and remains the same until the shortage condition is over. Therefore, for the purpose of drought allocations for the 5-year Drought Risk Assessment, wholesale RWS demand is assumed to remain static from 2022 through the drought sequence.

Section 2: Drought Allocations *With* Bay-Delta Plan

Table C: RWS Supply Available to the Wholesale Customers (Combined Tables 3a-3f from the SFPUC's March 30th letter) *With* Bay-Delta Plan (mgd)

	2020[e]	2025	2030	2035	2040	2045
Projected Purchases[d]	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	138.6	93.3	94.2	96.5	99.2	88.7
Consecutive 2nd Dry Year	140.8	80.0	80.8	82.7	85.1	88.7
Consecutive 3rd Dry Year	74.5	80.0	80.8	82.7	85.1	88.7
Consecutive 4th Dry Year	74.5	80.0	80.8	82.7	75.1	75.4
Consecutive 5th Dry Year	74.5	80.0	80.8	75.8	75.1	75.4

[d] Values for 2020 are actual purchases. This row aligns with what is labeled as an "Average Year" in Tables 3a-3f in the SFPUC's March 30th letter. However, these values do not represent an average year and instead are actual purchases for 2020 or projected purchases for 2025 through 2045.

[e] In years when the Bay-Delta Plan is not in effect, sufficient RWS supplies will be available to meet the Wholesale Customers' purchase requests assuming that they are between the 2020 and 2025 projected levels. As such, RWS supply available to the Wholesale Customers in the 1st and 2nd consecutive dry years under base year 2020 is equal to the cumulative projected wholesale RWS purchases for 2021 and 2022, respectively.

Table D: Wholesale RWS Demand (Combined Totals from Tables A and B) (mgd)[f]

	2020	2025	2030	2035	2040	2045
Projected Purchases[d]	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	138.6	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	140.8	146.0	147.9	151.9	156.3	162.8
Consecutive 5th Dry Year	140.8	146.0	147.9	151.9	156.3	162.8

[f] The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. Additionally, the Tier 2 Plan calculates each agencies' Allocation Factor once at the onset of a drought and it remains the same until the shortage condition is over. When system-wide shortages are projected, wholesale RWS demand is assumed to be static for the remainder of the drought sequence.

Table E: Percent Cutback to the Wholesale Customers *With* Bay-Delta Plan[g]

	2020	2025	2030	2035	2040	2045
Projected Purchases[d]	0%	0%	0%	0%	0%	0%
Consecutive 1st Dry Year	0%	36%	36%	36%	37%	46%
Consecutive 2nd Dry Year	0%	45%	45%	46%	46%	46%
Consecutive 3rd Dry Year	47%	45%	45%	46%	46%	46%
Consecutive 4th Dry Year	47%	45%	45%	46%	52%	54%
Consecutive 5th Dry Year	47%	45%	45%	50%	52%	54%

[g] Agencies that wish to use new or different projected RWS purchases may use the percent cutbacks listed in this table to determine their drought allocation.

Table F1: Basis of Water Supply Data [For Tables 7-1 and 7-5], Base Year 2020, *With* Bay-Delta Plan (mgd)

Year Consecutive Dry Year	2020 Actual	2021 1st	2022 2nd	2023 3rd	2024 4th	2025 5th
Wholesale RWS Demand	132.2	138.6	140.8	140.8	140.8	140.8
Wholesale RWS Supply Available	132.2	138.6	140.8	74.5	74.5	74.5
Percent Cutback	0%	0%	0%	47%	47%	47%

Table F2: Individual Agency Drought Allocations [For Tables 7-1 and 7-5], Base Year 2020, *With* Bay-Delta Plan (mgd)

	2020	Wholesale RWS Drought Allocations				
Agency	Actual	2021	2022	2023	2024	2025
ACWD	7.87	9.44	9.46	5.01	5.01	5.01
Brisbane/GVMID	0.64	0.62	0.65	0.34	0.34	0.34
Burlingame	3.48	3.34	3.35	1.77	1.77	1.77
Coastside	1.02	1.54	1.23	0.65	0.65	0.65
CalWater Total	29.00	29.66	29.81	15.78	15.78	15.78
Daly City	3.97	4.00	4.01	2.12	2.12	2.12
East Palo Alto	1.57	1.63	1.69	0.89	0.89	0.89
Estero	4.34	4.48	4.51	2.39	2.39	2.39
Hayward	13.92	14.47	15.12	8.00	8.00	8.00
Hillsborough	2.62	2.95	3.05	1.61	1.61	1.61
Menlo Park	2.96	2.92	2.93	1.55	1.55	1.55
Mid-Peninsula	2.66	2.65	2.80	1.48	1.48	1.48
Millbrae	1.90	1.95	2.15	1.14	1.14	1.14
Milpitas	5.92	5.88	5.34	2.83	2.83	2.83
Mountain View	7.67	7.80	8.05	4.26	4.26	4.26
North Coast	2.37	2.58	2.66	1.41	1.41	1.41
Palo Alto	9.75	9.44	9.66	5.11	5.11	5.11
Purissima Hills	1.75	1.97	2.02	1.07	1.07	1.07
Redwood City	8.76	8.72	9.07	4.80	4.80	4.80
San Bruno	0.95	3.39	3.40	1.80	1.80	1.80
San Jose	4.26	4.31	4.51	2.39	2.39	2.39
Santa Clara	3.27	3.29	3.50	1.85	1.85	1.85
Stanford	1.43	1.40	1.54	0.82	0.82	0.82
Sunnyvale	9.33	9.35	9.45	5.00	5.00	5.00
Westborough	0.82	0.84	0.81	0.43	0.43	0.43
Total	**132.2**	**138.6**	**140.8**	**74.5**	**74.5**	**74.5**

Table G1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2025, *With* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	146.0	146.0	146.0	146.0	146.0
Wholesale RWS Supply Available	93.3	80.0	80.0	80.0	80.0
Percent Cutback	36%	45%	45%	45%	45%

Table G2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2025, *With* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations				
Consecutive Dry Year	1st	2nd	3rd	4th	5th
ACWD	4.91	4.21	4.21	4.21	4.21
Brisbane/GVMID	0.57	0.49	0.49	0.49	0.49
Burlingame	2.76	2.37	2.37	2.37	2.37
Coastside	0.89	0.77	0.77	0.77	0.77
CalWater Total	19.16	16.43	16.43	16.43	16.43
Daly City	2.28	1.96	1.96	1.96	1.96
East Palo Alto	1.20	1.03	1.03	1.03	1.03
Estero	2.60	2.23	2.23	2.23	2.23
Hayward	11.41	9.78	9.78	9.78	9.78
Hillsborough	2.08	1.79	1.79	1.79	1.79
Menlo Park	2.27	1.95	1.95	1.95	1.95
Mid-Peninsula	1.83	1.57	1.57	1.57	1.57
Millbrae	1.46	1.25	1.25	1.25	1.25
Milpitas	4.21	3.61	3.61	3.61	3.61
Mountain View	5.49	4.71	4.71	4.71	4.71
North Coast	1.49	1.28	1.28	1.28	1.28
Palo Alto	6.43	5.51	5.51	5.51	5.51
Purissima Hills	1.33	1.14	1.14	1.14	1.14
Redwood City	5.40	4.63	4.63	4.63	4.63
San Bruno	2.07	1.77	1.77	1.77	1.77
San Jose	2.88	2.47	2.47	2.47	2.47
Santa Clara	2.88	2.47	2.47	2.47	2.47
Stanford	1.28	1.10	1.10	1.10	1.10
Sunnyvale	5.85	5.02	5.02	5.02	5.02
Westborough	0.55	0.47	0.47	0.47	0.47
Total	**93.3**	**80.0**	**80.0**	**80.0**	**80.0**

Table H1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2030, *With* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	147.9	147.9	147.9	147.9	147.9
Wholesale RWS Supply Available	94.2	80.8	80.8	80.8	80.8
Percent Cutback	36%	45%	45%	45%	45%

Table H2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2030, *With* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations				
Consecutive Dry Year	1st	2nd	3rd	4th	5th
ACWD	4.89	4.20	4.20	4.20	4.20
Brisbane/GVMID	0.56	0.48	0.48	0.48	0.48
Burlingame	2.80	2.40	2.40	2.40	2.40
Coastside	0.88	0.75	0.75	0.75	0.75
CalWater Total	18.94	16.25	16.25	16.25	16.25
Daly City	2.24	1.92	1.92	1.92	1.92
East Palo Alto	1.24	1.07	1.07	1.07	1.07
Estero	2.62	2.24	2.24	2.24	2.24
Hayward	11.90	10.21	10.21	10.21	10.21
Hillsborough	2.07	1.78	1.78	1.78	1.78
Menlo Park	2.35	2.01	2.01	2.01	2.01
Mid-Peninsula	1.81	1.55	1.55	1.55	1.55
Millbrae	1.59	1.37	1.37	1.37	1.37
Milpitas	4.30	3.69	3.69	3.69	3.69
Mountain View	5.67	4.86	4.86	4.86	4.86
North Coast	1.48	1.27	1.27	1.27	1.27
Palo Alto	6.47	5.55	5.55	5.55	5.55
Purissima Hills	1.33	1.14	1.14	1.14	1.14
Redwood City	5.41	4.64	4.64	4.64	4.64
San Bruno	2.05	1.76	1.76	1.76	1.76
San Jose	2.87	2.46	2.46	2.46	2.46
Santa Clara	2.87	2.46	2.46	2.46	2.46
Stanford	1.39	1.19	1.19	1.19	1.19
Sunnyvale	5.92	5.08	5.08	5.08	5.08
Westborough	0.54	0.47	0.47	0.47	0.47
Total	**94.2**	**80.8**	**80.8**	**80.8**	**80.8**

Table I1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2035, *With* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	151.9	151.9	151.9	151.9	151.9
Wholesale RWS Supply Available	96.5	82.7	82.7	82.7	75.8
Percent Cutback	36%	46%	46%	46%	50%

Table I2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2035, *With* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations				
Consecutive Dry Year	1st	2nd	3rd	4th	5th
ACWD	4.88	4.18	4.18	4.18	3.83
Brisbane/GVMID	0.56	0.48	0.48	0.48	0.44
Burlingame	2.84	2.44	2.44	2.44	2.23
Coastside	0.86	0.74	0.74	0.74	0.68
CalWater Total	18.94	16.23	16.23	16.23	14.88
Daly City	2.22	1.90	1.90	1.90	1.74
East Palo Alto	1.33	1.14	1.14	1.14	1.05
Estero	2.66	2.28	2.28	2.28	2.09
Hayward	12.55	10.75	10.75	10.75	9.86
Hillsborough	2.07	1.78	1.78	1.78	1.63
Menlo Park	2.46	2.10	2.10	2.10	1.93
Mid-Peninsula	1.83	1.57	1.57	1.57	1.44
Millbrae	1.56	1.34	1.34	1.34	1.22
Milpitas	4.47	3.83	3.83	3.83	3.51
Mountain View	5.84	5.01	5.01	5.01	4.59
North Coast	1.49	1.27	1.27	1.27	1.17
Palo Alto	6.53	5.60	5.60	5.60	5.13
Purissima Hills	1.34	1.15	1.15	1.15	1.06
Redwood City	5.49	4.70	4.70	4.70	4.31
San Bruno	2.03	1.74	1.74	1.74	1.60
San Jose	2.86	2.45	2.45	2.45	2.25
Santa Clara	2.86	2.45	2.45	2.45	2.25
Stanford	1.49	1.28	1.28	1.28	1.17
Sunnyvale	6.80	5.83	5.83	5.83	5.34
Westborough	0.54	0.46	0.46	0.46	0.42
Total	**96.5**	**82.7**	**82.7**	**82.7**	**75.8**

Table J1: Basis of Water Supply Data [For Table 7-1 and 7-4], Base Year 2040, *With* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	156.3	156.3	156.3	156.3	156.3
Wholesale RWS Supply Available	99.2	85.1	85.1	75.1	75.1
Percent Cutback	37%	46%	46%	52%	52%

Table J2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2040, *With* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations				
Consecutive Dry Year	1st	2nd	3rd	4th	5th
ACWD	4.87	4.18	4.18	3.69	3.69
Brisbane/GVMID	0.56	0.48	0.48	0.43	0.43
Burlingame	2.91	2.49	2.49	2.20	2.20
Coastside	0.85	0.73	0.73	0.64	0.64
CalWater Total	19.21	16.48	16.48	14.54	14.54
Daly City	2.20	1.88	1.88	1.66	1.66
East Palo Alto	1.58	1.36	1.36	1.20	1.20
Estero	2.69	2.30	2.30	2.03	2.03
Hayward	13.21	11.34	11.34	10.00	10.00
Hillsborough	2.07	1.78	1.78	1.57	1.57
Menlo Park	2.58	2.21	2.21	1.95	1.95
Mid-Peninsula	1.84	1.58	1.58	1.39	1.39
Millbrae	1.79	1.53	1.53	1.35	1.35
Milpitas	4.62	3.96	3.96	3.49	3.49
Mountain View	6.03	5.18	5.18	4.57	4.57
North Coast	1.49	1.27	1.27	1.12	1.12
Palo Alto	6.67	5.72	5.72	5.05	5.05
Purissima Hills	1.35	1.16	1.16	1.03	1.03
Redwood City	5.55	4.76	4.76	4.20	4.20
San Bruno	2.03	1.74	1.74	1.54	1.54
San Jose	2.86	2.45	2.45	2.16	2.16
Santa Clara	2.86	2.45	2.45	2.16	2.16
Stanford	1.61	1.38	1.38	1.22	1.22
Sunnyvale	7.26	6.23	6.23	5.49	5.49
Westborough	0.54	0.46	0.46	0.41	0.41
Total	**99.2**	**85.1**	**85.1**	**75.1**	**75.1**

Table K1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2045, *With* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	162.8	162.8	162.8	162.8	162.8
Wholesale RWS Supply Available	88.7	88.7	88.7	75.4	75.4
Percent Cutback	46%	46%	46%	54%	54%

Table K2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2045, *With* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations				
Consecutive Dry Year	1st	2nd	3rd	4th	5th
ACWD	4.97	4.97	4.97	4.22	4.22
Brisbane/GVMID	0.49	0.49	0.49	0.41	0.41
Burlingame	2.56	2.56	2.56	2.17	2.17
Coastside	0.72	0.72	0.72	0.61	0.61
CalWater Total	16.73	16.73	16.73	14.22	14.22
Daly City	1.87	1.87	1.87	1.59	1.59
East Palo Alto	1.58	1.58	1.58	1.34	1.34
Estero	2.39	2.39	2.39	2.03	2.03
Hayward	12.07	12.07	12.07	10.26	10.26
Hillsborough	1.78	1.78	1.78	1.51	1.51
Menlo Park	2.34	2.34	2.34	1.99	1.99
Mid-Peninsula	1.59	1.59	1.59	1.36	1.36
Millbrae	1.74	1.74	1.74	1.48	1.48
Milpitas	4.11	4.11	4.11	3.49	3.49
Mountain View	5.41	5.41	5.41	4.60	4.60
North Coast	1.28	1.28	1.28	1.09	1.09
Palo Alto	5.88	5.88	5.88	5.00	5.00
Purissima Hills	1.17	1.17	1.17	1.00	1.00
Redwood City	4.85	4.85	4.85	4.12	4.12
San Bruno	1.75	1.75	1.75	1.49	1.49
San Jose	2.45	2.45	2.45	2.08	2.08
Santa Clara	2.45	2.45	2.45	2.08	2.08
Stanford	1.47	1.47	1.47	1.25	1.25
Sunnyvale	6.59	6.59	6.59	5.61	5.61
Westborough	0.46	0.46	0.46	0.39	0.39
Total	**88.7**	**88.7**	**88.7**	**75.4**	**75.4**

Section 3: Drought Allocations *Without* Bay-Delta Plan

Table L: RWS Supply Available to the Wholesale Customers (Combined Tables 4a-4f from the SFPUC's March 30th letter) *Without* Bay-Delta Plan (mgd)[h]

	2020	2025	2030	2035	2040	2045
Projected Purchases[i]	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	132.2	146.0	147.9	151.9	156.3	139.1
Consecutive 5th Dry Year	132.2	146.0	147.9	151.9	156.3	139.1

[h] The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. However, the SFPUC has indicated that sufficient supplies are available to meet wholesale RWS demand so long as they reasonably stay within 2020 and 2040 levels. The SFPUC's modeling does not indicate cutbacks will be required till the 4th and 5th consecutive dry year at 2045 levels.

[i] Values for 2020 are actual purchases. This row aligns with what is labeled as an "Average Year" in Tables 4a-4f in the SFPUC's March 30th letter. However, these values do not represent an average year and instead are actual purchases for 2020 or projected purchases for 2025 through 2045.

Table M: Wholesale RWS Demand (Combined Totals from Tables A and B) (mgd)

	2020	2025	2030	2035	2040	2045
Projected Purchases[i]	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 1st Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 2nd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 3rd Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 4th Dry Year	132.2	146.0	147.9	151.9	156.3	162.8
Consecutive 5th Dry Year	132.2	146.0	147.9	151.9	156.3	162.8

Table N: Percent Cutback to the Wholesale Customers *Without* Bay-Delta Plan

	2020	2025	2030	2035	2040	2045
Projected Purchases[i]	0%	0%	0%	0%	0%	0%
Consecutive 1st Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 2nd Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 3rd Dry Year	0%	0%	0%	0%	0%	0%
Consecutive 4th Dry Year	0%	0%	0%	0%	0%	15%
Consecutive 5th Dry Year	0%	0%	0%	0%	0%	15%

Table O1: Basis of Water Supply Data [For Tables 7-1 and 7-4], Base Year 2045, *Without* Bay-Delta Plan (mgd)

Consecutive Dry Year	1st	2nd	3rd	4th	5th
Wholesale RWS Demand	162.8	162.8	162.8	162.8	162.8
Wholesale RWS Supply Available	162.8	162.8	162.8	139.1	139.1
Percent Cutback	0%	0%	0%	Tier 2 Plan	Tier 2 Plan

Table O2: Individual Agency Drought Allocations [For Tables 7-1 and 7-4], Base Year 2045, *Without* Bay-Delta Plan (mgd)

	Wholesale RWS Drought Allocations					Tier 2 Drought Cutback
Consecutive Dry Year	1st	2nd	3rd	4th	5th	
ACWD	9.11	9.11	9.11	8.20	8.20	10.0%
Brisbane/GVMID	0.89	0.89	0.89	0.74	0.74	16.8%
Burlingame	4.69	4.69	4.69	4.02	4.02	14.3%
Coastside	1.33	1.33	1.33	1.19	1.19	10.0%
CalWater Total	30.70	30.70	30.70	26.73	26.73	12.9%
Daly City	3.43	3.43	3.43	3.01	3.01	12.4%
East Palo Alto	2.89	2.89	2.89	2.68	2.68	7.3%
Estero	4.38	4.38	4.38	3.94	3.94	10.0%
Hayward	22.14	22.14	22.14	18.67	18.67	15.7%
Hillsborough	3.26	3.26	3.26	2.93	2.93	10.2%
Menlo Park	4.29	4.29	4.29	3.58	3.58	16.5%
Mid-Peninsula	2.93	2.93	2.93	2.63	2.63	10.0%
Millbrae	3.20	3.20	3.20	2.54	2.54	20.7%
Milpitas	7.53	7.53	7.53	6.55	6.55	13.1%
Mountain View	9.93	9.93	9.93	8.91	8.91	10.3%
North Coast	2.34	2.34	2.34	2.11	2.11	10.0%
Palo Alto	10.79	10.79	10.79	9.71	9.71	10.0%
Purissima Hills	2.15	2.15	2.15	1.41	1.41	34.5%
Redwood City	8.90	8.90	8.90	7.92	7.92	11.1%
San Bruno	3.21	3.21	3.21	2.60	2.60	19.1%
San Jose	4.50	4.50	4.50	2.95	2.95	34.5%
Santa Clara	4.50	4.50	4.50	2.95	2.95	34.5%
Stanford	2.70	2.70	2.70	2.27	2.27	16.0%
Sunnyvale	12.10	12.10	12.10	10.11	10.11	16.5%
Westborough	0.84	0.84	0.84	0.76	0.76	10.0%
Total	**162.8**	**162.8**	**162.8**	**139.1**	**139.1**	

APPENDIX L - APRIL 8TH, 2021 ATTACHMENT B – UPDATED 2020 UWMP DROUGHT CUTBACKS

Attachment B: Updated 2020 UWMP Drought Cutbacks

The January 22, 2021, SFPUC Regional Water System (RWS) Supply Reliability Letter (Supply Reliability Letter) provides RWS supplies available to the Wholesale Customers under two scenarios: (1) With Bay-Delta Plan, and (2) Without Bay-Delta Plan. Your agency must choose which scenario to use for your agency's 2020 UWMP submittal tables. However, you may discuss both scenarios in the body of your agency's UWMP. The purpose of this attachment is to provide further detail about your agency's allocation of total RWS supplies available to the Wholesale Customers under both scenarios.

Data Sources for Projected RWS Purchases

Supply allocations are based on projected RWS purchases provided to BAWSCA by the Member Agencies. Following the completion of the Demand Study in June 2020, BAWSCA used the results to develop a table for each Member Agency listing possible supplies and total demand for 2025, 2030, 2035, 2040, and 2045. BAWSCA populated the tables with total demand after passive conservation and entered active conservation, as calculated in the agencies' DSS Model, as a source of supply. Multi-source agencies were asked to complete the table with supply projections, including from the RWS, to meet total demand. Single-source agencies were offered the opportunity to review the tables upon request. Because active conservation was treated as a source of supply, projected RWS purchases are after passive and active conservation.

Water Management Representatives (WMRs) received a draft copy of all projected wholesale RWS purchase requests as part of the January 7, 2021 WMR meeting agenda packet and meeting slides. Agencies were asked to notify BAWSCA if changes were necessary regarding their purchase requests prior to BAWSCA sending those purchase requests to the SFPUC. Purchase requests were transmitted to the SFPUC via a letter dated January 15, 2021 for use in their 2020 UWMP efforts.

Note that the projected RWS purchases used by BAWSCA for fiscal years 2020-21 and for 2021-22 were provided to Christina Tang, BAWSCA's Finance Manager, by each Member Agency in January 2021. This annual reporting is part of the SFPUC's wholesale rate setting process. Member Agencies have provided BAWSCA with these projected purchases annually for the past 10 years.

UWMP Tables 7-1 and 7-5

UWMP Table 7-1 requests supply reliability for a normal year, a single dry year, and multiple (five) dry years. Tables 3, 4, 5, and 6 provided in the Supply Reliability Letter will help your agency complete UWMP Table 7-1. The Drought Risk Assessment (DRA) in UWMP Table 7-5 also requests a five-year drought sequence but specifies years 2021 through 2025. Supply Reliability Letter Tables 9 and 10 will help your agency complete UWMP Table 7-5.

The Supply Reliability Letter provides four tables for completing UWMP Table 7-1. The Supply Reliability Letter Tables 3 (with Bay-Delta Plan) and 4 (without Bay-Delta Plan) use 2020 as the base year. Depending on which scenario you choose, these will be the basis for your agency's five-year DRA (UWMP Table 7-5). The Supply Reliability Letter Tables 5 (with Bay-Delta Plan) and 6 (without Bay-Delta Plan) use 2025 as the base year. Depending on which scenario you choose, these will be the basis for UWMP Tables 7-2 through 7-4. Your agency may submit multiple UWMP Tables 7-1 with different base years (see Figure 1 below).

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Attachment B: Updated 2020 UWMP Drought Cutbacks

Figure 1: Footnote from Draft UWMP Table 7-1

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

Total RWS supplies available to the Wholesale Customers in the first through fifth consecutive dry years in Supply Reliability Letter Table 3 align with those in Table 9 of the same letter. Similarly, Supply Reliability Letter Table 4 aligns with Table 10 of the same letter.

Table A below provides a summary of the Member Agencies' RWS supply drought cutbacks under each of the four supply availability conditions and is intended to help you complete UWMP Tables 7-1and 7-5.

Table A: Wholesale Customer Drought Cutbacks Based on a Single Dry Year and Multiple Dry Years (Base Year 2020)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
(1)	Projected SF RWS Wholesale Purchases	132.2 MGD	138.6 MGD	140.8 MGD	140.8 MGD	140.8 MGD	140.8 MGD
(2)	Supply Available to the Wholesale Customers	Percent Cutback on Wholesale RWS Purchases					
		2020	**2021**	**2022**	**2023**	**2024**	**2025**
(3)	157.5 MGD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
(4)	132.5 MGD	0.0%	-4.4%	-5.9%	-5.9%	-5.9%	-5.9%
(5)	82.8 MGD	-37.4%	-40.3%	-41.2%	-41.2%	-41.2%	-41.2%
(6)	74.5 MGD	-43.7%	-46.3%	-47.1%	-47.1%	-47.1%	-47.1%

Table A, column (a), rows 3 through 6 lists total RWS supplies available to the Wholesale Customers as provided in the Supply Reliability Letter tables. Row 1 provides cumulative actual wholesale RWS purchases for 2020. In years when the Bay-Delta Plan is not in effect, sufficient RWS supplies will be available to meet the Wholesale Customers' purchase requests assuming that they are between the 2020 and 2025 projected levels. As such, RWS supply available to the Wholesale Customers in the 2021 and 2022 is equal to the cumulative projected wholesale RWS.. Projected RWS purchases for years 2021 and 2022 were provided to Christina Tang, BAWSCA's Finance Manager, by the Member Agencies in January 2021. The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. Additionally, the Tier 2 Plan calculates each agencies' Allocation Factor once at the onset of a drought and it remains the same until the shortage condition is over. Therefore, wholesale RWS demand in 2023 through 2025 is assumed to be static based on the 2022 projected demand.

Table B below provides a summary of the Member Agencies' RWS supply drought cutbacks under each of the four supply availability conditions and is intended to help you complete UWMP Table 7-1.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table B: Wholesale Customer Drought Cutbacks Based on a Single Dry Year and Multiple Dry Years (Base Year 2025)

	(a)	(b)	(c)	(d)	(e)	(f)
(1)	Projected SF RWS Wholesale Purchases	146.0 MGD	146.0 MGD	146.0 MGD	146.0 MGD	146.0 MGD
(2)	Supply Available to the Wholesale Customers	Percent Cutback on Wholesale RWS Purchases				
		2025	**2026**	**2027**	**2028**	**2029**
(3)	157.5 MGD	0.0%	0.0%	0.0%	0.0%	0.0%
(4)	132.5 MGD	-9.2%	-9.2%	-9.2%	-9.2%	-9.2%
(5)	82.8 MGD	-43.3%	-43.3%	-43.3%	-43.3%	-43.3%
(6)	74.5 MGD	-49.0%	-49.0%	-49.0%	-49.0%	-49.0%

Table B, column (a), rows 3 through 6 lists total RWS supplies available to the Wholesale Customers as provided in the Supply Reliability Letter tables. Row 1 provides cumulative projected wholesale RWS purchases for 2025 through 2029. The SFPUC's modeling approach does not allow for varying demands over the course of a dry year sequence. Additionally, the Tier 2 Plan calculates each agencies' Allocation Factor once at the onset of a drought and it remains the same until the shortage condition is over. Therefore, wholesale RWS demand is assumed to be static between 2025 and 2029 based on the 2025 projected demand.

To complete UWMP Tables 7-1 and 7-5, reference tables in the Supply Reliability Letter to identify total RWS supplies available to the Wholesale Customers and apply the percent cutback in the corresponding year of the drought sequence using Tables A and B. For example, in Supply Reliability Letter Table 3, in the 5th consecutive year of a drought, the volume available to the Wholesale Customers is 74.5 MGD. To calculate RWS supplies available to your agency in 2025 using table A, locate the row with 74.5 MGD on the table – row 6 – and the column for 2025 – column (g). Then apply the percent cutback to your agency's RWS demand in 2025.

A list of purchase projections by agency are provided in Tables C, D, E, and F. The table also indicates the percent cutback that should be applied based on total RWS supplies available to the Wholesale Customers. Tables C and E use Scenario 1: With Bay-Delta Plan. Tables D and F use Scenario 2: Without Bay-Delta Plan. Tables C and D use 2020 as the base year and Tables E and F use 2025 as the base year.

BAWSCA understands that agencies are updating projected demands for their 2020 UWMPs and that projected RWS purchases may change from what was previously provided. Additionally, BAWSCA recognizes that not all Member Agencies will choose the same scenario for their UWMP supply reliability tables. For both reasons, projected RWS purchases in each Member Agency's 2020 UWMP may not add up to total Wholesale demands in the SFPUC's 2020 UWMP. This is consistent with direction given by the Department of Water Resources, which encourages suppliers use the UWMP tables to represent what they believe to be the most likely supply reliability scenario and to characterize the five-consecutive year drought in a manner that is best suited for understanding and managing their water service reliability and individual agency level of risk tolerance.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table C: Scenario 1: With Bay-Delta Plan - Projected Wholesale Customer RWS Demand and Percent Cutback for a Single Dry Year and Multiple Dry Years (Base Year 2020)

	2020 (184 MGD)		2021 (157.5 MGD)		2022 (132.5 MGD)		2023 (74.5 MGD)		2024 (74.5 MGD)		2025 (74.5 MGD)	
Agency	Actual Purchases	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback
ACWD	7.87	0.0%	9.44	0.0%	9.46	-5.9%	9.46	-47%	9.46	-47%	9.46	-47%
Brisbane/GVMID	0.64	0.0%	0.62	0.0%	0.65	-5.9%	0.65	-47%	0.65	-47%	0.65	-47%
Burlingame	3.48	0.0%	3.34	0.0%	3.35	-5.9%	3.35	-47%	3.35	-47%	3.35	-47%
Coastside	1.02	0.0%	1.54	0.0%	1.23	-5.9%	1.23	-47%	1.23	-47%	1.23	-47%
CalWater Total	29.00	0.0%	29.66	0.0%	29.81	-5.9%	29.81	-47%	29.81	-47%	29.81	-47%
Daly City	3.97	0.0%	4.00	0.0%	4.01	-5.9%	4.01	-47%	4.01	-47%	4.01	-47%
East Palo Alto	1.57	0.0%	1.63	0.0%	1.69	-5.9%	1.69	-47%	1.69	-47%	1.69	-47%
Estero	4.34	0.0%	4.48	0.0%	4.51	-5.9%	4.51	-47%	4.51	-47%	4.51	-47%
Hayward	13.92	0.0%	14.47	0.0%	15.12	-5.9%	15.12	-47%	15.12	-47%	15.12	-47%
Hillsborough	2.62	0.0%	2.95	0.0%	3.05	-5.9%	3.05	-47%	3.05	-47%	3.05	-47%
Menlo Park	2.96	0.0%	2.92	0.0%	2.93	-5.9%	2.93	-47%	2.93	-47%	2.93	-47%
Mid-Peninsula	2.66	0.0%	2.65	0.0%	2.80	-5.9%	2.80	-47%	2.80	-47%	2.80	-47%
Millbrae	1.90	0.0%	1.95	0.0%	2.15	-5.9%	2.15	-47%	2.15	-47%	2.15	-47%
Milpitas	5.92	0.0%	5.88	0.0%	5.34	-5.9%	5.34	-47%	5.34	-47%	5.34	-47%
Mountain View	7.67	0.0%	7.80	0.0%	8.05	-5.9%	8.05	-47%	8.05	-47%	8.05	-47%
North Coast	2.37	0.0%	2.58	0.0%	2.66	-5.9%	2.66	-47%	2.66	-47%	2.66	-47%
Palo Alto	9.75	0.0%	9.44	0.0%	9.66	-5.9%	9.66	-47%	9.66	-47%	9.66	-47%
Purissima Hills	1.75	0.0%	1.97	0.0%	2.02	-5.9%	2.02	-47%	2.02	-47%	2.02	-47%
Redwood City	8.76	0.0%	8.72	0.0%	9.07	-5.9%	9.07	-47%	9.07	-47%	9.07	-47%
San Bruno	0.95	0.0%	3.39	0.0%	3.40	-5.9%	3.40	-47%	3.40	-47%	3.40	-47%
San José	4.26	0.0%	4.31	0.0%	4.51	-5.9%	4.51	-47%	4.51	-47%	4.51	-47%
Santa Clara	3.27	0.0%	3.29	0.0%	3.50	-5.9%	3.50	-47%	3.50	-47%	3.50	-47%
Stanford	1.43	0.0%	1.40	0.0%	1.54	-5.9%	1.54	-47%	1.54	-47%	1.54	-47%
Sunnyvale	9.33	0.0%	9.35	0.0%	9.45	-5.9%	9.45	-47%	9.45	-47%	9.45	-47%
Westborough	0.82	0.0%	0.84	0.0%	0.81	-5.9%	0.81	-47%	0.81	-47%	0.81	-47%
Wholesale Total	**132.2**	**132.2†**	**138.6**	**138.6†**	**140.8**	**132.5†**	**140.8**	**74.5†**	**140.8**	**74.5†**	**140.8**	**74.5†**

† Total supply available to the Wholesale Customers after drought cutback.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table D: Scenario 2: Without Bay-Delta Plan - Projected Wholesale Customer RWS Demand and Percent Cutback for a Single Dry Year and Multiple Dry Years (Base Year 2020)

	2020 (184 MGD)		2021 (157.5 MGD)		2022 (132.5 MGD)		2023 (132.5 MGD)		2024 (132.5 MGD)		2025 (132.5 MGD)	
Agency	Actual Purchases	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback
ACWD	7.87	0.0%	9.44	0.0%	9.46	-5.9%	9.46	-5.9%	9.46	-5.9%	9.46	-5.9%
Brisbane/GVMID	0.64	0.0%	0.62	0.0%	0.65	-5.9%	0.65	-5.9%	0.65	-5.9%	0.65	-5.9%
Burlingame	3.48	0.0%	3.34	0.0%	3.35	-5.9%	3.35	-5.9%	3.35	-5.9%	3.35	-5.9%
Coastside	1.02	0.0%	1.54	0.0%	1.23	-5.9%	1.23	-5.9%	1.23	-5.9%	1.23	-5.9%
CalWater Total	29.00	0.0%	29.66	0.0%	29.81	-5.9%	29.81	-5.9%	29.81	-5.9%	29.81	-5.9%
Daly City	3.97	0.0%	4.00	0.0%	4.01	-5.9%	4.01	-5.9%	4.01	-5.9%	4.01	-5.9%
East Palo Alto	1.57	0.0%	1.63	0.0%	1.69	-5.9%	1.69	-5.9%	1.69	-5.9%	1.69	-5.9%
Estero	4.34	0.0%	4.48	0.0%	4.51	-5.9%	4.51	-5.9%	4.51	-5.9%	4.51	-5.9%
Hayward	13.92	0.0%	14.47	0.0%	15.12	-5.9%	15.12	-5.9%	15.12	-5.9%	15.12	-5.9%
Hillsborough	2.62	0.0%	2.95	0.0%	3.05	-5.9%	3.05	-5.9%	3.05	-5.9%	3.05	-5.9%
Menlo Park	2.96	0.0%	2.92	0.0%	2.93	-5.9%	2.93	-5.9%	2.93	-5.9%	2.93	-5.9%
Mid-Peninsula	2.66	0.0%	2.65	0.0%	2.80	-5.9%	2.80	-5.9%	2.80	-5.9%	2.80	-5.9%
Millbrae	1.90	0.0%	1.95	0.0%	2.15	-5.9%	2.15	-5.9%	2.15	-5.9%	2.15	-5.9%
Milpitas	5.92	0.0%	5.88	0.0%	5.34	-5.9%	5.34	-5.9%	5.34	-5.9%	5.34	-5.9%
Mountain View	7.67	0.0%	7.80	0.0%	8.05	-5.9%	8.05	-5.9%	8.05	-5.9%	8.05	-5.9%
North Coast	2.37	0.0%	2.58	0.0%	2.66	-5.9%	2.66	-5.9%	2.66	-5.9%	2.66	-5.9%
Palo Alto	9.75	0.0%	9.44	0.0%	9.66	-5.9%	9.66	-5.9%	9.66	-5.9%	9.66	-5.9%
Purissima Hills	1.75	0.0%	1.97	0.0%	2.02	-5.9%	2.02	-5.9%	2.02	-5.9%	2.02	-5.9%
Redwood City	8.76	0.0%	8.72	0.0%	9.07	-5.9%	9.07	-5.9%	9.07	-5.9%	9.07	-5.9%
San Bruno	0.95	0.0%	3.39	0.0%	3.40	-5.9%	3.40	-5.9%	3.40	-5.9%	3.40	-5.9%
San José	4.26	0.0%	4.31	0.0%	4.51	-5.9%	4.51	-5.9%	4.51	-5.9%	4.51	-5.9%
Santa Clara	3.27	0.0%	3.29	0.0%	3.50	-5.9%	3.50	-5.9%	3.50	-5.9%	3.50	-5.9%
Stanford	1.43	0.0%	1.40	0.0%	1.54	-5.9%	1.54	-5.9%	1.54	-5.9%	1.54	-5.9%
Sunnyvale	9.33	0.0%	9.35	0.0%	9.45	-5.9%	9.45	-5.9%	9.45	-5.9%	9.45	-5.9%
Westborough	0.82	0.0%	0.84	0.0%	0.81	-5.9%	0.81	-5.9%	0.81	-5.9%	0.81	-5.9%
Wholesale Total	**132.2**	**132.2†**	**138.6**	**138.6†**	**140.8**	**132.5†**	**140.8**	**132.5†**	**140.8**	**132.5†**	**140.8**	**132.5†**

† Total supply available to the Wholesale Customers after drought cutback.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table E: Scenario 1: With Bay-Delta Plan - Projected Wholesale Customer RWS Demand and Percent Cutback for a Single Dry Year and Multiple Dry Years (Base Year 2025)

	2025 (184 MGD)		2026 (82.8 MGD)		2027 (74.5 MGD)		2028 (74.5 MGD)		2029 (74.5 MGD)	
Agency	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback
ACWD	7.68	0%	7.68	-43.3%	7.68	-49%	7.68	-49%	7.68	-49%
Brisbane/GVMID	0.89	0%	0.89	-43.3%	0.89	-49%	0.89	-49%	0.89	-49%
Burlingame	4.33	0%	4.33	-43.3%	4.33	-49%	4.33	-49%	4.33	-49%
Coastside	1.40	0%	1.40	-43.3%	1.40	-49%	1.40	-49%	1.40	-49%
CalWater Total	29.99	0%	29.99	-43.3%	29.99	-49%	29.99	-49%	29.99	-49%
Daly City	3.57	0%	3.57	-43.3%	3.57	-49%	3.57	-49%	3.57	-49%
East Palo Alto	1.88	0%	1.88	-43.3%	1.88	-49%	1.88	-49%	1.88	-49%
Estero	4.07	0%	4.07	-43.3%	4.07	-49%	4.07	-49%	4.07	-49%
Hayward	17.86	0%	17.86	-43.3%	17.86	-49%	17.86	-49%	17.86	-49%
Hillsborough	3.26	0%	3.26	-43.3%	3.26	-49%	3.26	-49%	3.26	-49%
Menlo Park	3.55	0%	3.55	-43.3%	3.55	-49%	3.55	-49%	3.55	-49%
Mid-Peninsula	2.86	0%	2.86	-43.3%	2.86	-49%	2.86	-49%	2.86	-49%
Millbrae	2.29	0%	2.29	-43.3%	2.29	-49%	2.29	-49%	2.29	-49%
Milpitas	6.59	0%	6.59	-43.3%	6.59	-49%	6.59	-49%	6.59	-49%
Mountain View	8.60	0%	8.60	-43.3%	8.60	-49%	8.60	-49%	8.60	-49%
North Coast	2.34	0%	2.34	-43.3%	2.34	-49%	2.34	-49%	2.34	-49%
Palo Alto	10.06	0%	10.06	-43.3%	10.06	-49%	10.06	-49%	10.06	-49%
Purissima Hills	2.09	0%	2.09	-43.3%	2.09	-49%	2.09	-49%	2.09	-49%
Redwood City	8.46	0%	8.46	-43.3%	8.46	-49%	8.46	-49%	8.46	-49%
San Bruno	3.24	0%	3.24	-43.3%	3.24	-49%	3.24	-49%	3.24	-49%
San José	4.50	0%	4.50	-43.3%	4.50	-49%	4.50	-49%	4.50	-49%
Santa Clara	4.50	0%	4.50	-43.3%	4.50	-49%	4.50	-49%	4.50	-49%
Stanford	2.01	0%	2.01	-43.3%	2.01	-49%	2.01	-49%	2.01	-49%
Sunnyvale	9.16	0%	9.16	-43.3%	9.16	-49%	9.16	-49%	9.16	-49%
Westborough	0.86	0%	0.86	-43.3%	0.86	-49%	0.86	-49%	0.86	-49%
Wholesale Total	**146.0**	**146.0†**	**146.0**	**82.8†**	**146.0**	**74.5†**	**146.0**	**74.5†**	**146.0**	**74.5†**

† Total supply available to the Wholesale Customers after drought cutback.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table F: Scenario 2: Without Bay-Delta Plan - Projected Wholesale Customer RWS Demand and Percent Cutback for a Single Dry Year and Multiple Dry Years (Base Year 2025)

	2025 (184 MGD)		2026 (157.5 MGD)		2027 (157.5 MGD)		2028 (157.5 MGD)		2029 (132.5 MGD)	
Agency	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback	Projected Demand	Drought Cutback
ACWD	7.68	0.0%	7.68	0.0%	7.68	0.0%	7.68	0.0%	7.68	-9.2%
Brisbane/GVMID	0.89	0.0%	0.89	0.0%	0.89	0.0%	0.89	0.0%	0.89	-9.2%
Burlingame	4.33	0.0%	4.33	0.0%	4.33	0.0%	4.33	0.0%	4.33	-9.2%
Coastside	1.40	0.0%	1.40	0.0%	1.40	0.0%	1.40	0.0%	1.40	-9.2%
CalWater Total	29.99	0.0%	29.99	0.0%	29.99	0.0%	29.99	0.0%	29.99	-9.2%
Daly City	3.57	0.0%	3.57	0.0%	3.57	0.0%	3.57	0.0%	3.57	-9.2%
East Palo Alto	1.88	0.0%	1.88	0.0%	1.88	0.0%	1.88	0.0%	1.88	-9.2%
Estero	4.07	0.0%	4.07	0.0%	4.07	0.0%	4.07	0.0%	4.07	-9.2%
Hayward	17.86	0.0%	17.86	0.0%	17.86	0.0%	17.86	0.0%	17.86	-9.2%
Hillsborough	3.26	0.0%	3.26	0.0%	3.26	0.0%	3.26	0.0%	3.26	-9.2%
Menlo Park	3.55	0.0%	3.55	0.0%	3.55	0.0%	3.55	0.0%	3.55	-9.2%
Mid-Peninsula	2.86	0.0%	2.86	0.0%	2.86	0.0%	2.86	0.0%	2.86	-9.2%
Millbrae	2.29	0.0%	2.29	0.0%	2.29	0.0%	2.29	0.0%	2.29	-9.2%
Milpitas	6.59	0.0%	6.59	0.0%	6.59	0.0%	6.59	0.0%	6.59	-9.2%
Mountain View	8.60	0.0%	8.60	0.0%	8.60	0.0%	8.60	0.0%	8.60	-9.2%
North Coast	2.34	0.0%	2.34	0.0%	2.34	0.0%	2.34	0.0%	2.34	-9.2%
Palo Alto	10.06	0.0%	10.06	0.0%	10.06	0.0%	10.06	0.0%	10.06	-9.2%
Purissima Hills	2.09	0.0%	2.09	0.0%	2.09	0.0%	2.09	0.0%	2.09	-9.2%
Redwood City	8.46	0.0%	8.46	0.0%	8.46	0.0%	8.46	0.0%	8.46	-9.2%
San Bruno	3.24	0.0%	3.24	0.0%	3.24	0.0%	3.24	0.0%	3.24	-9.2%
San José	4.50	0.0%	4.50	0.0%	4.50	0.0%	4.50	0.0%	4.50	-9.2%
Santa Clara	4.50	0.0%	4.50	0.0%	4.50	0.0%	4.50	0.0%	4.50	-9.2%
Stanford	2.01	0.0%	2.01	0.0%	2.01	0.0%	2.01	0.0%	2.01	-9.2%
Sunnyvale	9.16	0.0%	9.16	0.0%	9.16	0.0%	9.16	0.0%	9.16	-9.2%
Westborough	0.86	0.0%	0.86	0.0%	0.86	0.0%	0.86	0.0%	0.86	-9.2%
Wholesale Total	**146.0**	**146.0†**	**146.0**	**146.4†**	**146.0**	**146.8†**	**146.0**	**147.1†**	**146.0**	**132.5†**

† Total supply available to the Wholesale Customers after drought cutback.

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table H: Drought Allocations when Total Supplies Available to the Wholesale Customers are Equal to 157.5 MGD

Projected SF RWS Wholesale Purchases	146.0 MGD	147.9 MGD	151.9 MGD	156.3 MGD	162.8 MGD
	Drought Allocation (MGD)				
Agency	**2025**	**2030**	**2035**	**2040**	**2045**
ACWD	7.68	7.68	7.68	7.68	8.82
Brisbane/GVMID	0.89	0.89	0.88	0.89	0.87
Burlingame	4.33	4.40	4.47	4.58	4.54
Coastside	1.40	1.38	1.36	1.33	1.28
CalWater Total	29.99	29.74	29.81	30.27	29.71
Daly City	3.57	3.52	3.49	3.46	3.32
East Palo Alto	1.88	1.95	2.10	2.49	2.80
Estero	4.07	4.11	4.18	4.23	4.24
Hayward	17.86	18.68	19.75	20.82	21.43
Hillsborough	3.26	3.25	3.26	3.26	3.15
Menlo Park	3.55	3.68	3.87	4.06	4.15
Mid-Peninsula	2.86	2.84	2.88	2.89	2.83
Millbrae	2.29	2.50	2.45	2.82	3.10
Milpitas	6.59	6.75	7.03	7.27	7.29
Mountain View	8.60	8.90	9.20	9.51	9.61
North Coast	2.34	2.33	2.34	2.34	2.27
Palo Alto	10.06	10.15	10.28	10.51	10.44
Purissima Hills	2.09	2.09	2.12	2.13	2.08
Redwood City	8.46	8.49	8.64	8.74	8.62
San Bruno	3.24	3.22	3.20	3.20	3.11
San José	4.50	4.50	4.50	4.50	4.35
Santa Clara	4.50	4.50	4.50	4.50	4.35
Stanford	2.01	2.18	2.35	2.53	2.61
Sunnyvale	9.16	9.30	10.70	11.44	11.71
Westborough	0.86	0.85	0.85	0.84	0.82
Wholesale Total	**146.0**	**147.9**	**151.9**	**156.3**	**157.5**

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table I: Drought Allocations when Total Supplies Available to the Wholesale Customers are Equal to 132.5 MGD

Projected SF RWS Wholesale Purchases	146.0 MGD	147.9 MGD	151.9 MGD	156.3 MGD	162.8 MGD
	Drought Allocation (MGD)				
Agency	**2025**	**2030**	**2035**	**2040**	**2045**
ACWD	6.97	6.88	6.91	6.91	8.20
Brisbane/GVMID	0.81	0.79	0.73	0.73	0.72
Burlingame	3.93	3.94	3.96	3.89	3.80
Coastside	1.27	1.24	1.22	1.20	1.19
CalWater Total	27.21	26.65	26.46	25.69	24.69
Daly City	3.24	3.15	3.04	3.01	2.98
East Palo Alto	1.70	1.75	1.97	2.30	2.62
Estero	3.69	3.68	3.76	3.87	3.77
Hayward	16.20	16.74	17.32	17.69	18.07
Hillsborough	2.96	2.92	2.90	2.75	2.56
Menlo Park	3.22	3.30	3.37	3.33	3.26
Mid-Peninsula	2.59	2.54	2.59	2.62	2.54
Millbrae	2.07	2.24	2.16	2.32	2.45
Milpitas	5.98	6.05	6.25	6.31	6.35
Mountain View	7.80	7.97	8.28	8.49	8.34
North Coast	2.12	2.09	2.11	2.11	2.11
Palo Alto	9.13	9.09	9.26	9.46	9.71
Purissima Hills	1.89	1.87	1.42	1.38	1.32
Redwood City	7.67	7.61	7.89	7.70	7.49
San Bruno	2.94	2.88	2.56	2.51	2.45
San José	4.08	4.03	3.03	2.91	2.76
Santa Clara	4.08	4.03	3.03	2.91	2.76
Stanford	1.82	1.95	2.06	2.13	2.16
Sunnyvale	8.31	8.33	9.46	9.51	9.43
Westborough	0.78	0.76	0.76	0.76	0.76
Wholesale Total	**132.5**	**132.5**	**132.5**	**132.5**	**132.5**

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table J: Drought Allocations when Total Supplies Available to the Wholesale Customers are Equal to 82.8 MGD

Projected SF RWS Wholesale Purchases	146.0 MGD	147.9 MGD	151.9 MGD	156.3 MGD	162.8 MGD
	Drought Allocation (MGD)				
Agency	**2025**	**2030**	**2035**	**2040**	**2045**
ACWD	4.36	4.30	4.19	4.07	4.64
Brisbane/GVMID	0.51	0.50	0.48	0.47	0.45
Burlingame	2.45	2.46	2.44	2.43	2.39
Coastside	0.79	0.77	0.74	0.71	0.68
CalWater Total	17.00	16.65	16.25	16.03	15.62
Daly City	2.02	1.97	1.90	1.83	1.75
East Palo Alto	1.06	1.09	1.14	1.32	1.47
Estero	2.31	2.30	2.28	2.24	2.23
Hayward	10.13	10.46	10.77	11.03	11.26
Hillsborough	1.85	1.82	1.78	1.73	1.66
Menlo Park	2.01	2.06	2.11	2.15	2.18
Mid-Peninsula	1.62	1.59	1.57	1.53	1.49
Millbrae	1.30	1.40	1.34	1.49	1.63
Milpitas	3.74	3.78	3.83	3.85	3.83
Mountain View	4.88	4.98	5.01	5.04	5.05
North Coast	1.33	1.30	1.28	1.24	1.19
Palo Alto	5.71	5.68	5.61	5.57	5.49
Purissima Hills	1.18	1.17	1.15	1.13	1.10
Redwood City	4.80	4.76	4.71	4.63	4.53
San Bruno	1.83	1.80	1.75	1.70	1.63
San José	2.55	2.52	2.45	2.38	2.29
Santa Clara	2.55	2.52	2.45	2.38	2.29
Stanford	1.14	1.22	1.28	1.34	1.37
Sunnyvale	5.19	5.21	5.83	6.06	6.16
Westborough	0.49	0.48	0.46	0.45	0.43
Wholesale Total	**82.8**	**82.8**	**82.8**	**82.8**	**82.8**

Attachment B: Updated 2020 UWMP Drought Cutbacks

Table K: Drought Allocations when Total Supplies Available to the Wholesale Customers are Equal to 74.5 MGD

Projected SF RWS Wholesale Purchases	146.0 MGD	147.9 MGD	151.9 MGD	156.3 MGD	162.8 MGD
	Drought Allocation (MGD)				
Agency	**2025**	**2030**	**2035**	**2040**	**2045**
ACWD	3.92	3.87	3.77	3.66	4.17
Brisbane/GVMID	0.46	0.45	0.43	0.42	0.41
Burlingame	2.21	2.21	2.19	2.18	2.15
Coastside	0.71	0.70	0.67	0.64	0.61
CalWater Total	15.30	14.98	14.62	14.43	14.05
Daly City	1.82	1.77	1.71	1.65	1.57
East Palo Alto	0.96	0.98	1.03	1.19	1.32
Estero	2.08	2.07	2.05	2.02	2.00
Hayward	9.11	9.41	9.69	9.92	10.14
Hillsborough	1.66	1.64	1.60	1.55	1.49
Menlo Park	1.81	1.86	1.90	1.94	1.96
Mid-Peninsula	1.46	1.43	1.41	1.38	1.34
Millbrae	1.17	1.26	1.20	1.34	1.47
Milpitas	3.36	3.40	3.45	3.47	3.45
Mountain View	4.39	4.48	4.51	4.53	4.54
North Coast	1.19	1.17	1.15	1.12	1.07
Palo Alto	5.14	5.11	5.04	5.01	4.94
Purissima Hills	1.06	1.05	1.04	1.02	0.99
Redwood City	4.31	4.28	4.24	4.17	4.08
San Bruno	1.65	1.62	1.57	1.53	1.47
San José	2.30	2.27	2.21	2.14	2.06
Santa Clara	2.30	2.27	2.21	2.14	2.06
Stanford	1.03	1.10	1.15	1.21	1.24
Sunnyvale	4.67	4.69	5.25	5.45	5.54
Westborough	0.44	0.43	0.41	0.40	0.39
Wholesale Total	**74.5**	**74.5**	**74.5**	**74.5**	**74.5**

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Conduct a Public Hearing and Adopt a Resolution Adopting the Water Shortage Contingency Plan.**
Category:	Public Hearings-Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Tony Ndah, 408-586-2602**
Recommendation:	Conduct a Public Hearing and Adopt a Resolution Adopting the Water Shortage Contingency Plan.

Background:
Established by California State Assembly Bill 797 in 1983, the Urban Water Management Planning Act (Act) requires every urban water suppliers with more than 3,000 service connections or supplying more than 3,000 acre feet of water annually to prepare plans that support long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. In 1991, as an amendment to Assembly Bill 797, the State added requirements to include a Water Shortage Contingency Plan (WSCP) as part of the Urban Water Management Plan (UWMP) to outline the urban water supplier's response and plan for changes or shortages in water supplies. The WSCP is required by California Water Code Section 10632.1 and is to be submitted to the Department of Water Resources (DWR) on or before July 1 of each year, or within 14 days of receiving final allocations from the State Water Project, whichever is later. The previous WSCP for the City was approved by City Council on June 7, 2016, as part of the 2015 Urban Water Management Plan update.

On October 14, 2021, a Professional Services Agreement was executed with Maddaus Water Management, Inc. for the preparation of the 2020 UWMP and 2020 WSCP.

As required by the State and as part of the 2020 UWMP, the City is expanding its WSCP to be a standalone document to define water shortage levels and establish actions and procedures for managing water shortages. To align with State guidelines the updated WSCP defines 6 water shortage levels ranging from 0% reductions to greater than 50%. The WSCP also evaluates the financial consequences of droughts.

Per Water Code Section 10632.1, the City is required to conduct an Annual Water Supply and Demand Assessment (Annual Assessment). The Annual Assessment must be submitted to the Department of Water Resources (DWR) by July 1st of each year, beginning in 2022. The assessment must contain information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's Water Shortage Contingency Plan (WSCP). The Annual Assessment will be predicated on outcome of the San Francisco Public Utilities Commission (SFPUC) Annual Assessment and the Valley Water Annual Assessment which must be submitted to the City prior to July 1st annually.

The outcome of the City's Annual Assessment will determine the Annual Assessment approval process. If the City's water supply availability is normal, without expected shortages, the City's designee will approve the Annual Assessment and submit the findings to DWR by the July 1st deadline. If shortage conditions are expected, the City will present the Annual Assessment to the City Council and recommend implementing the

appropriate WSCP shortage level. In the event a water shortage is triggered, the City Council by resolution must declare a shortage according to the defined water shortage levels set forth in the WSCP.

Analysis:

The City Council's review and approval of the WSCP is unfortunately quite timely. As discussed in the Urban Management Water Plan staff report, scheduled for Council approval on June 15, 2021, the City's wholesale water providers continue to analyze the effects of the current drought on water supply availability. Specifically, on June 9, 2021, Valley Water took action by calling for a mandatory 15% reduction in water use compared to 2019 levels and also urged the County of Santa Clara to proclaim a local emergency to underscore the seriousness of the threats posed by the drought.

With the adoption of the recommended resolution adopting the WSCP, the City Manager, or his designee, is authorized and directed to implement the Water Shortage Contingency Plan in accordance with the Urban Water Management Planning Act and to provide recommendations to the City Council regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the Water Shortage Contingency Plan. Based on recent requests and mandates by the wholesale water providers to limit water usage in response to the drought, staff is analyzing the impacts of the water shortage, to determine the appropriate water shortage level, as explained below, and implement the necessary actions consistent with the WSCP and the City's ordinance. Preliminary information on the water shortage contingency plan levels and initial set of demand reduction actions necessary to respond to the current drought will be discussed with Council during the presentation of this item at the June 15, 2021 Council meeting.

Regardless of impending water reduction measures, the City must prepare and submit the adopted 2020 Water Shortage Contingency Plan to the DWR by July 1, 2021 to comply with regulations and ensure continued eligibility of DWR-administered grants, loans, and drought assistance. State regulations require a public hearing prior to adoption of the WSCP. On February 23, 2021, the City published notice to update its WSCP to neighboring cities and counties and invited public comment. On May 28 and June 4, 2021, the City published notice to the public, via the Milpitas Post, that the WSCP was available on the City website.

The major components and recommendations of the Water Shortage Contingency Plan include the following:

1. Annual Water Supply and Demand Assessment Procedures
2. Six Standard Water Shortage Levels
3. Demand Reduction Actions
4. Water Supply Augmentation Strategies
5. Financial Consequences of the Water Shortage Contingency Plan

1. <u>Annual Water Supply and Demand Assessment Procedures</u>

The Annual Assessment will be predicated on the outcome of the SFPUC and Valley Water annual water supply assessments for each year. Based on staff review of the water supply projections from wholesale providers, staff would take one of the following actions:

A. No Water Shortage Exists

- City determines water supply availability is normal, without expected shortages.
- City Manager or designee will approve the Annual Assessment.
- City submits results of the Annual Assessment to DWR by July 1 of each year.

B. <u>Water Shortage Exists</u>

- City determines water supply availability is abnormal with expected shortages.
- City presents the Annual Assessment to the City Council.
- City Council adopts the Annual Assessment and recommended WSCP level commensurate with the supply projections.

- City submits adopted Annual Assessment to the California Department of Water Resources (DWR) on or before July 1 of each year.

2. Six Standard Water Shortage Levels

The City's six water shortage levels (see Table 1), ranging from 0% reductions to greater than 50%, are aligned with the State Water Shortage Levels. The Milpitas City Council is authorized to require or impose restrictions on or reductions in the use of water if such reductions are necessary to comply with Water Supply Shortage conditions.

Table 1: Standard Water Shortage Levels

	Level 0	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
Target Water Savings	0% (Normal)	10%	11%-20%	21%-30%	31%-40%	41%-50%	>50%
Public Outreach	Permanent Water Waste Prohibitions Awareness	Increase advertising, social media campaigns, and direct communication to high water users; educate residents on water conservation rebates and resources available by promoting the City's Water Conservation page http://www.savewatermilpitas.org/.				Escalate outreach efforts.	Highest outreach effort level with focus on health and safety
Demand Reduction Actions	Permanent water use restrictions	Water use restrictions and enforcement increases with each level such as imposing outdoor watering schedules.					
Supply Augmentation Actions	No additional actions	Install additional City owned groundwater wells.					

3. Demand Reduction Actions

The demand reduction actions, were identified based on the Drought Risk Analysis performed in the 2020 UWMP, center around supply augmentations or demand reductions. Further, regardless of the water shortage, the State requires the response actions identified below.

- Supply augmentation actions.
- Demand reduction actions to adequately respond to shortages.
- City operational changes.
- Permanent Water Conservation As A Milpitas Way of Life prohibitions that are in addition to state-mandated prohibitions (Ordinance 240.6).
- For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.
- Each elevated shortage level will include the elements of the previous shortage level(s), and each elevated shortage level is intended to be more restrictive than the previous level(s).

Table 3-1 (pg. 21) of the WSCP provides a narrative description of the water shortage levels, percent shortage range, and a narrative description of the water shortage condition. The table also summarizes the planned response actions based on the target for water savings. A detailed list of Demand Reduction Actions applicable to each water shortage level is shown in Table 3-2 (pg. 23) of the WSCP.

4. Water Supply Augmentation Strategies

Currently, the City does not use groundwater to meet customer demands under normal conditions. The City has one existing fully developed well, Pinewood Well, which is used to meet emergency water supply needs, and two wells that are planned or in development: Curtis Well and McCandless Well. The City may pursue a managed groundwater well extraction program to augment water shortages. The south-western portion of the City of Milpitas overlays a groundwater aquifer which is adequately productive therefore, in-pipe blending with SFPUC and Valley Water is a viable option for augmenting supply shortages. Four wells at an average withdrawal rate of 1.2 million gallons per day (450 million gallons per year) can produce up to 5 million gallons per day of new water supply or the City. The extraction rate and volume is based on preliminary production tests of McCandless Well and Curtis Well which have indicated the aquifer in this zone produces 500-1,20

gallons per minute or an average of 850 gallons per minute. Planning for future wells allows for better long-term supply reliability by expanding the City's water supply portfolio which will allow the City to supplement water supply cutbacks in some or all drought scenarios. Wells also provide the City storage credits to offset above grade water storage requirements which also include infrastructure and land acquisition costs. Preliminary estimate indicates three (3) production wells can augment supply shortfalls in 2030 and four (4) production wells in 2040 would be required to offset all of the SFPUC supply cutbacks. The assumption is each well will produce approximately 850 gallons per minute and Valley Water determines no adverse impacts will be realized as a result of extracting groundwater at the rate and volume identified above.

5. Financial Consequences of the Water Shortage Contingency Plan

The Water Shortage Actions are designed to address a range of water shortage conditions and have a potential to impact the City's revenues and expenditures for its water utility. To assess these impacts, the staff calculated the revenue impacts resulting from each shortage stage percent reduction in revenue as compared to an estimate of a normal year baseline. The proposed following measures can be implemented by the City to overcome reductions in water revenue due to lower consumption to ensure that expenditures do not exceed revenues:

- The City Manager can implement a hiring and expenditure review process to curb expenditures;
- The City Council can authorize use of the Rate Stabilization Reserve to balance the budget;
- The City can defer non-mission critical capital improvement projects and reallocate the funds to cover the cost of operations and critical maintenance;
- Depending on the severity of the shortage and impact on revenue, the City Council may choose to increase water rates, and/or implement a drought response surcharge, by an amount necessary to fully or partially offset the revenue loss. The subsequent rate increase and/or drought surcharge enacted will remain in effect until such time the City Council declares that a water shortage no longer exists; and/or
- The City Manager can recommend alternative measures to the City Council, to the extent of which to be determined by a rates analysis.

Available Water Conservation Resources

The City works closely with our water supply partners, SFPUC, Valley Water, and Bay Area Water Supply and Conservation Agency, to bring water conservation programs and education for our community. This includes up to 8 annual workshops on water efficient landscaping and water conservation education and tips. In partnership with Valley Water, Milpitas residents have access to the following water efficiency rebate programs:

- Landscape Conversion Rebate
- Water Efficient Irrigation Equipment Upgrades
- Rainwater Capture and Grey Water System Rebates
- Indoor and Outdoor Water Surveys and Audits
- Water Efficient Tools Online Shop

With each Water Shortage Level, staff will be increasing outreach and education about water conservation measures and tips, as well as promotion of available rebates and financial assistance.

Next Steps

Staff will return to Council in August to present the results of the water supply assessment, update the Council on the implementation of the water shortage strategy, and may recommend updates to the City Ordinance to align with the Water Shortage Contingency Plan, if necessary.

Policy Alternatives:

Alternative 1: City Council does not adopt the Water Shortage Contingency Plan

Pros: None

Cons: Assembly Bill 2067 mandates that all Water Shortage Contingency Plans be submitted to the Department of Water Resources by July 1, 2021.

Reason not recommended: Failure to adopt the Water Shortage Contingency Plan renders the City ineligible for any water management grant or loan administered by the Department of Water Resources (DWR) and may render the City ineligible for other State funding, depending on the conditions that are specified in funding guidelines.

Fiscal Impact:
There are no fiscal impacts related to the adoption of the Water Shortage Contingency Plan.

California Environmental Quality Act:
The 2020 Water shortage Contingency Plan is exempt from CEQA pursuant to Water Code Section 10652.

Recommendation:
1. Open the Public Hearing for public comment and close the Public Hearing.
2. Adopt a Resolution adopting the Water Shortage Contingency Plan.

Attachments:
1. Draft 2020 Water Shortage Contingency Plan
2. Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS ADOPTING THE 2020 WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the Urban Water Management Planning Act, as codified in Section 10610 of the California Water Code passed by the California legislation in 1983, requires urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt, in accordance with prescribed requirements, a Water Shortage Contingency Plan; and

WHEREAS, in 1991, the State of California added requirements to include a Water Shortage Contingency Plan as part of the Urban Water Management Plan to outline the urban water supplier's response and plan for changes or shortages in water supplies; and

WHEREAS, the goal of developing the Water Shortage Contingency Plan is to prepare in advance a response for various water shortage conditions. The Water Shortage Contingency Plan defines City actions to address six stages of drought causing up to a 50 percent water shortage and catastrophic supply interruptions from power outage, earthquakes, or other disasters; and;

WHEREAS, the Urban Water Management Planning Act specifies the requirements and procedures for adopting such Water Shortage Contingency Plans; and

WHEREAS, pursuant to recent amendments to the Urban Water Management Planning Act, urban water suppliers are required to adopt and electronically submit their Water Shortage Contingency Plans to the California Department of Water Resources (DWR) by July 1, 2021; and

WHEREAS, pursuant to the Urban Water Management Planning Act, "urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers; and

WHEREAS, the City of Milpitas (City) meets the definition of an urban water supplier for purposes of the Urban Water Management Planning Act and is required to prepare and adopt and Water Shortage Contingency Plan as part of its 2020 Urban Water Management Plan; and

WHEREAS, the Water Shortage Contingency Plan describes the procedures for conducting an Annual Water Supply and Demand Assessment (Annual Assessment) that is required by California Water Code Section 10632.1 and is to be submitted to DWR on or before July 1 of each year, or within 14 days of receiving final allocations from the State Water Project, whichever is later; and

WHEREAS, the City prepared the draft 2020 Water Shortage Contingency Plan in accordance with the Urban Water Management Planning Act, and applicable legal requirements, has undertaken certain coordination with other appropriate agencies including other suppliers sharing common sources, regional water management agencies, and relevant public agencies, notice, public involvement, public comment, and other procedures in relation to its Water Shortage Contingency Plan; and

WHEREAS, in accordance with the Urban Water Management Planning Act, the City has prepared its Water Shortage Contingency Plan with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its Water Shortage Contingency Plan, and has also utilized DWR's Urban Water Management Plan Guidebook 2020, including its related appendices, in preparing its Water Shortage Contingency Plan; and

WHEREAS, the City has provided notice to the public of its intent to adopt the 2020 Water Shortage Contingency Plan, has made the draft plan available for public review, and has encouraged the public to provide comment; and

WHEREAS, in accordance with applicable law, including Water Code section 10642, and Government Code section 6066, a Notice of a Public Hearing regarding the City of Milpitas' Water Shortage Contingency Plan was published within the jurisdiction of the City on May 28, 2021 and June 4, 2021; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code section 10642, the City held a public hearing on June 15, 2021, prior to adoption of said Plan for the purpose of allowing community comment regarding the City's Water Shortage Contingency Plan.

WHEREAS, pursuant to said public hearing on the City's Water Shortage Contingency Plan, the City, among other things, encouraged the active involvement of diverse social, cultural, and economic members of the community within City's service area with regard to the Water Shortage Contingency Plan, and encouraged community input regarding City's Water Shortage Contingency Plan; and

WHEREAS, the City Council has reviewed and considered the purposes and requirements of the Urban Water Management Planning Act, the contents of the Water Shortage Contingency Plan, and the documentation contained in the administrative record in support of the Water Shortage Contingency Plan, and has determined that the factual analyses and conclusions set forth in the Water Shortage Contingency Plan are legally sufficient; and

WHEREAS, the City Council desires to adopt the Water Shortage Contingency Plan and to incorporate it as part of its 2020 Urban Water Management Plan prior to July 1, 2021 in order to comply with the Urban Water Management Planning Act; and

WHEREAS, Section 10652 of the California Water Code provides that the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) (CEQA) does not apply to the preparation and adoption of a WSCP as part of Plan pursuant to California Water Code section 10632.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. The custodian of this record will be the City Clerk. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The Council finds and determines that, under California Water Code Section 10652, the adoption of the Plan and this resolution does not constitute a project under the California Environmental Quality Act, and no environmental assessment is required. Pursuant to CEQA, the City Council directs staff to file a Notice of Exemption with the County Clerk's Office within five (5) working days of the adoption of this resolution.

3. The 2020 Water Shortage Contingency Plan, attached to as Exhibit A, is hereby adopted as amended by the changes incorporated by the City Council as a result of input received (if any) at the public hearing and ordered filed with the City Clerk and shall be incorporated into the City of Milpitas's Urban Water Management Plan.

4. The City Manager, or his designee, is hereby authorized and directed to include a copy of this Resolution in City of Milpitas's Water Shortage Contingency Plan and/or in City of Milpitas's 2020 Urban Water Management Plan

5. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code sections 10621(d) and 10644(a)(1)-(2), to electronically submit a copy of the Water Shortage Contingency Plan, as a part of its 2020 Urban Water Management Plan, with the California Department of Water Resources no later than July 1, 2021.

6. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code section 10644(a), to submit a copy of the Water Shortage Contingency Plan, as part of its 2020 Urban Water

Management Plan, to the California State Library, and to any city or county within which the City of Milpitas provides water supplies no later than thirty (30) days after this adoption date.

7. The City Manager, or his designee, is hereby authorized and directed, in accordance with Water Code section 10645, to make the Water Shortage Contingency Plan available for public review at City of Milpitas's offices during normal business hours and on its website at https://www.ci.milpitas.ca.gov/2020_uwmp no later than thirty (30) days after filing a copy of the Water Shortage Contingency Plan, as part of its 2020 Urban Water Management Plan, with California Department of Water Resources.

8. The City Manager, or his designee, is hereby authorized and directed to implement the Water Shortage Contingency Plan in accordance with the Urban Water Management Planning Act and to provide recommendations to the City Council regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the Water Shortage Contingency Plan.

PASSED AND ADOPTED this _____ day of _____, 2021, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

Draft 2020 Water Shortage Contingency Plan

June 2021

Prepared by:

MADDAUS WATER MANAGEMENT INC.

1803

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LIST OF ABBREVIATIONS AND ACRONYMS

2020 UWMP	2020 Urban Water Management Plan
AB	Assembly Bill
ABAG	Association of Bay Area Governments
acct	account
AF	acre-feet
AFY	acre-feet per year
AMI	Advanced Metering Infrastructure
AWE	Alliance for Water Efficiency
AWWA	American Water Works Association
AWWARF	American Water Works Association Research Foundation
BART	Bay Area Rapid Transit
BAWSCA	Bay Area Water Supply and Conservation Agency
BMP	Best Management Practice
ccf	100 cubic feet
CalWEP	California Water Efficiency Partnership
CEC	California Energy Commission
CII	Commercial, Industrial and Institutional
CIMIS	California Irrigation Management Information System
CPUC	California Public Utilities Commission
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
DDW	State Water Resources Control Board Division of Drinking Water
DMM	Demand Management Measure
DOF	California Department of Finance
DRA	Drought Risk Assessment
DSS Model	Least Cost Planning Decision Support System Model
DWR	California Department of Water Resources
EPA	Environmental Protection Agency
ETo	Evapotranspiration
GCM	global climate model
GPCD	gallons per capita per day
gpd	gallons per day
gpf	gallons per flush
gpm	gallons per minute
hcf	hundred cubic feet
HE	high efficiency
HET	High-Efficiency Toilet
HEU	High-Efficiency Urinal
ISG	Individual Supply Guarantee
MF	multifamily
MG	million gallons
MGD	million gallons per day
MGY	million gallons per year
MOU	Memorandum of Understanding
MWELO	Model Water Efficient Landscape Ordinance
MWM	Maddaus Water Management
NIWR	Net Irrigation Water Requirements
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
psi	pounds per square inch
PWS	Public Water Systems
PWSID	Public Water System Identification Number
REUWS	Residential End Uses of Water Study
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009
SBWR	City of San Jose South Bay Water Recycling
SCVWA	Santa Clara Valley Water Agency (now referred to as Valley Water)
SF	Single Family
SFPUC	San Francisco Public Utilities Commission
SFR	Single Family Residential
SWP	State Water Project
USBR	United States Bureau of Reclamation

UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act of 1983
VTA	Santa Clara Valley Transportation Authority
VW	Valley Water
WARN	Water/Wastewater Agency Response Network
WCR	Water Conservation Requirements
WDR	Waste Discharge Requirement
WRR	Water Recycling Requirement
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WWTP	Wastewater Treatment Plant
WUE	Water Use Efficiency

1 INTRODUCTION AND WSCP OVERVIEW

The Water Shortage Contingency Plan is a strategic planning document designed to prepare for and respond to water shortages. This Water Shortage Contingency Plan (WSCP) complies with California Water Code (CWC) Section 10632, which requires that every urban water supplier shall prepare and adopt a WSCP as part of its urban water management plan (UWMP). This level of detailed planning and preparation is intended to help maintain reliable supplies and reduce the impacts of supply interruptions.

The WSCP is the City's operating manual that is used to prevent catastrophic service disruptions through proactive, rather than reactive, management. A water shortage, when water supply available is insufficient to meet the normally expected customer water use at a given point in time, may occur due to a number of reasons, such as population and land use growth, climate change, drought, and catastrophic events. This Plan provides a structured guide for the City to deal with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic supply interruption. This way, if and when shortage conditions arise, the City's governing body, its staff, and the public can easily identify and efficiently implement pre-determined steps to manage a water shortage. A well-structured WSCP allows real-time water supply availability assessment and structured steps designed to respond to actual conditions, to allow for efficient management of any shortage with predictability and accountability.

The WSCP also describes the City's procedures for conducting an Annual Water Supply and Demand Assessment (Annual Assessment) that is required by CWC Section 10632.1 and is to be submitted to the California Department of Water Resources (DWR) on or before July 1 of each year, or within 14 days of receiving final allocations from the State Water Project, whichever is later. City's 2020 WSCP is included as an appendix to its 2020 (UWMP) which will be submitted to DWR by July 1, 2021. However, this WSCP is created separately from City's 2020 UWMP and can be amended, as needed, without amending the UWMP. Furthermore, the California Water Code does not prohibit an urban water supplier from taking actions not specified in its WSCP, if needed, without having to formally amend its UWMP or WSCP.

1.1 Water Shortage Contingency Plan Requirements and Organization

The WSCP provides the steps and water shortage response actions to be taken in times of water shortage conditions. WSCP has prescriptive elements, such as: an analysis of water supply reliability; the water shortage response actions for each of the six standard water shortage levels, that correspond to water shortage percentages ranging from 10 percent to greater than 50 percent; an estimate of potential to close supply gap for each measure; protocols and procedures to communicate identified actions for any current or predicted water shortage conditions; procedures for an annual water supply and demand assessment; monitoring and reporting requirements to determine customer compliance; reevaluation and improvement procedures for evaluating the WSCP.

This WSCP is organized into three main sections with Section 3 aligned with the California Water Code Section 16032 requirements.

Section 1 Introduction and WSCP Overview gives an overview of the WSCP fundamentals.

Section 2 Background provides a background on the City's water service area.

Section 3 Water Shortage Contingency Response and Preparedness Planning

Section 3.1 Water Supply Reliability Analysis provides a summary of the water supply analysis and water reliability findings from the 2020 UWMP.

Section 3.2 Annual Water Supply and Demand Assessment Procedures provide a description of procedures to conduct and approve the Annual Assessment.

Section 3.3 Six Standard Water Shortage Levels explains the WSCP's six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, 50, and more than 50 percent shortages.

Section 3.4 Shortage Response Actions describes the WSCP's shortage response actions that align with the defined shortage levels.

Section 3.5 Communication Protocols addresses communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding any current or predicted shortages and any resulting shortage response actions.

Section 3.6 Compliance and Enforcement describes customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions.

Section 3.7 Legal Authorities is a description of the legal authorities that enable the City to implement and enforce its shortage response actions

Section 3.8 Financial Consequences of the WSCP provides a description of the financial consequences of and responses for drought conditions.

Section 3.9 Monitoring and Reporting describes monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements**.**

Section 3.10 WSCP Refinement Procedures addresses reevaluation and improvement procedures for monitoring and evaluating the functionality of the WSCP.

Section 3.11 Special Water Feature Distinction is a required definition for inclusion in a WSCP per the Water Code.

Section 3.12 Plan Adoption, Submittal, and Implementation provides a record of the process the City followed to adopt and implement its WSCP.

1.2 Integration with Other Planning Efforts

As a retail water supplier in Santa Clara County, the City of Milpitas considered other key entities in the development of this WSCP, including Valley Water and SFPUC (regional wholesale supplier). The City also developed this WSCP with input from several coordination efforts led by Bay Area Water Supply and Conservation Agency[1] (BAWSCA) and City and County planning documents.

Some of the key planning and reporting documents that were used to develop this WSCP are:

1.2.1 Draft 2020 Water Master Plan: evaluates historical and existing water demands to review and refine performance and planning criteria to evaluate the water system and facilities. This also incorporates the Milpitas Metro Specific Plan and Milpitas Gateway-Main Street Specific Plan.

1.2.2 City of Milpitas 2040 General Plan: identifies the community's vision for the future and provides a framework that will guide decisions on growth, development, and conservation of open space and

[1] More information on the Bay Area Water Supply and Conservation Agency is available online: www.bawsca.org.

resources in a manner that is consistent with the quality of life desired by the City's residents and businesses.

1.2.3 American Water Infrastructure Act Risk and Resilience Assessment and Emergency Response Plan

1.2.4 Santa Clara County Operational Hazard Mitigation Plan

2 BACKGROUND INFORMATION

The City of Milpitas is located in Santa Clara County near the southern tip of the San Francisco Bay, 45 miles south of San Francisco. The City of Fremont borders Milpitas to the north and the City of San Jose borders Milpitas to the south. Most of its 14 square miles of land is situated between two major freeways (I-880 and I-680) and a county expressway. The City has approximately 10 square miles of valley floor to the west and 4 square miles of hillside areas to the east. Industrial and commercial areas are located on the valley floor with residential areas on the valley floor and hillside. Parks and recreational open spaces are distributed throughout residential areas.

Since its inception in 1954, the City has experienced steady growth and development. At the time of incorporation, the City covered an area of 2.9 square miles with a population of 825. Rapid growth began with the Ford Motor Company assembly plant in 1955 and continued with the high technology industry in the 1970s. The majority of the valley floor is fairly new. Growth slowed as result of the recession of 2008. However, in more recent years, the transformation of industrial areas of the City into high-density housing has resumed. The City contains a strong complement of employment and retail uses as well as housing. Large sources of employment include manufacturing, the school district, and the Great Mall shopping center.

2.1 City of Milpitas Service Area

The City owns, operates and maintains a potable water distribution system which consists of five turnouts, one emergency groundwater well, three emergency interties, five storage reservoirs, five pump stations, 17 pressure reducing valves (PRVs), and approximately 183 miles of pipeline. The City also operates and maintains a recycled water system owned by the City of San Jose South Bay Water Recycling (SBWR) program.

As shown in Figure 3-1, the City's potable water supply system is divided into two distinct service areas, corresponding to the areas served by the City's two wholesalers: SFPUC and Valley Water. Under normal operating conditions, the City does not blend water from SFPUC and Valley Water. However, the two sources of water can be interconnected to provide an emergency water supply, if needed.

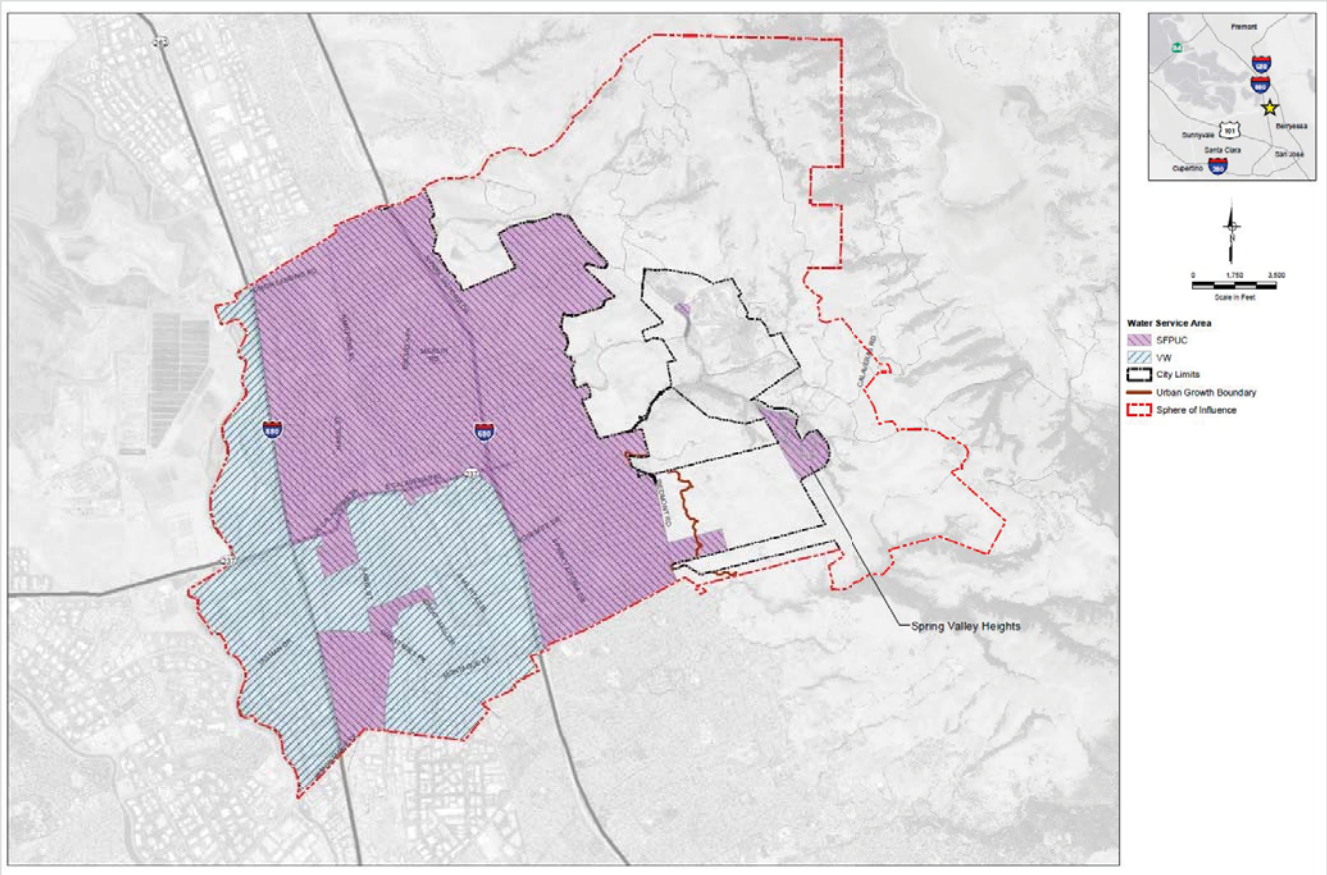


Figure 2-1. City Service Area

2.2 Relationship to Wholesalers

The City purchases treated potable water from two wholesalers: SFPUC and Valley Water (previously known as SCVWD). These two sources are not blended under normal operating conditions. However, the distribution systems are physically interconnected with isolation valves to provide emergency water supply if needed.

In its incorporation year of 1954, the City began distributing SFPUC water to all residents and businesses, expanding to the hillside area in 1982. In August 1993, the City began serving water from SCVWD (now Valley Water), primarily to the commercial and industrial areas of the City (west of Highway 880, and also south of Calaveras Blvd. and west of Highway 680). Figure 2-1 shows the SFPUC and Valley Water service areas.

Most of the City's growth is occurring within areas served by Valley Water and as these areas grow, so does the percentage of the City's potable supply that comes from Valley Water. In 2020, approximately 30% of the City's potable water came from Valley Water, which is a decrease from 40% in 2015. The City's potable water demand is largely rebounded since the 2012-2016 drought period.

San Francisco Public Utilities Commission (SFPUC)

Milpitas purchases wholesale water from the City and County of San Francisco's regional water system. This supply is predominantly snowmelt from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by SFPUC from its local watersheds and facilities in Alameda County. On June 2, 2009, the City entered into a 25-year Water Supply Agreement with SFPUC. This agreement affirms the

City's perpetual right to purchase up to 9.23 million gallons per day (mgd) of treated potable water unless SFPUC has a water shortage.

Valley Water (Formerly Santa Clara Valley Water District)

The City began receiving treated surface water from SCVWD in August 1993 under a September 1984 contract between the City and SCVWD. The supply delivery is adjusted annually based on a binding 3-year annual delivery schedule. The City's annual purchase must be at least 90% of the delivery schedule and the City's monthly "supply guarantee" is at least 15% of the annual delivery schedule. Valley Water provides treated water from its Penitencia and Santa Teresa treatment plants via its Milpitas Pipeline which terminates in the City.

Although the City purchases are currently limited to surface water largely purchased by Valley Water from the State Water Project and Central Valley Project, Valley Water's overall water supply comes from a variety of sources. Nearly half is from local groundwater aquifers, and more than half is imported from the Sierra Nevada through pumping stations in the Sacramento-San Joaquin River Delta. Both groundwater and imported water are sold to retailers. Valley Water also manages the groundwater basin to the benefit of agricultural users and other independent users who pump groundwater. Local runoff is captured in Valley Water reservoirs for recharge into the groundwater basin or treatment at one of Valley Water's water treatment plants. The total storage capacity of these reservoirs is about 170,000 acre-feet (AF).

2.3 Relationship with Wholesaler Water Shortage Planning

The WSCP is designed to be consistent with the water shortage contingency planning strategies of its wholesale water providers. The City will consider the following documents when planning for water shortage:

- **SFPUC Water Shortage Contingency Plan** outlines SFPUC's plan for responding to a water shortage condition. This includes demand reduction actions that may affect the City supply during shortage. In addition, the SFPUC WSCP includes the procedures that will be used by SFPUC to conduct an annual water supply and demand assessment (annual assessment). The annual assessment will provide a description and quantification of each source of SFPUC's water supply compared to water demands for the current year and one subsequent dry year.
- **Valley Water Water Shortage Contingency Plan** outlines Valley Water's plan for responding to a water shortage condition. This includes demand reduction actions that may affect the City supply during shortage. In addition, the Valley Water WSCP includes the procedures that will be used by Valley Water to conduct an annual water supply and demand assessment (annual assessment). The annual assessment will provide a description and quantification of each source of Valley Water's water supply compared to water demands for the current year and one subsequent dry year.
- **City of Milpitas 2020 Urban Water Management Plan**. A related document presenting the analysis of long-term water supply reliability and forecasted demand under normal conditions, single and multiple dry year scenarios.

3 WATER SHORTAGE CONTINGENCY RESPONSE AND PREPAREDNESS PLANNING

The City of Milpitas (City) Water Shortage Contingency Plan (WSCP) is a detailed guide of how the City intends to act in the case of an actual water shortage condition. The WSCP anticipates a water supply shortage and provides pre-planned guidance for managing and mitigating a shortage. Regardless of the reason for the shortage, the WSCP based on adequate details of demand reduction and supply augmentation measures that are structured to match varying degrees of shortage will ensure the relevant stakeholders understand what to expect during a water shortage situation.

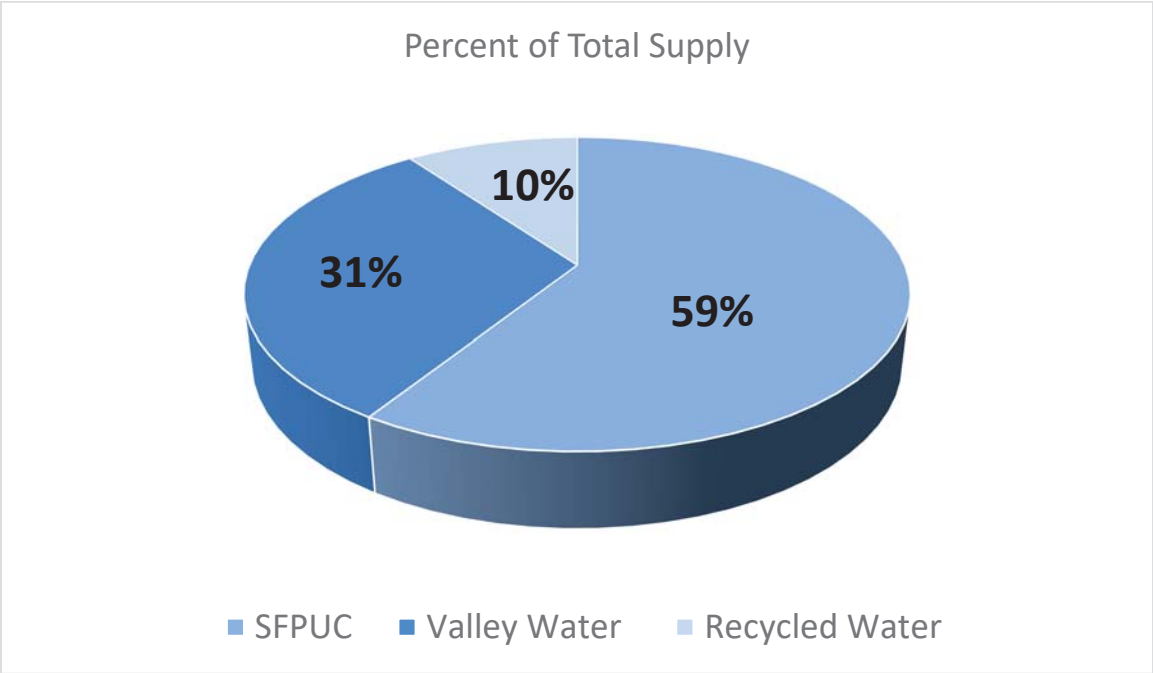
3.1 Water Supply Reliability Analysis

Per Water Code Section 10632 (a)(1), the WSCP shall provide an analysis of water supply reliability conducted pursuant to Water Code Section 10635, and the key issues that may create a shortage condition when looking at the City's water asset portfolio.

Understanding water supply reliability, factors that could contribute to water supply constraints, availability of alternative supplies, and what effect these have on meeting customer demands provides the City with a solid basis on which to develop appropriate and feasible response actions in the event of a water shortage. In the 2020 UWMP, the City conducted a Water Reliability Assessment to compare the total water supply sources available to the water supplier with long-term projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The City also conducted a Drought Risk Assessment to evaluate a drought period that lasts five consecutive water years starting from the year following when the assessment is conducted.

In 2019, SFPUC supplies represented about 59 percent of the City's total water supplies, while water supplies from Valley Water represented about 31 percent of the City's total water supplies. Therefore, supply reliability from both providers will have significant impact to the City supplies and are described below.

Figure 3-1 City of Milpitas Water Supply



SFPUC Supply Reliability

The SWRCB has stated that it intends to implement the Bay-Delta Plan Amendment on the Tuolumne River by the year 2022, assuming all required approvals are obtained by that time; however implementation of the Bay Delta Plan Amendment is uncertain for multiple reasons explained in the 2020 UWMP.

For the 2020 UWMPs, SFPUC provided two scenarios, using hydrologic models with and without the Bay Delta Plan Amendment. Scenario 1, with Bay Delta Plan, includes severe water cutbacks of 60% (from normal year total wholesale agency supply of 184 mgd), starting with the second year of a multi-year drought, if the Bay Delta Plan cutbacks are applied to SFPUC's water supply. Scenario 2, without the Bay Delta Plan, assumes water supply reductions of approximately 28 percent (from normal year total wholesale agency supply of 184 mgd), starting with the fourth year of a multi-year drought, if the Bay Delta Plan Amendment cutbacks are not applied to SFPUC's water supply. Using the two SFPUC assumptions, BAWSCA developed water shortage cutback allocations for each BAWSCA water agency. The drought allocation cutback calculations use actual historic and forecast water demands through 2045.

For 2020 UWMPs, BAWSCA developed a new method to allocate SFPUC's wholesale available supply during dry years. BAWSCA's method results in an equal percent reduction shared across all wholesale customers when average wholesale customers' RWS shortages are 10 percent, or less, or greater than 20 percent.[2] This allocation method is intended to serve the purposes of the 2020 UWMP supply reliability analysis. It does not imply an agreement by BAWSCA member agencies as to the exact allocation methodology. BAWSCA member agencies are in discussions about jointly developing an allocation method that would consider additional multiple equity factors in the event that SFPUC is not able to deliver its contractual supply volume, and its cutbacks on RWS exceed 20 percent.

Given that the City partially relies on supplies from SFPUC, the Bay Delta Plan Amendment can significantly impact the City's water supply reliability. The City will be able to meet the projected water demands presented in normal years but would experience supply shortages in single dry years and multiple dry years. As such, implementation of the Bay Delta Plan will require rationing in all single dry years and multiple dry years.

The normal year supply for BAWSCA agencies is 100 percent of SFPUC's Supply Agreement, that is 184 mgd. Therefore, under the City's normal supply is 100 percent of its Individual Supply Guarantee (ISG), that is 9.232 mgd. SFPUC normal year supply will meet the City's projected demands for 2025, 2030, 2035, 240, and 2045. As detailed in Section 7 of the City's 2020 UWMP, for both single dry and multiple dry year scenarios, the City anticipates significant water supply cutbacks in SFPUC supplies. (2020 UWMP)

Valley Water Supply Reliability

Valley Water supplies appear to be sufficient to meet demands during a single dry year through 2045. This assumes that reserves are at healthy levels at the beginning of the year and that the projects and programs identified in the Valley Water's Water Supply Master Plan 2040 (WSMP) are implemented. Supplies available for this single year drought represent water needed not only for that single drought year, but also water that may be needed for a prolonged drought. Valley Water would manage the supplies reported in the table assuming the drought may continue beyond a single year, and thus not all supplies are expected to be used by retailers during the single year drought.

The greatest challenge to Valley Water's water supply reliability is multiple dry years, such as those that occurred in 1988 through 1992 and in 2012 through 2016. The five dry-year period used in this analysis is 1988 to 1992, which was an extended drought within historic record and WEAP modeling period. The most recent 2012-2016 drought is more severe but imported water allocations are not available from DWR DCR 2019 for the analysis.

[2] BAWSCA. (2021). BAWSCA Common Language, April 2021.

The analysis indicates that with existing and planned projects' supplies, Valley Water's diverse water supplies are sufficient to meet demands throughout the first three years of a multi-year drought, and cutbacks are anticipated in more severe droughts as outlined in the City's 2020 UWMP.

Additional Reliability Constraints

In addition to regulatory changes, the amount of water available from SFPUC's RWS and Valley Water's Agreement No. A0657 for a Supply of Treated Water for the City is constrained by climate, hydrology, facilities, and the institutional parameters that allocate the water supply from the Tuolumne River. Climate change may affect the snow-pack storage and water availability in future.

Constraints on the SFPUC and Valley Water supplies were discussed in more detail in the 2020 UWMP. The main long-term constraints on supply reliability are due to climate change and regulatory changes. Key factors impacting water supply for both wholesalers include:

- Changes in precipitation patterns, such as time of snowfall or rain, intensity, and duration.
- Changes in water quality as a result of changes in precipitation patterns and storage.

The below-noted constraints potentially will affect SFPUC's Hetch-Hetchy watershed and management of the RWS water supply and its distribution.

- Fewer months of continuous below freezing (-32F) temperatures in the Sierra Nevada, resulting in less precipitation as snow, shorter duration for snowpack storage.
- Warmer temperatures leading to melt of the snowpack storage.
- Inadequate storage capacity to store the snowmelt water source.
- Regulatory changes affecting the SFPUC water supplies, such as implementation of the Bay Delta Plan Amendment that could reduce supply water for the SFPUC RWS by 60% in drought years.

Valley Water's treated surface water supply could be impacted by regulatory changes limiting availability of supplies from the State Water Project. In addition, Valley Water's groundwater supply is largely constrained by hydrologic variability. The inflows to the groundwater subbasins are constrained by Valley Water's managed aquifer recharge program and natural recharge, including more than 90 miles of in-stream recharge and 102 off-stream recharge ponds. Maintaining Valley Water's managed recharge program requires ongoing operational planning for the distribution of local and imported water to recharge facilities; maintenance and operation of reservoirs, diversion facilities, distribution systems, and recharge ponds; and the maintenance of water supply contracts, water rights, and relevant environmental clearance. Valley Water's managed recharge program is critical to maintaining groundwater supply, because natural recharge is insufficient to meet groundwater demands. However, protecting natural recharge capacity is also important. Valley Water's District Act and Board policy help preserve open space that supports agriculture and natural recharge capacity.

Groundwater quality can also be a constraint on groundwater supply. In general, the Santa Clara and Llagas Subbasins have high-quality groundwater, except for nitrate, which is elevated in some wells in the Coyote Valley and Llagas Subbasin from historic and ongoing sources including fertilizers, septic systems, and animal waste. However, nitrate concentrations are generally stable or declining and Valley Water has many programs to protect groundwater quality, including several targeted to improve nitrate in groundwater. Additional details about constraints on groundwater supply and quality and Valley Water's comprehensive groundwater management strategies are described in the 2016 Groundwater Management Plan https://www.valleywater.org/your-water/where-your-water-comes-from/groundwater/sustainable-groundwater-management.

Drought Risk Assessment

In the DRA, the City includes its supply reliability using SFPUC scenario with Bay Delta Plan. The SFPUC projects that in multiple dry years, with the Bay Delta Plan, the wholesale volume available will range from 86 percent of normal in the first year, 72 percent in the second year, and starting the third year to fifth year 40 percent of normal (Data Sources: SFPUC: Regional Water Supply Reliability, Table 3).[3] The SFPUC's projections for available supplies for wholesale agencies translate to significant cutback allocations for all BAWSCA agencies (BAWSCA Attachment B: Updated 2020 UWMP Drought Cutbacks, Tables C, D, 3/1/2021).

The City will experience water significant supply shortfalls with the Bay Delta Plan, for multiple (five) dry years. These shortfalls will invoke the City's WSCP in a multi-year drought scenario as outlined in the City's 2020 UWMP. To reduce the need for continued extreme use reductions, the City will need to accelerate seeking additional water supplies by developing new groundwater wells.

3.2 Annual Water Supply and Demand Assessment Procedures

Per Water Code Section 10632.1, the City will conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and by July 1st of each year, beginning in 2022, submit an annual water shortage assessment with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan.

This section documents the decision-making process required for formal approval of the City's Annual Assessment determination of water supply reliability each year and the key data inputs and the methodologies used to evaluate the water system reliability for the coming year, while considering that the year to follow would be considered dry.

3.2.1 Decision-Making Process

The Annual Assessment will be predicated on outcome of the SFPUC Annual Assessment and the Valley Water Annual Assessment.

SFPUC Annual Assessment

Throughout the year, the City attends working meetings with BAWSCA and reviews water supply availability updates from SFPUC. SFPUC updates BAWSCA on January 1, February 1, and provides the final annual supply availability by April 15. A sample timeline for the City's Annual Assessment report is presented in Figure 3-1.

Valley Water Annual Assessment

Water shortage determinations are made at Valley Water Board meetings that would be held as necessary during a water shortage. The City will review its supply and demand to determine if a local supply shortage will occur due to reduced supplies from Valley Water and determine if the WSCP needs to be implemented.

As required by Water Code Section 10632(a)(2), the procedures the City will follow to conduct its Annual Assessment for water demand and supply and formally approve it include staff and City Council actions, such as:

- Review an analysis of monthly and annual (prior year) service area water consumption by sector.
- Comparison and analysis of monthly and annual City consumption to SFPUC production data.

[3] SFPUC: January 22, 2021, Regional Water Supply Reliability, Table 3.

- Review and analysis of actual consumption compared to forecast (i.e., Milpitas's update and DSS Model forecast), and, if changes are apparent, review of potential impacts on water use patterns (e.g., drought, COVID-19 pandemic, etc.).
- Review and analysis of SFPUC updated (final SFPUC supply availability on April 15, annually) annual supply projections (SFPUC's hydrological and water availability forecast), and available related information.
- Review and analysis of Valley Water updated (final Valley Water supply availability in April/May) supply status, and available related information.
- New regulatory requirements that could potentially impact water supply.
- Other related data and information including an analysis of water system reliability for the coming year with the presumption that the year would be dry.

The outcome of the Annual Assessment will determine the Annual Assessment approval process. If the City water supply availability is normal, without expected shortages, the Public Works Director, or designee, will approve the Annual Assessment. If shortage conditions are expected, the City presents the Annual Assessment to the City Council and implements the WSCP. Following discussion, deliberations, and, if any, follow-up actions from staff (e.g., if the WSCP is implemented, specific actions, such as communication with customers, implementation of shortage Levels, and other necessary steps are identified).

The City's routine annual demand and supply assessment and approval process includes interactions with BAWSCA, SFPUC, and Valley Water. Figure 3-2 illustrates the annual demand and supply steps in the communication and decision-making process between the City, BAWSCA, SFPUC and Valley Water.

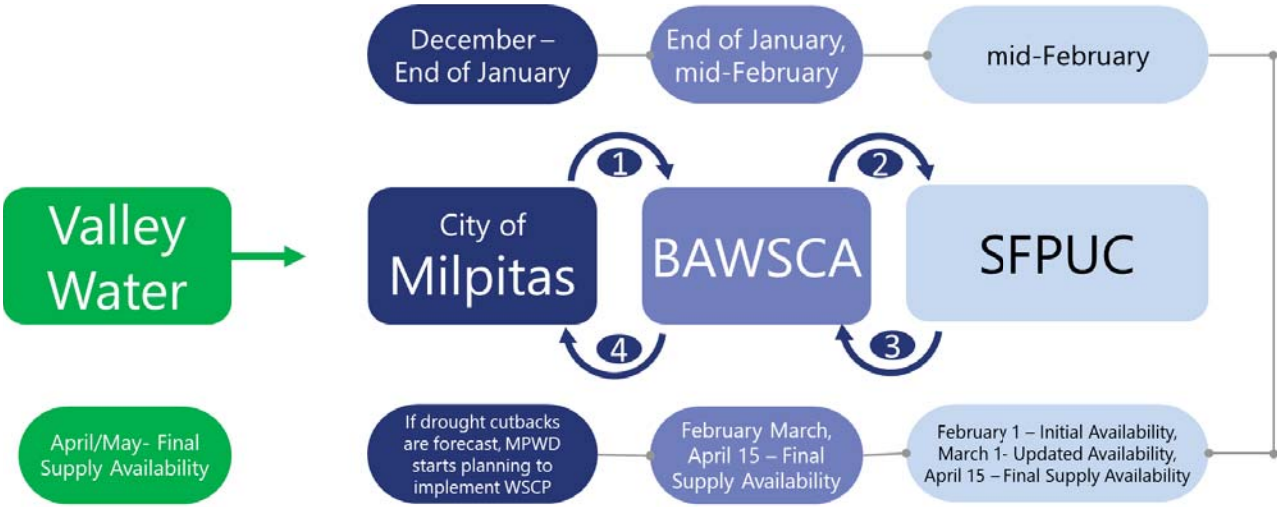


Figure 3-2 Annual Assessment Communication Steps

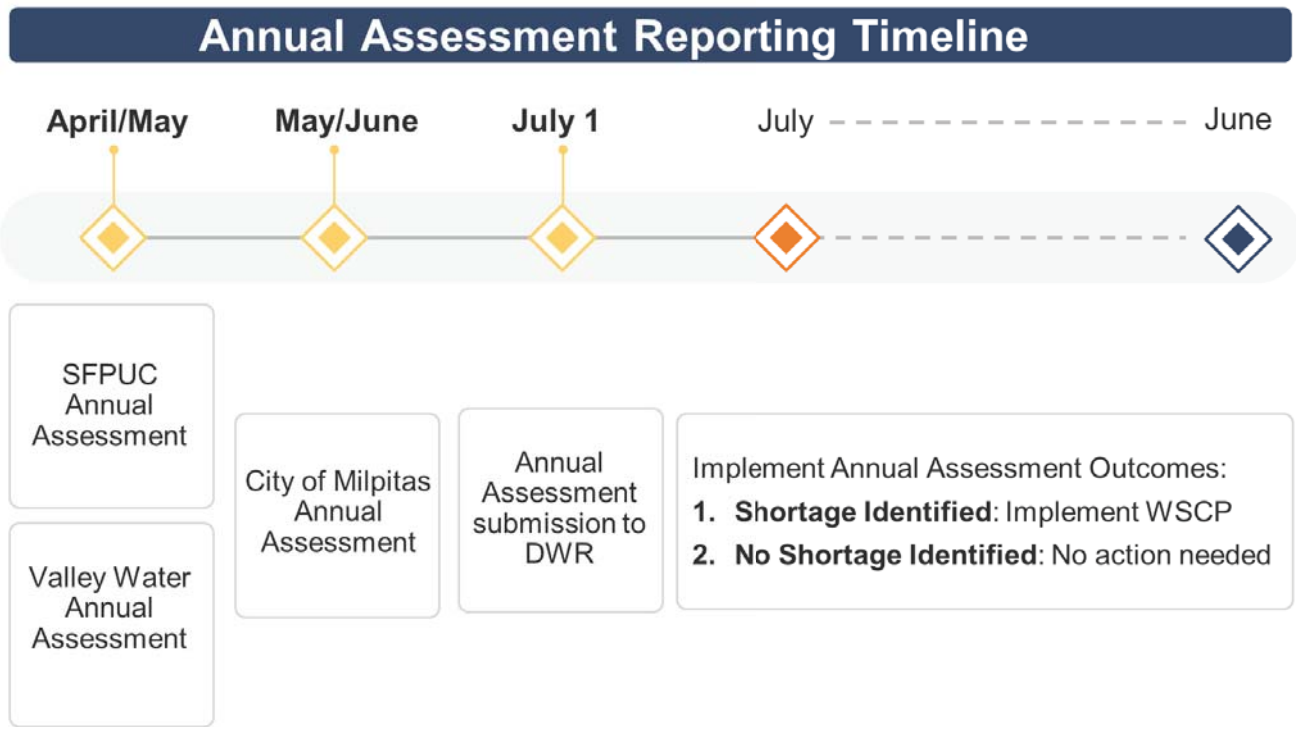


Figure 3-3. Annual Assessment Reporting Timeline

3.2.2 Data and Methodologies

The following paragraphs document the key data inputs and methodologies that are used to evaluate the water system reliability for the coming year, while considering that the year to follow would be considered dry, as defined below:

Evaluation Criteria

In the 2020 UWMP, the City conducted an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment compares the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. This assessment was based on the City's service area, water sources, water supply reliability, and water use as described in Water Code Section 10631, including available data from state, regional, or local agency population, land use development, and climate change projections within the service area of the City.

The City will continue to monitor emerging supply and demand conditions and regulatory developments related to imported water from SFPUC and Valley Water and take appropriate actions consistent with the flexibility and adaptiveness inherent to the WSCP.

If a major earthquake on the San Andreas Fault occurs, it has the potential to damage all three key regional water aqueducts and disrupt imported supplies. Located in the seismically active San Francisco Bay Area, this Silicon Valley community of 65,000 is vulnerable to seismic events on the nearby Calaveras, Hayward, and San Andreas Faults. There is a 70% chance of an M 6.7 or greater earthquake on these faults in the next 30 years and, in such an event, the City will experience strong ground shaking, liquefaction in the valley floor, and landslides in the hills. The City expects pipeline displacements of up to 8 inches and 150 water main breaks during a major earthquake.

Water Supply

The City's existing water supplies include imported water, groundwater, recycled water, and interties with neighboring agencies. Under normal conditions, imported water comprises the City's entire water supply. The City purchases treated surface water from two agencies: the SFPUC and VW, which was previously known as the Santa Clara Valley Water District. In 2019, water supplies from SFPUC totaled 6,146 acre-feet (af) and represented about 59 percent of the City's total water supplies, while water supplies from Valley Water totaled 3,182 af and represented about 31 percent of the City's total water supplies. Recycled water is produced at the San José-Santa Clara Regional Wastewater Facility and delivered to the City by SBWR. In 2019, the City used approximately 1,049 af of recycled water, mainly for landscape irrigation. This represented about 10 percent of the City's total 2019 water use. In emergencies, the City can activate interties with SJW and the ACWD and/or pump groundwater. The City overlies the Santa Clara Valley Groundwater Sub-basin and currently has one existing fully developed groundwater well (Pinewood Well), and two planned in development: Curtis Well and McCandless Well.

Unconstrained Customer Demand

The WSCP and Annual Assessment define unconstrained demand as expected water use prior to any projected shortage response actions that may be taken under the WSCP. Unconstrained demand is distinguished from observed demand, which may be constrained by preceding, ongoing, or future actions, such as emergency supply allocations during a multi-year drought. WSCP shortage response actions to constrain demand are inherently extraordinary; routine activities such as ongoing conservation programs and regular operational adjustments are not considered as constraints on demands.

The DSS Model was used to projected long-term demand, through 2045, based on expected service area growth for both population and employment. Demand forecasts were developed for each agency to account for conservation from passive (i.e., from codes/standards) and active conservation programs. Based on this analysis, water demands were projected after accounting for the effects of the existing plumbing code and future active conservation savings.

In the DRA, the City estimated unconstrained demand, or expected gross water use for the next five years without drought conditions. The City will experience significant water supply shortfalls with the Bay Delta Plan,

for multiple (five) dry years. These shortfalls will invoke the City's WSCP in a multi-year drought scenario as outlined in Section 7 of the City's 2020 UWMP.

Planned Water Use for Current Year Considering Dry Subsequent Year

Water Code Section 10632(a)(2)(B)(ii) requires the Annual Assessment to determine "current year available supply, considering hydrological and regulatory conditions in the current year and one dry year." The Annual Assessment will include two separate estimates of City's annual water supply and unconstrained demand using: 1) current year conditions, and 2) assumed dry year conditions. The City will determine the hydrologic conditions of a normal and dry year conditions according to the following methodology:

- **Normal Year.** Normal Year. This condition represents the normal/average water supplies from SFPUC for BAWSCA agencies, and Valley Water for its water retailers. This condition represents the normal/average water supplies from SFPUC for BAWSCA agencies, 67,160 MG (184 mgd). In this chapter, consistent with its supplier, the SFPUC, the City presents the 'normal' year available supply from SFPUC as its contractual volume, its ISG, 9.322 mgd. This condition also assumes full allocation of Valley Water three year contract purchase projections.
- **Single Dry Year.** The single dry year represents the year with the lowest water supply available from SFPUC to the City. With Bay Delta Plan for each of the base years from SFPUC for the City, the available water supply in a single-dry year is 974 MG/year or 69% of normal supply (the City's normal or average of 1,420 MG/year). This condition also assumes full allocation of Valley Water three-year contract purchase projections.

Infrastructure Considerations

The Annual Assessment will include consideration of any infrastructure issues that may pertain to near-term water supply reliability, including repairs, construction, and environmental mitigation measures that may temporarily constrain capabilities, as well as any new projects that may add to system capacity.

The City maintains one existing fully developed groundwater well for use in emergencies, but it is not used as a normal supply. Currently, the City does not use groundwater to meet customer demands under normal conditions. Currently, the City does not use groundwater to meet customer demands under normal conditions. The City has one existing fully developed well, Pinewood Well and two planned or in development: Curtis Well and McCandless Well. These wells are located in the southwestern part of the City (See Figure 6-3). The Curtis Well was drilled in 2003, but the well was not equipped with above-grade infrastructure required for a functioning well, and the facility was never completed. As a result, bringing the Curtis Well online requires installing a submersible pump, piping and treatment components, as well as conducting testing and permitting. Design for the Curtis Well improvements began in 2020. Construction of the McCandless Well began in 2020 and is anticipated to be completed by 2024.

The use of Pinewood Well, Curtis Well and McCandless Well as emergency wells or fully functioning wells is yet to be studied however the significance of these wells cannot be understated. The State Water Resources Control Board Division of Drinking Water (DDW), in 2015, requested a formal evaluation of the City's Water Source Capacity, under Section 64558, Title 22, of the California Code of Regulations (CCR). The use of well(s) for storage credits is one strategy the City may use to supplement above grade storage requirements to satisfy Section 64558, Title 22. A Source Capacity Analysis, as part of a separate study independent of the UWMP, is being performed by the City at the time of the writing of this UWMP. The City in May of 2020 completed a Draft Final Water Master Plan which identified the City's current and future water demands and the infrastructure required to address source capacity. The Master Plan Study will inform the Source Capacity Analysis however, preliminary evaluations indicate a combination of groundwater supply in conjunction with above grade storage (tanks) may be the appropriate balance to ensure compliance with Section 64558 of Title 22. Additionally, expanding the City's water portfolio to include groundwater wells will supplement loss of supply as a result of wholesale cutbacks in the event of prolonged droughts as discussed in Chapter 7 of the

2020 Urban Water Management Plan. Pinewood Well is permitted for use as a standby emergency well. The City currently reserves groundwater supply for emergency use in the event that SFPUC and Valley Water cannot deliver contract treated water supplies.

Other Factors

For the Annual Assessment, any known issues related to water quality would be considered for potential effects on water supply reliability.

3.3 Six Standard Water Shortage Levels

Per Water Code Section 10632 (a)(3)(A), the City must include the six standard water shortage levels that represent shortages from the normal reliability as determined in the Annual Assessment. The shortage levels have been standardized to provide a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions. This is an outgrowth of the severe statewide drought of 2012-2016, and the widely recognized public communication and state policy uncertainty associated with the many different local definitions of water shortage Levels.

The six standard water shortage levels correspond to progressively increasing estimated shortage conditions (up to 10-, 20-, 30-, 40-, 50-percent, and greater than 50-percent shortage compared to the normal reliability condition) and align with the response actions the Supplier would implement to meet the severity of the impending shortages.

Table 3-1. Retail: Water Shortage Contingency Plan Levels

Table 8-1 Retail Water Shortage Contingency Plan Levels		
	Complete Both	
Shortage Levels	Percent Shortage Range[1] *Numerical value as a percent*	Water Shortage Condition (*Narrative description)*
Add additional rows as needed		
0	0% (Normal)	A Level 0 Water Supply Shortage – Condition exists when the City notifies its water users that no supply reductions are anticipated in this year. City proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and local City goals for water supply reliability. Permanent water waste prohibitions are in place as stipulated in the City's Water Shortage Response Ordinance.
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when the City notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 10% is necessary to make more efficient use of water and respond to existing water conditions. The City shall implement the mandatory Level 1 conservation measures identified in this WSCP. The type of event that may prompt the City to declare a Level 1 Water Supply Shortage may

		include, among other factors, a finding that its wholesale water provider calls for extraordinary water conservation.
2	11% to 20%	A Level 2 Water Supply Shortage – Condition exists when the City notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 20% is necessary to make more efficient use of water and respond to existing water conditions. Upon declaration of a Level 2 Water Supply Shortage condition, the City shall implement the mandatory Level 2 conservation measures identified in this WSCP.
3	21% to 30%	A Level 3 Water Supply Shortage – Condition exists when the City declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 30% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	31% to 40%	A Level 4 Water Supply Shortage – Condition exists when the City declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 40% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	41% to 50%	A Level 5 Water Supply Shortage – Condition exists when the City declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
6	>50%	A Level 6 Water Supply Shortage – Condition exists when the City declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that greater than 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. The City must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
[1] One level in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

3.4 Shortage Response Actions

Water Code Section 10632 (a)(4) requires the WSCP to specify shortage response actions that align with the defined shortage levels. The City has defined specific shortage response actions that align with the defined shortage levels in Tables 3-4 and 3-5. These shortage response actions were developed with consideration to

the system infrastructure and operations changes, supply augmentation responses, customer-class or water use-specific demand reduction initiatives, and increasingly stringent water use prohibitions.

3.4.1 Demand Reduction

The demand reduction measures that would be implemented to address shortage levels are described in Table 3-4. This table indicates which actions align with specific defined shortage levels and estimates the extent to which that action will reduce the gap between supplies and demands to demonstrate to the that choose suite of shortage response actions can be expected to deliver the expected outcomes necessary to meet the requirements of a given shortage level. This table also identifies the enforcement action, if any, associated with each demand reduction measure.

Table 3-2. Demand Reduction Actions

Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUE data online submittal tool. Select those that apply to you.*	How much is this going to reduce the shortage gap? *Include volume units used.*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
Add additional rows as needed				
0	Other water feature or swimming pool restriction	Statewide Prohibition is Required	Cleaning, filling, or operating water features, such as decorative fountains, except where the water is part of a recirculating system.	No
0	Other	Statewide Prohibition is Required	Washing or hosing down vehicles is prohibited except by use of a hand held container, hose with an automatic shut off device, or at a commercial car wash.	No
0	Other - Prohibit use of potable water for washing hard surfaces	Statewide Prohibition is Required	Washing hard or paved surfaces is prohibited except to alleviate safety or sanitary hazards using a hand held container, hose with an automatic shut off device, or a low-volume high pressure cleaning machine that recycles used water.	No
0	Landscape - Restrict or prohibit runoff from landscape irrigation	Statewide Prohibition is Required	Watering vegetated areas in a manner that causes excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is prohibited.	No

0	Landscape - Other landscape restriction or prohibition	Statewide Prohibition is Required	Irrigating ornamental turf on public street medians is prohibited.	No
0	Landscape - Other landscape restriction or prohibition	Statewide Prohibition is Required	No landscape watering shall occur within 48 hours after measurable precipitation.	No
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Prohibited use of broken or defective plumbing, sprinkler, watering or irrigation systems	No
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Prohibited use of potable water for outdoor irrigation in newly constructed homes and buildings, except with drip or microspray irrigation systems.	No
0	CII - Restaurants may only serve water upon request	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	CII - Restaurants may only serve water upon request	No
0	CII - Other CII restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	No water in new, added or altered cooling system equipment unless at least fifty percent (50%) of the water is recycled.	No
0	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	All new commercial car wash and laundry facilities must re-circulate the wash water.	No
0	Landscape - Limit landscape irrigation to specific times	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Watering or irrigation of vegetated areas is prohibited between 9 am and 6 pm except by use of a hand held device, hose equipped with an automatic shutoff device, or for adjusting or repairing an irrigation system for short periods of time.	No

0	Other - Require automatic shut of hoses	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Use a shutoff nozzle on hoses.	No
0	Pools and Spas - Require covers for pools and spas	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Pools and spas shall be covered when not in use to prevent evaporation.	No
0	Other - Prohibit use of potable water for construction and dust control	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control).	No
0	Landscape - Limit landscape irrigation to specific days	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings	Irrigation shall be limited to 4 days per week turf watering when using potable water.	No
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings	Prohibited use of potable water for outdoor irrigation in newly constructed homes and buildings, except with drip or microspray irrigation systems.	No
1	Landscape - Limit landscape irrigation to specific times	0-5%	Watering or irrigation of vegetated areas is prohibited between 9 am and 6 pm except by use of a hand held device, hose equipped with an automatic shutoff device, or for adjusting or repairing an irrigation system for short periods of time.	Yes
1	Landscape - Limit landscape irrigation to specific days	0-5%	Irrigation shall be limited to 4 days per week turf watering when using potable water.	Yes
1	Expand Public Information Campaign	0-1%	Community Outreach and Messaging (Expand Public Information Campaign)	Yes

1	Reduce System Water Loss	0-5%	Real Loss Reduction - Pressure Management and More Aggressive Leak Detection and Repair	Yes
1	Increase Water Waste Patrols	0-1%	Increase Water Waste Patrols	Yes
1	Expand Public Information Campaign	0-1%	Expand promotion and outreach about rebates available	No
2	Improve Customer Billing	0-1%	Improve AMI Leak Reports to include more details on water use	No
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers promptly/within 5 days.	Yes
2	Landscape - Other landscape restriction or prohibition	0-1%	Prohibited use of broken or defective plumbing, sprinkler, watering or irrigation systems.	Yes
2	Landscape - Limit landscape irrigation to specific days	5-10%	Irrigation shall be limited to 3 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	0-1%	Filling or refilling ornamental lakes and ponds is prohibited. Ornamental lakes and ponds that sustain aquatic life of significant value and were actively managed prior to the storage declaration are exempt.	Yes
2	Pools and Spas - Require covers for pools and spas	0-1%	Pools and Spas - Require covers for pools and spas	Yes
2	Decrease Line Flushing	0-1%	Decrease Line Flushing	Yes
2	CII - Restaurants may only serve water upon request	0-1%	CII - Restaurants may only serve water upon request	Yes
2	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	0-1%	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Yes

3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 4 days.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	0-1%	Car washing is only permitted using a commercial carwash that recirculates water or by high pressure/low volume wash systems.	Yes
3	Other - Prohibit use of potable water for construction and dust control	0-1%	Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control).	Yes
3	Landscape - Limit landscape irrigation to specific days	10-25%	Irrigation shall be limited to 2 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
3	Other water feature or swimming pool restriction	0-1%	Decorative water features that use potable water must be drained and kept dry.	Yes
3	CII - Other CII restriction or prohibition	0-1%	No water in new, added or altered cooling system equipment unless at least fifty percent (50%) of the water is recycled.	Yes
4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 3 days.	Yes
4	Landscape - Limit landscape irrigation to specific days	5-20%	Irrigation shall be limited to 1 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.	Yes
4	Other water feature or swimming pool restriction	0-1%	Existing pools shall not be emptied and refilled using potable water unless required for	Yes

			public health and safety purposes.	
4	Other water feature or swimming pool restriction	0-1%	No new permits for pools will be issued.	Yes
4	Landscape - Prohibit certain types of landscape irrigation	0-1%	Irrigation of golf courses only allowed for greens and tees area.	Yes
5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 2 days.	Yes
5	Landscape - Prohibit all landscape irrigation	5-20%	All irrigation is prohibited.	Yes
5	Landscape - Prohibit certain types of landscape irrigation	0-1%	Watering of all golf course areas is prohibited.	Yes
5	Landscape - Prohibit certain types of landscape irrigation	0-1%	Watering of parks, school grounds, and recreation fields is prohibited, except for rare plant or animal species.	Yes
6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	Fix leaks or faulty sprinklers within 1 day.	Yes
6	Other	0-50%	Water use for public health and safety purposes only.	Yes
6	Landscape - Prohibit all landscape irrigation	0-5%	The City may shut off all non-essential water services. All irrigation is prohibited.	Yes
6	CII - Other CII restriction or prohibition	0-15%	Water for commercial, manufacturing, or processing purposes shall be reduced in volume by up to 50% or exceeded if necessary for public health and safety purposes.	Yes
6	Other	0-70%	Water use for public health and safety purposes only. Customer rationing may be implemented.	Yes
NOTES:				

3.4.2 Supply Augmentation

The supply augmentation actions are described in Table 8-3. These augmentations represent short-term management objectives triggered by the WSCP and do not overlap with the long-term new water supply

development or supply reliability enhancement projects. The City relies on SFPUC's and Valley Waters reliability portfolio of water supply programs including existing water transfers, storage and exchange agreements to supplement gaps in the City's supply/demand balance.

Table 3-3. Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
1	Other Actions (describe)	0-10%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation
2	Other Actions (describe)	10-20%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation
3	Other Actions (describe)	20-30%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation
4	Other Actions (describe)	37%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation
5	Other Actions (describe)	37%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation
6	Other Actions (describe)	37%	Install 5 additional City owned groundwater wells by 2025 and 2 additional groundwater wells by 2040 with a capacity of 1.2 mgd each per West Yost April 2021 Shortage Evaluation

NOTES: Pumped groundwater if available.

The City may pursue a managed groundwater well extraction program similar to neighboring water agencies, Alameda County Water District to the north and City of Santa Clara and San Jose Water Company to the south. The south-western portion of the City of Milpitas overlays a groundwater aquifer which is adequately productive therefore, in-pipe blending with SFPUC and VW is a viable option for augmenting supply shortages. Four wells at an average withdrawal rate of 1.2 million gallons per day (450 million gallons per year) can produce up to 5 million gallons per day of new water supply for the City. The extraction rate and volume is based on preliminary production tests of McCandless Well and Curtis Well which have indicated the aquifer in this zone produces 500-1,200 gallons per minute or an average of 850 gallons per minute. Prior to use, a State Water Quality Report must be completed, as well as treatment (if necessary) and disinfection. Assuming new wells would be of similar quality to that of Pinewood Well (the primary municipal well for Milpitas' emergency water supply), treatment for contaminants would be minimal. Issues to be resolved include both mineral and odor concerns which will require treatment or in-pipe blending with current water supplies. Planning for future wells, while an increase to the infrastructure costs, allows for better long-term supply reliability by expanding the City's water supply portfolio which will allow the City to supplement water supply cutbacks in some or all drought scenarios. Wells also provide the City storage credits to offset above grade water storage requirements which also include infrastructure and land acquisition costs.

Sustainability of wells and groundwater aquifers are based on aquifer recharge, as currently performed by Valley Water. The City in concert with VW should study the feasibility of offsetting SFPUC supply reductions, as outlined in the Bay Delta Plan and this UWMP, to determine the approximate quantity of groundwater and the rate at which groundwater can be extracted from the aquifer during various drought scenarios. If it is determined the aquifer has the capacity to offset most if not all of the supply cutbacks from SFPUC, the City should develop a Water Supply Augmentation Feasibility Report to determine the recommended number and location of wells.

Table 3-6 below is a preliminary estimate of the number of wells which would be required to offset all of the SFPUC supply cutbacks with the assumption that each well will produce approximately 850 gallons per minute and Valley Water determines no adverse impacts will be realized as a result of extracting groundwater at the rate and volume identified above.

Table 3-6. Groundwater Wells Required to Supplement Multiple Dry Years Supply

Proposed Number of Groundwater Wells for Consecutive Dry Year Supply Augmentation					
	2025	2030	2035	2040	2045 (Opt)
First Dry Year	2	2	2	2	3
Second Dry Year	2	3	3	3	3
Third Dry Year	3	3	3	3	4
Fourth Dry Year	3	3	3	4	4
Fifth Dry Year	3	3	4	4	4
Notes: The number of wells needed to augment multiple dry year supply without cutbacks based on well capacity of 1.2 mgd					

3.4.3 Operational Changes

During shortage conditions, operations may be affected by supply augmentation or demand reduction responses. The City considered its operational procedures to identify changes that can be implemented to address water shortage on a short-term basis, including but may not be limited to the following:

- Use reclaimed water for hydroflushing
- Temporarily suspend hydrant flushing
- Minimize any conventional flushing
- Utilize NO-DES truck whenever possible
- Converting emergency wells to supply wells
- Drilling additional wells for supply

3.4.4 Additional Mandatory Restrictions

California Water Code Section 10632(a)(4)(D) calls for "additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions" to be included among the WSCP's shortage response actions. The City has identified additional mandatory restrictions in Chapter VIII-6 of the Milpitas Municipal Code. The City intends to update mandatory restrictions and enforcement procedures in a subsequently adopted ordinance which will supersede the existing ordinance.

3.4.5 Emergency Response Plan (Hazard Mitigation Plan)

A catastrophic water shortage would be addressed according to the appropriate water shortage level and response actions. It is likely that a catastrophic shortage would immediately trigger Shortage Level 6 and response actions have been put in place to mitigate a catastrophic shortage. In addition, there are several Plans that address catastrophic failures and align with the WSCP including the Santa Clara Operational Area Hazard Mitigation Plan and the City of Milpitas Emergency Response Plan.

Santa Clara Operational Area Hazard Mitigation Plan

Santa Clara County and a partnership of local governments, including the City, within the county have developed a hazard mitigation plan to reduce risks from natural disasters in the Santa Clara County Operational Area. As a planning partner of the Santa Clara Operational Area Hazard Mitigation Plan, the City reviewed its recommended actions to classify each action based on the hazard it addresses and the type of mitigation it involves. This planning process used the Community Rating System (CRS) categories of mitigation activities. The CRS credits programs and activities that are considered to be above and beyond the minimum requirements established by FEMA. These CRS categories add significantly more detail to the four mitigation categories defined in FEMA's 2013 Local Mitigation Handbook. The CRS expanded categories provide a more comprehensive range of alternatives to consider, thus increasing integration opportunities. Additionally, the use of CRS program guidance will enhance the CRS credit potential for this plan, benefiting planning partners who participate in the CRS program. Mitigation types used for this categorization are as follows:

- Prevention—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- Property Protection—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

- Public Education and Awareness—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- Natural Resource Protection—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Emergency Services—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- Structural Projects—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Climate Resilient—Actions that minimize the impacts of climate change via an aquifer storage and recovery system to increase water supply for drought mitigation and a flood diversion and storage project to reduce flood risk.

SFPUC Preparation for Catastrophic Supply Interruption

The SFPUC maintains various planning documents which collectively address its emergency preparedness and planned response in the event of a catastrophic interruption of water supplies due to power outages, earthquakes, or other disasters including Emergency Preparedness Plans, Emergency Drinking Water Planning, and Power Outage Preparedness and Response. Should a catastrophic interruption occur, the City will coordinate with SFPUC for the possible proclamation of a local emergency and emergency mitigation.

City of Milpitas Emergency Response Plan

The City will also refer to its current American Water Infrastructure Act Risk and Resilience Assessment and Emergency Response Plan in the event of a catastrophic supply interruption. In compliance with Section 2013 of America's Water Infrastructure Act (AWIA) of 2018, the City is in the process of re-certifying it's ERP by the required deadline of June 30, 2021. This ERP contains sensitive infrastructure information and is therefore not included as an Appendix or available for public review.

3.5 Seismic Risk Assessment and Mitigation Plan

Per the Water Code Section 10632.5, Suppliers are required to assess seismic risk to water supplies as part of the WSCP. The plan also must include the mitigation plan for the seismic risk(s). Earthquakes are common in California and are recognized as high probability occurrences in many regions across the state.

In 2006, the City developed the City of Milpitas Water System Seismic Improvements Strategic Plan[4] to prepare, respond, and recover from the impact of a major earthquake on its water utility. Located in the seismically active San Francisco Bay Area, this Silicon Valley community of 65,000 is vulnerable to seismic events on the nearby Calaveras, Hayward, and San Andreas Faults. There is a 70% chance of an M 6.7 or greater earthquake on these faults in the next 30 years and, in such an event, the City will experience strong ground shaking, liquefaction in the valley floor, and landslides in the hills. The City expects pipeline displacements of up to 8 inches and 150 water main breaks during a major earthquake.

The City depends on an intact water service to protect public health and safety after a major earthquake, as water is needed for fire protection as well as basic sanitation. Broken pressure mains may also damage transportation routes, hindering emergency response. Because it is infeasibly expensive to seismically upgrade all components of the water infrastructure within a reasonable timeframe, the City developed a multi-

[4] City of Milpitas Water System Seismic Improvements Strategic Plan

component plan to optimize expenditure of its scarce utility funds while building its ability to protect and restore its water services.

Planning included conducting an infrastructure risk assessment to define water system vulnerabilities and consequences of failure. The City's wholesale suppliers are also developing seismic response plans, so the assessment takes into account expected out- of-service times for supply. The City developed hazard maps for potential rupture zones, landslides, and liquefaction and mapped its water and transportation infrastructure into GIS such that emergency transportation routes are defined and water pipeline networks and nodes are defined. The City assessed its emergency response ability through a resources and needs evaluation for personnel, equipment, and contract supplies and services.

Response preparation includes training to address gaps in personnel skills and preparation of emergency kits for staff and mutual aid personnel. GIS maps are loaded into laptop computers for field personnel and the City's Emergency Operations Center. The City is stockpiling an inventory of temporary and replacement equipment and expects to eventually acquire over 5,000 feet of flexible hose, deployed from trailer- mounted reels, to allow temporary bypass from fire hydrants around water main breaks.

Seismic improvements are integrated into the City's development standards such that new and replacement infrastructure is designed and constructed to withstand damage from ground displacement and hydraulic pressure surges caused by fault rupture, landslides and liquefaction. Standards apply to pipe material, joint design and geometry, and fittings, connections, and appurtenances. The incremental cost for these improvements is minor compared the benefits accruing as new infrastructure is built and aging infrastructure is replaced.

Finally, the City has a targeted capital improvement plan to harden critical water infrastructure defined as the "backbone" distribution system. The backbone includes supply turnouts, major pipelines, pump stations, reservoirs, pressure relief valves, and emergency power. This plan includes 31 projects to anchor aboveground reservoirs, install flexible joints at rigid connection and fault crossings, install isolation valves, and upgrade pipe materials.[5]

Since the City purchases a portion of its water from the SFPUC, it is highly dependent on the SFPUC RWS infrastructure reliability. The SFPUC conveyance system crosses five major faults and the majority (about 85 percent) travels 167 miles through pipelines and tunnels from the Hetch-Hetchy watershed in the Sierra Nevada Mountains. SFPUC also has four major storage facilities and distribution lines in the San Francisco Bay Area. Both the regional and San Francisco Bay Area parts of the SFPUC system are vulnerable to seismic events. However, the SFPUC's nearly completed Water System Improvement Program (WSIP) provides improvements in reliability for water delivery and supply through the SFPUC RWS. The SFPUC's 2020 Capital Improvement Program (CIP) includes various projects to enhance reliability of the SFPUC RWS.[6]

The City's seismic risk assessment for its system is part of the Santa Clara Operational Area Hazard Mitigation Plan (Santa Clara Hazard Mitigation Plan, Volume 2, Section 8, 2017) that is required under the federal Disaster Mitigation Act of 2000 (Public Law 106-390). The Santa Clara Operational Ara Local Hazard Mitigation Plan[7]

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[5] City of Milpitas Strategic Plan to Protect and Restore Water Utility Service in the Event of a Magnitude 7 Earthquake on the Hayward Fault. http://www.ci.milpitas.ca.gov/_pdfs/council/2009/012009/item_08.pdf

[6] SFPUC 2020 Capital Improvement Plan, adopted February 11, 2020. San Francisco Public Utilities Commission : 2020 Agendas-Minutes

[7] Santa Clara County Local Hazard Mitigation Plan, 2017. https://emergencymanagement.sccgov.org/sites/g/files/exjcpb261/files/For%20Partners/Local-Hazard-Mitigation-Plan-LHMP-Vol-1.pdf

Volume 1 and Volume 2 is available online. As required, the City also has an American Water Infrastructure Act Risk and Resilience Assessment and Emergency Response Plan that describes strategies, resources, plans, and procedures utilities can use to prepare for and respond to an incident, natural or man-made, that threatens life, property, or the environment.

3.5.1 Shortage Response Action Effectiveness

For each specific Shortage Response Action identified in the plan, the WSCP also estimates the extent to which that action will reduce the gap between supplies and demands identified in Table 8-2. To the extent feasible, City has estimated percentage savings for the chosen suite of shortage response actions, which can be anticipated to deliver the expected outcomes necessary to meet the requirements of a given shortage level.

3.6 Communication Protocols

Timely and effective communication is a key element of the WSCP implementation. Per the Water Code Section 10632 (a)(5), the City has established communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments regarding any current or predicted shortages as determined by the Annual Assessment described pursuant to Section 10632.1; any shortage response actions triggered or anticipated to be triggered by the Annual Assessment described pursuant to Section 10632.1; and any other relevant communications. The City's Water Shortage Communication Plan is documented in Appendix B.

3.7 Compliance and Enforcement

Per the Water Code Section 10632 (a)(6), the City has defined customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions. Communication procedures to ensure customer compliance are described in Section 3.5 and customer enforcement, appeal, and exemption procedures are defined in the Chapter VIII-6 of the Milpitas Municipal Code (Appendix A). The City intends to update as needed existing enforcement procedures in a subsequently adopted ordinance which will supersede the existing ordinance.

3.8 Legal Authorities

Per Water Code Section 10632 (a)(7)(A), the City of Milpitas has provided a description of the legal authorities that empower the City to implement and enforce its shortage response in Chapter VIII-6 of the Milpitas Municipal Code (Appendix A). The City intends to update as needed existing enforcement procedures in a subsequently adopted ordinance which will supersede the existing ordinance.

*Per Water Code Section 10632 (a)(7) (B), t*he City shall declare a water shortage emergency condition to prevail within the area served by such wholesaler whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

*Per Water Code Section 10632 (a)(7)(C), th*e City shall coordinate with any City or county within which it provides water supply services for the possible proclamation of a local emergency under California Government Code, California Emergency Services Act (Article 2, Section 8558). Table 3-8 identifies the contacts for all cities or counties for which the Supplier provides service in the WSCP, along with developed coordination protocols, can

https://emergencymanagement.sccgov.org/sites/g/files/exjcpb261/files/For%20Partners/Local-Hazard-Mitigation-Plan-LHMP-Vol-2.pdf

facilitate compliance with this section of the Water Code in the event of a local emergency as defined in subpart (c) of Government Code Section 8558.

Table 3-4. Agency Contacts and Coordination Protocols

Contact	Agency	Coordination Protocols
City Manager	City of Milpitas	Email/call
City Council	City of Milpitas	Meeting/Memo
Santa Clara County Emergency Operations Coordinator	Santa Clara County Department of Public Health	Email/call
Director of Operations	San Jose Water Company	Email/call
Engineering Supervisor	Alameda County Water District	Email/call
Water Systems Operations Manager	San Jose Municipal Water	Email/call

3.9 Financial Consequences of WSCP

Per Water Code Section 10632(a)(8), Suppliers must include a description of the overall anticipated financial consequences to the Supplier of implementing the WSCP. This description must include potential reductions in revenue and increased expenses associated with implementation of the shortage response actions. This should be coupled with an identification of the anticipated mitigation actions needed to address these financial impacts.

The Water Shortage Actions designed to address a range of water shortage conditions have the potential to impact the City's revenues and expenditures. To assess these impacts, the City calculated the revenue impacts resulting from each shortage level percent reduction in sales as compared to an estimate of a normal year baseline. Other factors incorporated into the analysis included water losses, pricing structure and avoided costs. The results of this analysis are shown below in Table 3-9.

Table 3-5. Revenue Impacts Analysis

Revenue Impact Analysis (values rounded to thousand dollars)						
		Reduction in Sales				
Demand	**Baseline**	**10%**	**20%**	**30%**	**40%**	**50%**
Water Purchased Potable (HCF)	3,983,000	3,585,000	3,186,000	2,788,000	2,390,000	1,992,000
Water Purchased Recycled (HCF)	483,000	483,000	483,000	483,000	483,000	483,000
Water Sales Potable (HCF)	3,505,000	3,155,000	2,804,000	2,454,000	2,103,000	1,753,000
Water Losses (HCF)	478,000	430,000	382,000	334,000	287,000	239,000
Potable (%)	88%	88%	88%	88%	88%	88%
Recycled (%)	12%	12%	12%	12%	12%	12%
Ed Levin County Park (%)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Total	100%	100%	100%	100%	100%	100%
Potable (HCF)	3,084,000	2,776,000	2,468,000	2,160,000	1,851,000	1,543,000
Recycled (HCF)	425,000	425,000	425,000	425,000	425,000	425,000
Ed Levin County Park (HCF)	18,000	16,000	14,000	12,000	11,000	9,000
Total	3,527,000	3,217,000	2,907,000	2,597,000	2,287,000	1,977,000
Rate Schedule						
Flat Rate Potable ($/HCF)	$5.97	$5.97	$5.97	$5.97	$5.97	$5.97
Flat Rate Recycled ($/HCF)	$4.01	$4.01	$4.01	$4.01	$4.01	$4.01
Flat Rate Ed Levin County Park ($/HCF)	$4.10	$4.10	$4.10	$4.10	$4.10	$4.10
Calculated Revenue						
Calculated Potable Revenue ($)	$18,411,000	$16,573,000	$14,734,000	$12,895,000	$11,050,000	$9,212,000
Calculated Recycled Revenue ($)	$1,704,000	$1,704,000	$1,704,000	$1,704,000	$1,704,000	$1,704,000
Calculated Ed Levin Park Revenue ($)	$74,000	$66,000	$57,000	$49,000	$45,000	$37,000
Total Calculated Revenue ($)	**$20,189,000**	**$18,343,000**	**$16,495,000**	**$14,648,000**	**$12,799,000**	**$10,953,000**
Actual Revenue						
Potable Revenue ($)	$16,223,000	$14,601,000	$12,978,000	$11,356,000	$9,734,000	$8,112,000

Fire Revenue ($)	$8,000	$7,000	$6,000	$6,000	$5,000	$4,000
Recycled Revenue ($)	$1,336,000	$1,336,000	$1,336,000	$1,336,000	$1,336,000	$1,336,000
Construction Water ($)	$122,000	$100,000	$100,000	$100,000	$100,000	$100,000
Potable Irrigation ($)	$2,405,000	$2,165,000	$1,924,000	$1,684,000	$1,443,000	$1,203,000
Misc Other Revenue	$48,000	$45,000	$45,000	$45,000	$45,000	$45,000
Total Rate Revenue ($)	**$20,142,000**	**$15,944,000**	**$14,320,000**	**$12,698,000**	**$11,075,000**	**$9,452,000**
Fixed Monthly/Bimonthly Charge Revenue	$4,570,000.00	$4,570,000	$4,570,000	$4,570,000	$4,570,000	$4,570,000
Capital Surcharge	$4,643,000.00	$4,643,000	$4,643,000	$4,643,000	$4,643,000	$4,643,000
Total Revenue	$29,355,000	$25,157,000	$23,533,000	$21,911,000	$20,288,000	$18,665,000
Revenue Lost		**($4,198,000)**	**($5,822,000)**	**($7,444,000)**	**($9,067,000)**	**($10,690,000)**
Net Revenue Change		**($4,198,000)**	**($5,822,000)**	**($7,444,000)**	**($9,067,000)**	**($10,690,000)**

Water shortage mitigation actions will impact revenues and require additional costs for drought response activities such as increased staff costs for tracking, reporting, and communications. The following measures can be implemented by the City to overcome each reduction in water sales scenario outlined above depending on anticipated short-term and long-term financial impacts.

- The City can defer non-mission critical capital improvement projects and reallocate the funds to cover the cost of operations and critical maintenance, and/or;
- The City Manager can recommend the City Council to declare a water shortage and implement the City's Water Shortage Contingency Plan. Depending on the severity of the shortage and impact on revenue, the City Council may choose to increase water rates, and/or implement a drought response surcharge, by an amount necessary as determined by the City Council. The subsequent rate increases enacted will remain in effect until such time the City Council declares a water shortage no longer exists, and/or;
- The City Manager can recommend alternative measures to the City Council, to the extent of which to be determined by a rates analysis

3.10 Monitoring and Reporting

Per Water Code Section 10632(a)(9), the City is required to provide a description of the monitoring and reporting requirements and procedures that have been implemented to ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

Monitoring and reporting key water use metrics is fundamental to water supply planning and management. Monitoring is also essential in times of water shortage to ensure that the response actions are achieving the intended water use reduction purposes, or if improvements or new actions need to be considered (see Section 3.10). Monitoring for customer compliance tracking is also useful in enforcement actions.

Under normal water supply conditions, potable water production figures are provided monthly by SFPUC and Valley Water. The City records the production volumes and generates water use reports that are submitted to the state monthly. This data will be used to measure the effectiveness of any water shortage contingency level that may be implemented. In addition, the City is expected to be fully equipped with Automated Meter Infrastructure (AMI) by 2022 and will be able to further refine water use measurement resolution. As levels of water shortage are declared according to the WSCP, the City will follow implementation of those levels as appropriate and continue to monitor water demand levels. The City will participate in monthly member agency manager meetings with BAWSCA and Valley Water to monitor and discuss monthly water allocation charts. This will enable the City to be aware of water use on a timely basis as a result of specific actions taken responding to the City's Water Shortage Contingency Plan.

3.11 WSCP Refinement Procedures

Per Water Code Section 10632 (a)(10), the City must provide reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

The City's WSCP is prepared and implemented as an adaptive management plan. The City will use the monitoring and reporting process defined in section 3.9 to refine the WSCP. In addition, if certain procedural refinements or new actions are identified by City staff, or suggested by customers or other interested parties, the City will evaluate the action effectiveness, incorporate changes into the WSCP, and implement them quickly at the appropriate water shortage level.

It is envisioned that the WSCP will be periodically re-evaluated to ensure that its shortage risk tolerance is adequate, and the shortage response actions are effective and up to date based on lessons learned from implementing the WSCP. The WSCP will be revised and updated during the UWMP update cycle to incorporate updated and new information. For example, new supply augmentation actions will be added, and actions that

are no longer applicable for reasons such as program expiration will be removed. However, if revisions to the WSCP are warranted before the UWMP is updated, the WSCP will be updated outside of the UWMP update cycle. In the course of preparing the Annual Assessment each year, City staff will routinely consider the functionality the overall WSCP and will prepare recommendations for City Council if changes are found to be needed.

3.12 Special Water Feature Distinction

Per Water Code Section 10632 (b), the City has defined water features in that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code, in Prevention of Water Waste Ordinance 240.6 (Appendix A). The City intends to update as needed existing enforcement procedures in a subsequently adopted ordinance which will supersede the existing ordinance.

3.13 Plan Adoption, Submittal, and Availability

Per Water Code Section 10632 (a)(c), City provided notice of the availability of the draft 2020 UWMP and draft 2020 WSCP and notice of the public hearing to consider adoption of the WSCP. The public review drafts of the 2020 UWMP and the 2020 WSCP were posted prominently on City website, https://www.ci.milpitas.ca.gov/2020_uwmp/ on June 1st, 2020, more than 14 days in advance of the public hearing on June 15, 2021 Public hearing notifications were published in local newspapers. A copy of the published Notice of Public Hearing is included in Appendix C.

The City held the public hearing for the draft 2020 UWMP and draft WSCP on June 15, 2021, at the City Council meeting. The City Council reviewed and approved the 2020 UWMP and the WSCP at its June 15, 2021 meeting after the public hearing. See Appendix D for the resolution approving the WSCP.

By July 1, 2021, the City's adopted 2020 UWMP and WSCP was filed with DWR, California State Library, and the Sant Clara County. The City will make the WSCP available for public review on its website no later than 30 days after filing with DWR.

Based on DWR's review of the WSCP, the City will make any amendments in its adopted WSCP, as required and directed by DWR.

If the City revises its WSCP after UWMP is approved by DWR, then an electronic copy of the revised WSCP will be submitted to DWR within 30 days of its adoption.

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APPENDIX A – CITY OF MILPITAS MUNCIPAL CODE ORDINACE NO. 240.6

Below is the weblink to the current ordinance (last accessed on June 1, 2021)

https://library.municode.com/ca/milpitas/ordinances/code_of_ordinances?nodeId=836122

APPENDIX B – COMMUNICATION PROCEDURES

Public communication is an ongoing activity where the purpose, audience, message, tools, and channels may change at any given moment. In the context of water shortage response, the purpose may be an immediate emergency water shortage situation, such as may result from an earthquake, or a longer-term emergency shortage condition, such as may result from a drought. In a catastrophic emergency under crisis conditions, the City will activate the communication protocol detailed in the City of Milpitas American Water Infrastructure Act Risk and Resilience Assessment and Emergency Response Plan (ERP). In a longer-term water shortage situation, the City will implement the procedures identified in this Communication Plan.

Timely and effective communication is a key element of the WSCP implementation. Per CWC Section 10632 (a)(5), the City has established communication protocols and procedures to inform stakeholders regarding any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1; any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1; and any other relevant communications.

Emergency Response Plan Communication

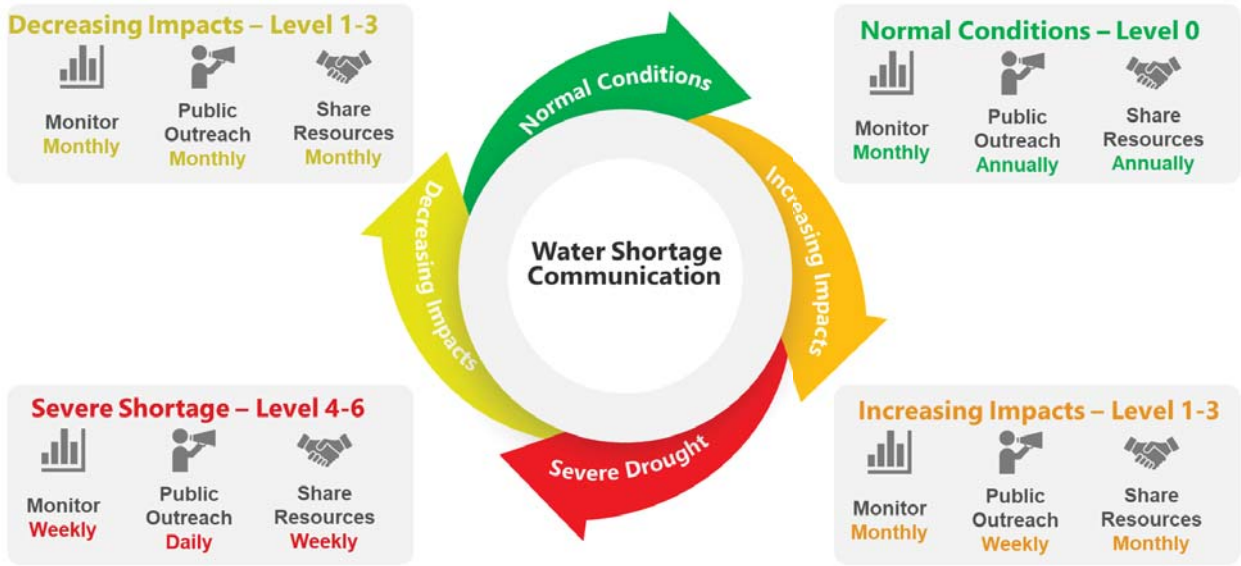
The ERP defines the actions to be taken by the City staff to reduce the loss of water and wastewater infrastructure; to respond effectively to a disaster; and to coordinate recovery operations in the aftermath of any emergency involving extensive damage to local and regional water and wastewater utilities. The ERP includes activation notification protocols that will be used to contact partner agencies to inform them of the situation, activation status of the ERP, known damage or impacts, or resource needs. The ERP is a standalone document that is reviewed annually and updated every 5 years. Refer to the ERP for full details.

Water Shortage Communication Plan

The Water Shortage Communication Plan serves as the baseline understanding for how the City will provide information and value to its various stakeholders, partners, and employees during normal conditions where water efficiency is an everyday goal for water supply reliability. In times of water shortage, this Communications Plan can be enhanced for the purposes of a Water Shortage Communication Plan. The Public Works Department works to elevate public awareness and participation in water efficiency so, in the event of a water shortage, the community is aware of the importance of response actions and can identify as an active participant in the City demand reduction target levels. The Communications Plan is designed to provide transparent, reliable, and accurate information to the public and collaborating agencies by identifying goals and objectives for each shortage level and outlining the appropriate communication interface tools and implementation schedule to for effective communication to assist customers with curtailing their water use.

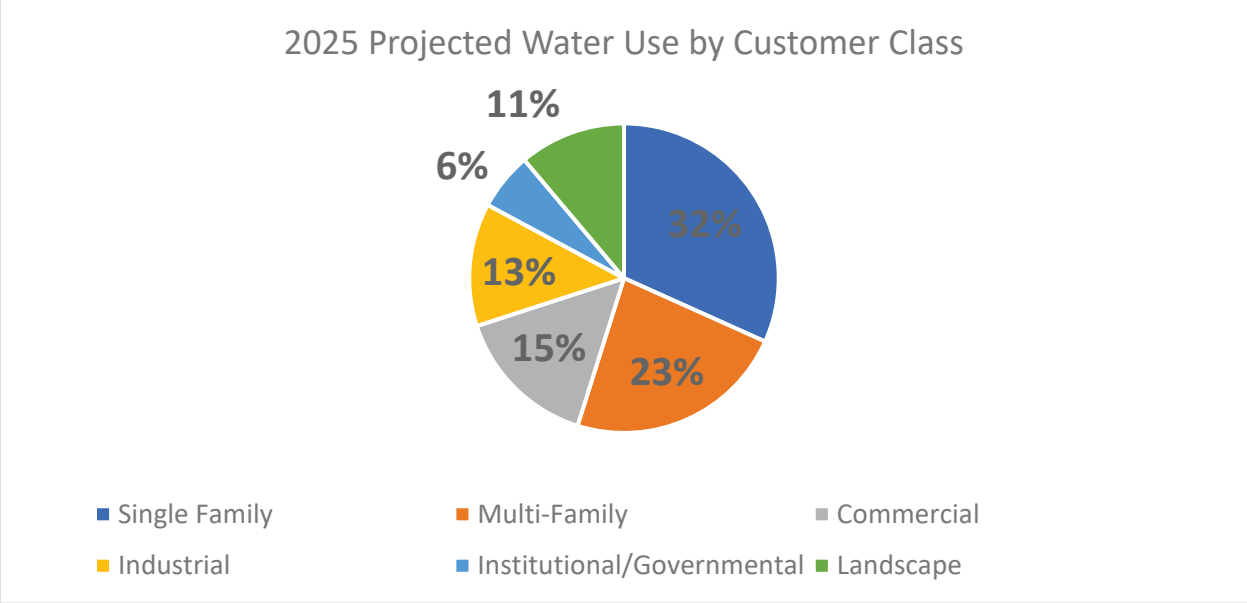
Goals & Objectives

The goal of the City's Water Shortage Communication Plan is to create a local awareness of water shortage conditions and to encourage water efficiency from all residents. The Water Shortage Communication Plan objectives further refine the focus of the program goal to achieve a desired outcome at shortage level. As a water shortage condition escalates, the objectives of the Communication Plan also escalate to ensure progress toward water supply reliability. The defined objectives for each Water Shortage level will determine the information that is communicated at each level.



Target Audiences

The City reviewed its water demand and customer class profile to develop a communication plan to be the most effective with its unique customer profile and water demands. Based on the 2025 projections, the City single family water use is expected to account for approximately 32% of the total water demand. Commercial, industrial, and institution water use is projected to account for about 34% of total demand. Multifamily and landscape use are projected to account for 23% and 11% of total demand, respectively based on recent trends. By understanding the local customer and water use profile, the City can implement a Water Shortage Communication Plan that leverages the appropriate communications tools to reach the target audience most effectively during a water shortage.



The City further refined its customer categories to identify the following target audiences for communication:

- City staff
- Homeowners and renters
- Business owners
- Local Industries
- Property owners and managers
- School district administrators and teachers
- Elected officials and staff
- Environmental/public interest groups
- General Public
- Local Media
- Homeowners Associations
- Golf Courses

Communications Interfaces and Tools

The City will work closely during a normal and water shortage condition, the City will utilize a comprehensive set of communication interface tools to engage water customers. The interface options and tools include:

- Water Bill communications
- Website Information on the City's water conservation page http://www.savewatermilpitas.org/ "and the City homepage https://www.ci.milpitas.ca.gov/
- Social Media outreach
- Media Coverage (print and electronic)
- Publications and Handouts
- Customer Portal Communication
- Presence at local events
- Mayor Public Service Announcements
- Direct mailings to homes and businesses
- School education programs
- Residential Water-Efficient Landscape Classes

Communication Tactics and Implementation Schedule

The City understands its responsibility to be transparent, accountable, have a positive impact on the community, and provide actionable guidance in times of water shortage. Carefully developed and executed communication tactics and implementation schedule will establish trust and credibility for all stakeholders by clearly communicating expectations and responsibilities. Below is a description of the Water Shortage Communication Plan Tactics. These tactics will be implemented according to the schedule and objectives defined in Table 1.

This Water Shortage Communication Plan is designed to have a standard set of Tactics systematically align to the current Water Shortage Level. For example, information that may be educational during Shortage Level 0 will shift to specific status information and shortage level response action requirements, as defined in Section 3.4.1 of the WSCP and DWR Table 8-2, as water shortage levels increase from 1 to 6. In Shortage Level 0, shortage communication will include a general overview of water efficiency and water shortage

levels so, in the event of a water shortage, the understanding and response requirements are familiar. As the Water Shortage Levels increase, messaging will align with specific shortage level response requirements and objectives.

Website

- The City website: Provide water efficiency information and resources on the City website including water shortage level status.
- Water Shortage Indicator: develop a permanent image on the webpage that identifies water shortage level status. Image will be updated promptly when status level changes and will link to additional shortage level information.
- Promote Valley Water's watersavings.org website: Provide information and link directing viewers to Valley Water's Rebate programs that the City cost-shares on.

Social Media

- Facebook/Nextdoor/Instagram: post water efficiency information and shortage level status on the City's pages. This may include unique City content or reposting of regional messages and images.
- Twitter: Tweet water efficiency information and water shortage level status on the City's account. This may include unique City content or reposting of regional messages and images.

Digital and Print Media

- Flyers/Signage/Brochures: Create and provide informational materials on water efficiency actions, local/regional water resource awareness, and water shortage level status.
- Consumer Confidence Reports (CCRs): provide a conservation reminder in CCR along with conservation tips.

Media Relations

- News stories/News Releases Newsletters: Provide news releases with information regarding water shortage level and expected trends.

Briefing papers/Talking points: Provide briefing papers to local media outlets such as newspapers, magazines, and other publications. This may also include social media posts and infographics.

Community Outreach

- Public Events: Promote water efficiency and water awareness at local events such as festivals, farmers market, community organizations, and other events.
- Promotional giveaways: Provide promotional water efficiency devices or messaging materials (i.e. hats, stickers, mugs, etc.) promoting water efficiency and response.

Educational Outreach

- School Programs: Provide water resource and efficiency presentations for local schools, including information and response to water shortage levels.
- Residential Water Efficiency Educational Classes: Provide educational classes to community on topics such as finding and fixing leaks, irrigation program scheduling, waterwise vegetation, etc.

- Non-residential water efficiency training classes/programs: Promote regional BayQWEL trainings for local irrigation professionals on water efficient practices and water shortage level requirements.

Water Efficiency Programs

- Rebate/Incentive Programs: Promote regional rebate and incentive programs for local water users. Messaging frequency increased as the shortage levels increase.
- Turf Removal: Promote regional rebate and incentive programs for local water users. Messaging frequency increased as the shortage levels increase.
- Water Surveys- Commercial: Promote regional rebate and incentive programs for local water users. Messaging frequency increased as the shortage levels increase.

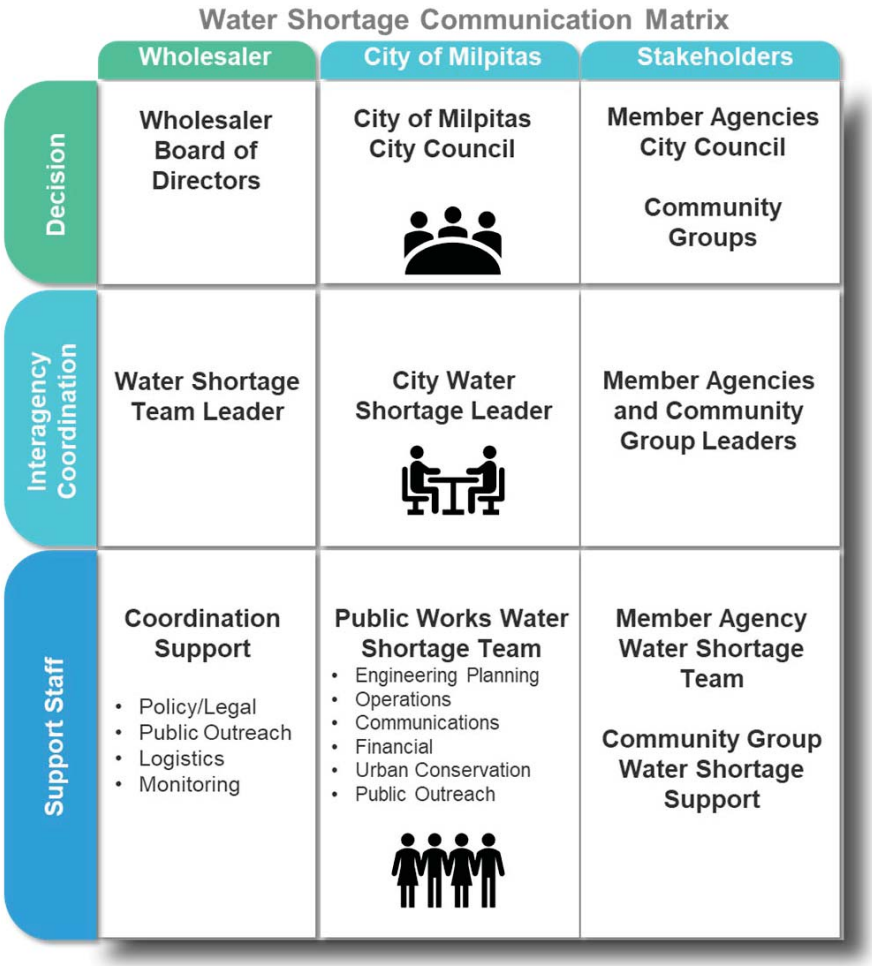
Water Surveys – Residential: Promote regional rebate and incentive programs for local water users. Messaging frequency increased as the shortage levels increase.

Direct Customer Communication

- Billing Inserts: Include billing inserts in water utility billings including water shortage level status and response actions.
- Water Use notifications: Include a comparison of actual water use and information regarding penalties.
- Neighborhood Canvasing: the City staff and/or representatives will canvas neighborhoods to educate residents of water shortage status and response action requirements.

Partnerships/Regional Initiatives

- SFPUC/BAWSCA/Valley Water: Utilize regional messaging programs, messages, and resources to communicate with local water users.
- Coordinate messaging with other member agencies and public partnerships.



Monitor, Evaluate, and Amend

The effectiveness of the City's Communication Plan depends on a large variety of factors including technological advancements or changes, the rise and fall of audience engagement, current news or media concentration, political changes in leadership and focus, and the weather. The Communication Plan will be evaluated for effectiveness and updated accordingly based on available metrics and stakeholder feedback.

Table 1: Water Shortage Communication Plan Implementation Schedule

Water Shortage Level	0	1	2	3	4	5	6
Goal	Create a awareness of water shortage level status and encourage water efficiency from all citizens.						
Objective	Permanent Water Waste Prohibitions, Water Awareness	Compliance with response actions, 10% reduction in water use	Compliance with response actions, 20% reduction in water use	Compliance with response actions, 30% reduction in water use	Compliance with response actions, 40% reduction in water use	Compliance with response actions, 50% reduction in water use	Compliance with response actions, Essential Water Use only
Outreach Strategies	1) City Website 2) Written and Print Media 3) Social Media 4) Community Outreach 5) Educational Outreach 6) Direct communication with high water users 7) Communication with commercial/industrial water users 8) City Water Efficiency Programs 9) Water Use Communications 10) Partnerships/Regional Initiatives						
Tactics							
Website							
City Website	X	X	X	X	X	X	X
Water Shortage Indicator.		X	X	X	X	X	X
Social Media							
Facebook	X	X	X	X	X	X	X
Instagram		X	X	X	X	X	X
Twitter	X	X	X	X	X	X	X
Digital and Print Media							
Flyers/Signage/Brochures	X	X	X	X	X	X	X

Consumer Confidence Reports (CCRs)		X	X	X	X	X	X
Media Relations							
News Stories/News Releases/Newsletters.		X	X	X	X	X	X
Community Outreach							
Public Events	X	X	X	X	X	X	X
Promotional Giveaways.	X	X	X	X	X	X	X
Educational Outreach							
School Programs	X	X	X	X	X	X	X
Residential Water Efficiency Educational Classes	X	X	X	X	X	X	X
Water Efficiency Programs							
Rebate/Incentive Programs	X	X	X	X	X	X	X
Turf Removal	X	X	X	X	X	X	X
Water Surveys	X	X	X	X	X	X	X
California Friendly Landscaping Classes	X	X	X	X	X	X	X
Direct Customer Communication							
Billing Inserts		X	X	X	X	X	X
Water Use Notifications	X	X	X	X	X	X	X
Neighborhood Canvasing			X	X	X	X	X
Partnerships/Regional Initiatives	X	X	X	X	X	X	X
Message Frequency	Ongoing, regular messaging	Frequency escalates depending on water shortage level and/or financial budget.					

APPENDIX C – NOTICE OF PUBLIC HEARING

From: Milpitas Works <milpitasworks@ci.milpitas.ca.gov>
Sent: Wednesday, May 26, 2021 11:33 AM
To: *<email list removed due to space and privacy issues>*
Subject: City of Milpitas - Notice of Public Hearing for the 2020 Urban Water Management Plan and Water Shortage Contingency Plan

Dear Water Suppliers,

The Urban Water Management Planning Act (California Water Code §10608–10656) requires the City of Milpitas ("the City") to update its Urban Water Management Plan (UWMP) and associated Water Shortage Contingency Plan (WSCP) every 5 years. As part of the 2020 UWMP, the City expanded its Water Shortage Contingency Plan (WSCP) to be a standalone document to establish actions and procedures for managing water shortages. The UWMP and WSCP are required to be submitted to the California Department of Water Resources by July 1, 2021.

The City will hold a public hearing on June 15, 2021 at 7:00 p.m. by virtual meeting to consider proposed revisions and updates to the UWMP and associated WSCP. We invite your agency's participation in the process.

The UWMP and associated WSCP will be made available for public review by June 1, 2021 at https://www.ci.milpitas.ca.gov/2020_uwmp. Please visit http://www.ci.milpitas.ca.gov/our-government/city-council/city-council-agendas-and-minutes-2/ for the City Council meeting agenda and links to the virtual public hearing.

If you have any questions about the 2020 UWMP or WSCP or the process for updating these documents, please contact me.

Sincerely,

Tony Ndah
Director of Public Works
City of Milpitas
Phone: (408) 586-2600
milpitasworks@ci.milpitas.ca.gov

Notice of Public Hearing
City of Milpitas 2020 Urban Water Management Plan

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing via teleconference/zoom webinar on Tuesday, June 15, 2021, starting at or soon after 7:00 p.m. to receive public comment regarding adoption of the 2020 Urban Water Management Plan (UWMP).

The 2020 UWMP is a water supply planning tool describing the service area, the existing and planned sources, existing and planned customer demands, a comparison of actual water usage against State-mandated per capita water use targets, and the Water Shortage Contingency Plan. The 2020 UWMP is available for public review and comment through the end of the public hearing described above. A copy of the 2020 UWMP is accessible on the City's website:

https://www.ci.milpitas.ca.gov/2020_uwmp/

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code Section 65009, that any legal challenge of this matter in court may be limited to only those issues raised at the public hearing described in this notice or in written or e-mailed correspondence delivered to the City Council at, or prior to, thepublic hearing. Challenges shall also be in compliance with Water Code Sections 10650-10656.

ANY PERSONS who wish to comment are encouraged to attend the online public hearing where oral comments may be given by registering for the zoom webinar as attendee (see meeting agenda) or to submit written comments via e-mail to the City Council prior to the hearing. The City encourages the active involvement of the diverse social, cultural, and economic elements of the population within the service area. Written comments may be sent by e-mail to wwood@ci.milpitas.ca.gov.

Wendy Wood
City Clerk
Publication Dates: May 28 and June 4, 2021

Notice of Public Hearing
City of Milpitas 2020 Water Shortage Contingency Plan

NOTICE IS HEREBY GIVEN that the Milpitas City Council will hold a public hearing via teleconference/zoom webinar on Tuesday, June 15, 2021, starting at or soon after 7:00 p.m. to receive public comment regarding adoption of the 2020 Water Shortage Contingency Plan (WSCP).

The 2020 WSCP analyzes the supply and demand assessment at each source as required by AB 1668 and SB 606, looking at the next 20 years in 5-year increments, and includes a drought risk assessment for a 5-year period. The WSCP anticipates a water supply shortage and provides pre-planned guidance for managing and mitigating a supplier's shortage. The 2020 WSCP is available for public review and comment through the end of the public hearing described above. A copy of the 2020 WSCP is accessible on the City's website:

https://www.ci.milpitas.ca.gov/2020_uwmp/

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code Section 65009, that any legal challenge of this matter in court may be limited to only those issues raised at the public hearing described in this notice or in written or e-mailed correspondence delivered to the City Council at, or prior to, thepublic hearing. Challenges shall also be in compliance with Water Code Sections 10650-10656.

ANY PERSONS who wish to comment are encouraged to attend the online public hearing where oral comments may be given by registering for the zoom webinar as attendee (see meeting agenda) or to submit written comments via e-mail to the City Council prior to the hearing. The City encourages the active involvement of the diverse social, cultural, and economic elements of the population within the service area. Written comments may be sent by e-mail to wwood@ci.milpitas.ca.gov.

Wendy Wood
City Clerk
Publication Dates: May 28 and June 4, 2021

APPENDIX D – ADOPTION RESOLUTION

Documentation pending. It will be included in the Final Draft of this 2020 UWMP.

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	Conduct a public hearing, adopt Resolution A, conduct a special election for Community Facilities District No. 2008-1 – Annexation 21, and adopt Resolution B.
Category:	Public Hearing - Community Development
Meeting Date:	6/15/2021
Staff Contact:	Steve Erickson, Engineering Director/City Engineer, 408-586-3301
Recommendation:	Conduct a Public Hearing, hear testimony, then move to close the public hearing; and adopt the following Resolutions: (1) Resolution (A) of the City Council of the City of Milpitas Acting as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Making Certain Determinations and Authorizing Submittal of Levy of Special Taxes to the Qualified Electors of Certain Territory Proposed to be Annexed to Community Facilities District No. 2008-1 (Public Services); and (2) Resolution (B) of the City Council of the City of Milpitas Acting in its Capacity as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Declaring the Results of a Special Election in that Territory Designated as Community Facilities District No. 2008-1 (Public Services), Annexation No. 21 and Adding Such Territory To Such Community Facilities District.

Background:

On October 16, 2018, the City Council approved General Plan Amendment No. GP17-0001, Special Plan Amendment No. ST17-0002, Zoning Amendment No. ZA17-0002, Site Development Permit No. SD17-0013, Conditional Use Permit No. UP17-0018, Density Bonus No. DB17-0002, Lot Combination No. LC17-0002, and Environmental Assessment No. EA17-0005 for a 220-unit residential project located at 1380-1400 South Main Street ("Project").

The project is located on a 2.14-acre site (the "Property") within the Transit Area Specific Plan ("TASP") area. This project is known as Main Street Milpitas, and the developer is South Main Plaza. LLC, a Delaware limited liability company ("Developer"). The Developer requested the City initiate proceedings pursuant to the "Mello-Roos Community Facilities Act of 1982", being Chapter 2.5, Part 1, Division 2, Title 5 of the Government Code of the State of California (the "Act") to annex the Property into Community Facilities District 2008-1 ("CFD 2008-1").

Analysis:

The City previously formed CFD 2008-1 pursuant to the terms and provisions of the Act for the purpose of financing certain public services such as police and fire services, maintenance or streets, parks, and infrastructure, and storm and flood protection. Annexation of properties into CFD 2008-1 is subject to the provisions of the Act. The Property previously consisted of two parcels (Assessor Parcel Numbers 083-36-006 and 083-36-007), and a lot combination to merge the two parcels was approved by the City and recorded with the County of Santa Clara Office of the Recorder on November 25, 2020. The Property is known as "Parcel 21" and is proposed to be annexed into CFD 2008-1.

On May 4, 2021, the City Council, acting as the legislative body of CFD 2008-1, adopted a resolution of intent ("ROI") to annex the Property. The ROI set a date of June 15, 2021, to conduct a public hearing and special election to vote to approve the levy of a special tax on the Property and declare the election results.

The City has obtained a Certificate of Registrar of Voters from the County of Santa Clara certifying that there are no registered voters residing within the boundaries of the territory proposed to be annexed (Parcel 21). Thus, the qualified elector for the annexation is the Developer, as the sole landowner of the Property.

The Resolutions to be considered by City Council will make certain determinations authorizing the submittal of levy of special taxes to the qualified electors of the territory proposed to be annexed to CFD No. 2008-1 (Public Services) and declare the results of a special election in the territory designated as CFD No. 2008-1, Annexation No. 21 and add such territory to CFD No. 2008-1.

The Developer has agreed to waive certain election requirements for the special election. A copy of the Consent and Waiver form executed by the Developer is on file with the City Clerk.

A notice of the public hearing for Annexation No. 21 was posted and published on June 4, 2021 in the Milpitas Post to meet the minimum seven-day public noticing requirement in the Act.

Upon conclusion of the public hearing, the City Council, acting as the legislative body of CFD No. 2008-1 will consider Resolution A (Attachment 1), authorizing submittal of the levy of the special tax in the territory proposed to be annexed to CFD No. 2008-1 to the qualified elector (the Developer). If Resolution A (Attachment 1) is adopted, the City Clerk will conduct the election and announce the results of the election ballot received from the Developer, as the sole qualified elector. The City Council, acting as the legislative body of CFD No. 2008-1 will then consider Resolution B (Attachment 2), declaring the results of the election. If the sole qualified elector for the Property, the Developer, votes is in favor of the proposition to levy the special tax, the proposition will pass and an Amendment to Notice of Special Tax Lien will be recorded against the Property. This Amendment does not affect the special tax on other properties in CFD 2008-1

Policy Alternatives:

Alternative 1: Deny Resolution Making Certain Determinations and Authorizing Submittal of Levy of Special Taxes to the Qualified Electors or Resolution Declaring the Results of a Special Election (collectively the "Resolutions").

Pros: None. The annexation allows the levy of special taxes to fund public services for the Property.

Cons: Denying the Resolutions would prevent the City from levying special taxes on the Property to fund certain public services.

Reason not recommended: To adequately fund the perpetual maintenance of services for the Property, staff recommends adopting the Resolution A (Attachment 1), conducting an election, and adopting Resolution B (Attachment 2) to declare the results of the election. If at least 2/3rds of the vote is in favor of levying the special tax, the Property will be annexed into CFD 2008-1.

Fiscal Impact:

Adding the Property to the CFD No. 2008-1 would allow the City to levy special taxes on this parcel to fund certain public services to support the Project.

California Environmental Quality Act:

This project is covered under the scope of activities approved under the Transit Area Specific Plan Environmental Impact Report, SCH2006032091, which was certified by City Council on June 3, 2008. On October 16, 2018, the City Council found that the Project is exempt from further environmental review pursuant

to CEQA Guidelines Section 15183 (projects consistent with a Community Plan, General Plan or Zoning); CEQA Guidelines Section 15182 (residential projects consistent with a specific plan); and CEQA Guidelines Section 15168 (projects within the scope of a program EIR).

Recommendation:

Conduct a Public Hearing and adopt the following Resolutions:

1. Resolution (A) of the City Council of the City of Milpitas Acting as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Making Certain Determinations and Authorizing Submittal of Levy of Special Taxes to the Qualified Electors of Certain Territory Proposed to be Annexed to Community Facilities District No. 2008-1 (Public Services); and

2. Resolution (A) of the City Council of the City of Milpitas Acting in its Capacity as the Legislative Body of Community Facilities District No. 2008-1 (Public Services), Declaring the Results of a Special Election in that Territory Designated as Community Facilities District No. 2008-1 (Public Services), Annexation No. 21 and Adding Such Territory To Such Community Facilities District.

Attachments:

1. Resolution A
2. Resolution B

RESOLUTION NO. 2021 - __

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS, CALIFORNIA, ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES), MAKING CERTAIN DETERMINATIONS AND AUTHORIZING SUBMITTAL OF LEVY OF SPECIAL TAXES TO THE QUALIFIED ELECTORS OF CERTAIN TERRITORY PROPOSED TO BE ANNEXED TO COMMUNITY FACILITIES DISTRICT NO 2008-1 (PUBLIC SERVICES)

(ANNEXATION NO. 21)

WHEREAS, the City Council of the City of Milpitas, California, ("City Council"), formed a community facilities district pursuant to the terms and provisions of the "Mello-Roos Community Facilities Act of 1982", being Chapter 2.5, Part 1, Division 2, Title 5 of the Government Code of the State of California (the "Act"). The community facilities district has been designated as "Community Facilities District No. 2008-1 (Public Services)" (the "District"); and

WHEREAS, the City Council, at the request of the owner of that property known as 1380-1400 South Main Street, initiated proceedings pursuant to the Act to annex such territory to the District; and

WHEREAS, notice of a public hearing relating to the annexation of such territory to the District, the extent of the territory to be annexed, the furnishing of certain public services and all other related matters has been given; and

WHEREAS, the territory proposed to be annexed is known and designated as Community Facilities District No. 2008-1 (Public Services), Annexation No. 21 (the "Territory"); and

WHEREAS, it has now been determined that written protests have not been received by 50% or more of the registered voters residing either within the District or the Territory and written protests have not been received by owners representing more than one-half (1/2) or more of the area of land within the District or the Territory; and

WHEREAS, inasmuch as there have been less than twelve (12) persons registered to vote within the Territory for each of the 90 preceding days, this legislative body desires to submit the levy of the required special tax to the landowners of the Territory, such landowners being the qualified electors as authorized by law.

NOW, THEREFORE, IT IS HEREBY RESOLVED AS FOLLOWS, BY THE CITY COUNCIL, ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES):

SECTION 1. The above recitals are all true and correct.

SECTION 2. Determinations. It is determined by this City Council that:

(a) all proceedings prior hereto were valid and taken in conformity with the requirements of law, and specifically the provisions of the Act, and this finding is made pursuant to the provisions and authorization of Section 53325.1 of the Government Code of the State of California;

(b) the annexation of the Territory as proposed conforms with the City of Milpitas Amended and Restated Set of Local Goals and Policies for Community Facilities Districts No.2008-1 (Public Services);

(c) less than twelve (12) registered voters have resided within the Territory for each of the ninety (90) days preceding the close of the public hearing and, consequently, the qualified electors shall be the landowners of the Territory and each landowner who is the owner of record as of the close of the public hearing, or the authorized representative thereof, shall have one vote for each acre or portion of an acre of land that she or he owns within the Territory;

(d) the time limit specified by the Act for conducting an election to submit the levy of the special taxes to the qualified electors of the Territory and the requirements for impartial analysis and ballot arguments have been waived with the unanimous consent of the qualified electors of the Territory;

(e) the City Clerk, acting as the election official (the "Election Official"), has consented to conducting any required election on a date which is less than 125 days following the adoption of any resolution annexing the Territory to the District thereto; and

(f) the public services described in Section 4 herein proposed to be financed from the proceeds of special taxes to be levied within the Territory are necessary to meet increased demands placed upon the City as a result of development and/or rehabilitation occurring in the Territory.

SECTION 3. Boundaries of the Territory. The boundaries and parcels of land the Territory and in which the public services are to be provided and on which special taxes will be levied in order to pay the costs and expenses for such public services are generally described as follows:

All that Territory proposed to be annexed to the District thereto, as such property is shown on a map as previously approved by this legislative body, such map entitled "Annexation Map No. 21 of Community Facilities District No. 2008-1 (Public Services), City Of Milpitas, County Of Santa Clara, State Of California" (the "Annexation Map"), a copy of which is on file in the Office of the City Clerk and shall remain open for public inspection. The Annexation Map has been filed in the Office of the Santa Clara County Recorder, in Book 53, Page 19, of the Maps of Assessment and Community Facilities Districts and as Document No. 24985690.

Reference is made to the attached and incorporated Exhibit "A" Annexation Map No. 21.

SECTION 4. Description of Services. A general description of the services authorized to be financed by the District are as follows:

a) Police protection services, including, but not limited to criminal justice services. However, criminal justice services shall be limited to providing services for jails, detention facilities, and juvenile halls.

b) Fire protection and suppression services, and ambulance and paramedic services.

c) Maintenance and lighting of parks, parkways, streets, roads, street landscaping, and open space.

d) Flood and storm protection services, including, but not limited to, the operation and maintenance of storm drainage systems.

e) Services with respect to removal or remedial action for the cleanup of any hazardous substance released or threatened to be released into the environment. The District shall finance all direct, administrative and incidental annual costs and expenses necessary to provide such monitoring, maintenance, operation and management of such public property.

The same types of services which are authorized to be financed by the District from the proceeds of special taxes are the types of services to be financed from the proceeds of special taxes levied within the Territory. If and to the extent possible such services shall be provided in common within the District and the Territory.

SECTION 5. Special Tax. Except where funds are otherwise available, a special tax sufficient to pay for such services and related incidental expenses authorized by the Act, secured by recordation of a continuing lien against all non-exempt real property in the Territory, will be levied annually within the boundaries of such Territory. For further particulars as to the rate and method of apportionment of the proposed special tax, reference is made to the attached and incorporated Exhibit "B" (the "Rate and Method"), which sets forth in sufficient detail the method of apportionment to allow each landowner or resident within the proposed Territory to clearly estimate the maximum amount that such person will have to pay.

The special tax proposed to be levied within the Territory shall be equal to the special tax levied to pay for the same services in the District except that a higher or lower special tax may be levied within the Territory to the extent that the actual cost of providing the services in the Territory is higher or lower than the cost of providing those services in the District. Notwithstanding the foregoing, the special tax may not be levied at a rate which is higher than the maximum special tax authorized to be levied pursuant to the Rate and Method.

The special taxes herein authorized, to the extent possible, shall be collected in the same manner as ad valorem property taxes and shall be subject to the same penalties, procedure, sale and lien priority in any case of delinquency as applicable for ad valorem taxes. Any special taxes

that may not be collected on the County tax roll shall be collected through a direct billing procedure by the Treasurer.

The maximum special tax rate in the District shall not be increased as a result of the annexation of the Territory.

SECTION 6. Election. The proposition related to the levy of the special tax shall be submitted to the qualified electors of the Territory, such electors being the landowners, with each landowner having one (1) vote for each acre or portion thereof of land which he or she owns within such annexed territory. The special election shall be held on June 15, 2021 immediately following the adoption of this Resolution, and such election shall be a special election to be conducted by the City Clerk (hereinafter "Election Official"). If the proposition for the levy of the special tax receives the approval of more than two-thirds (2/3) of the votes cast on the proposition, the special tax may be levied as provided for in this Resolution.

SECTION 7. Ballot. The ballot proposal to be submitted to the qualified electors at the election shall generally be as follows:

PROPOSITION 1

CITY OF MILPITAS
COMMUNITY FACILITIES DISTRICT NO. 2008-1,
ANNEXATION NO. 21

AUTHORIZATION FOR SPECIAL TAX LEVY

Shall City of Milpitas Community Facilities District No. 2008-1 (Public Services) be authorized to levy special taxes throughout Annexation No. 21 to such community facilities district pursuant to the method of apportioning the special tax set forth in Attachment "A" to this Official Ballot for the purpose of financing public services, including but not limited to the services set forth in Attachment "B" to this Official Ballot to meet the increased demand for such services resulting from new development within Annexation No. 21 and the cost of administering the levy and collection of the special taxes?

SECTION 8. Vote. The appropriate mark placed in box adjacent to the word "YES" shall be counted in favor of the adoption of the proposition, and the appropriate mark placed in the box adjacent to the word "NO" in the manner as authorized, shall be counted against the adoption of such proposition.

SECTION 9. Election Procedure. This City Council hereby authorizes the Election Official to take any and all steps necessary for the holding of such election and ratifies any such steps previously taken by such Election Official which were necessary for the holding of such election. Such Election Official shall perform and render all services and proceedings incidental to and connected with the conduct of such election, and such services shall include, but not be limited to the following:

(a) Prepare and furnish to the election officers necessary election supplies for the conduct of the election.

(b) Cause to be printed the requisite number of official ballots, tally sheets and other necessary forms.

(c) Furnish and address official ballots for the qualified electors of the Territory.

(d) Cause the official ballots to be mailed and/or delivered, as required by law.

(e) Receive the returns of the election.

(f) Sort and assemble the election material and supplies in preparation for the canvassing of the returns.

(g) Canvass the returns of the election.

(h) Furnish a tabulation of the number of votes given in the election.

(i) Make all arrangements and take the necessary steps to pay all costs of the election incurred as a result of services performed for the District and pay costs and expenses of all election officials.

(j) Conduct and handle all other matters relating to the proceedings and conduct of the election in the manner and form as required by law.

ADOPTED by the City Council of the City of Milpitas, California, at a Regular Meeting thereof held this _____ day of June, 2021, by the following roll call vote to wit:

AYES:

NOES:

ABSENT:

APPROVED:

_____
Rich Tran, Mayor

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

EXHIBIT "A"
ANNEXATION MAP NO. 21

SHEET 1 OF 1

Filed in the office of the City Clerk of the City of Milpitas this 26th day of May, 2021.

City Clerk, City of Milpitas

I hereby certify that the within map showing proposed boundaries of Annexation Map No. 21 of City of Milpitas Community Facilities District No. 2008-1 (Public Services), City of Milpitas, County of Santa Clara, State of California, was approved by the City Council of the City of Milpitas at a regular meeting thereof, held on the _____ day of _____, 2021, by its Resolution No._____.

City Clerk, City of Milpitas

Filed this 4th day of June, 2021, at the hour of 2:19 o'clock P. m., in Book 53 of Maps of Assessment and Community Facilities Districts at Page 27 in the office of the County Recorder in the County of Santa Clara, State of California.

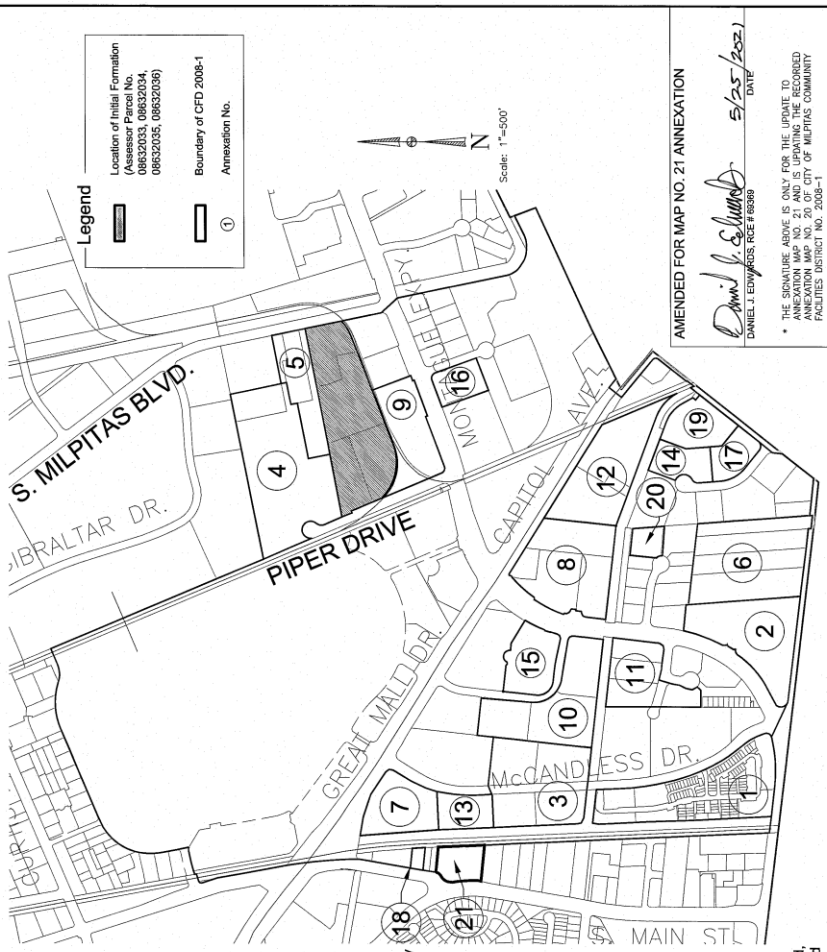
County Recorder, Regina Alcomendras
County of Santa Clara

The boundary of Community Facilities District No. 2008-1 is co-terminous with the boundary of the City of Milpitas in May 4, 2021.

Reference is hereby made to the Assessor maps of the County of Santa Clara for an exact description of the lines and dimensions of each lot and parcel.

The territory included in the Community Facilities District shall include only Santa Clara County Assessor's for the following Annexation Maps:
initial formation CFD 2008-1 : 08632033, 08632034, 08632035, 0832036
Map No. 1: 08641020, 08641021, 08641022
Map No. 2: 08636043
Map No. 3: 08633094, 08633095, 08633098, 08633099
Map No. 4: 08632044
Map No. 5: 08632039, 08632045, 08632046
Map No. 6: 08636003, 08636004, 08636005, 08636006
Map No. 7: 08633092
Map No. 8: 08637019, 08637037, 08637038
Map No. 9: 08632029, 08632070
Map No. 10: 08633089, 08633107, 08633108
Map No. 11: 08641009, 08641032, 08641033, 08641034
Map No. 12: 086037039, 086037040
Map No. 13: 08633105
Map No. 14: 08636040
Map No. 15: 08633111
Map No. 16: 09208077
Map No. 17: 08636039
Map No. 18: 08336003
Map No. 19: 08636038
Map No. 20: 08636013
Map No. 21: 08336009
and all publicly owned areas in the City of Milpitas landscaped or capable of being landscaped, such as parks, parkways, street medians, interchange areas, light rail areas, open space and all similar areas. All other areas depicted on this map indicate territory that may be annexed to the Community Facilities District in the future.

ANNEXATION MAP NO. 21 AND UPDATE OF ANNEXATION MAP NO. 20 OF CITY OF MILPITAS COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES), COUNTY OF SANTA CLARA STATE OF CALIFORNIA AS RECORDED IN BOOK 53 PAGE 19 OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS, O.R., SANTA CLARA COUNTY



AMENDED FOR MAP NO. 21 ANNEXATION

DANIEL I. EDWARDS, RCE # 8369 — DATE 5/25/2021

* THE SIGNATURE ABOVE IS ONLY FOR THE UPDATE TO ANNEXATION MAP NO. 21 AND IS UPDATING THE RECORDED ANNEXATION MAP NO. 20 OF CITY OF MILPITAS COMMUNITY FACILITIES DISTRICT NO. 2008-1

Drawn By: BP File No. CFD 2008-1 Sheet 1 of 1

EXHIBIT "B"

RATE AND METHOD OF APPORTIONMENT FOR COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES)

1. BASIS OF SPECIAL TAX LEVY

A Special Tax authorized under the Mello-Roos Community Facilities Act of 1982 (Act) applicable to the land in the Community Facilities District No. 2008-1 (Public Services) (CFD) of the City of Milpitas (City) shall be levied and collected according to the tax liability determined by the City through the application of the appropriate amount or rate, as described below.

2. DEFINITIONS

"Act" means the Mello-Roos Community Facilities Act of 1982, as amended, Sections 53311 and following of the California Government Code.

"Administrative Expenses" means the actual or estimated costs incurred by the City to form the CFD and to determine, levy, and collect the Special Taxes, including compensation of City employees for administrative work performed in relation to the CFD, the fees of consultants and legal counsel, the costs of collecting installments of the Special Taxes on the general tax rolls, preparation of required reports, and any other costs required to administer the CFD as determined by the City.

"Administrator" means the Finance Director of the City, or his or her designee.

"Affordable Housing" means a Dwelling Unit on a Developed Parcel that is subject to deed restrictions, resale restrictions, or regulatory agreements recorded on the property that provide housing for persons that meet Low-, Very Low-, or Extremely Low-Income levels pursuant to the California Health and Safety Code Sections 5079.5, 50105, or 50106. The Dwelling Unit shall no longer be considered Affordable Housing following termination of the agreement containing covenants or similar instruments.

"Annexation Parcel" means any Parcel that is annexed to the CFD after it is formed.

"Annual Costs" means for each Fiscal Year, the total of (1) Authorized Services, (2) Administrative Expenses, and (3) any amounts needed to cure actual or estimated delinquencies in Special Taxes for the current or previous Fiscal Year.

"Authorized Services" mean those services, as listed in the resolution forming the CFD.

"Base Year" means the Fiscal Year beginning July 1, 2009 and ending June 30, 2010.

"Certificate of Occupancy" means a permit issued by the City authorizing the occupancy of a Dwelling Unit.

"CFD" means the Community Facilities District No. 2008-1 (Public Services) of the City of Milpitas, Santa Clara County, California.

"City" means the City of Milpitas in Santa Clara County, California.

"Council" means the City Council of the City of Milpitas acting for the CFD under the Act.

"County" means the County of Santa Clara, California.

"County Assessor's Parcel" means a lot or Parcel with an assigned Assessor's Parcel Number in the maps used by the County Assessor in the preparation of the tax roll.

"County Median Income" means the current median income for the County as determined by the U.S. Department of Housing and Urban Development, or successor agency as published annually by the State Department of Housing and Community Development pursuant to the Health and Safety Code Section 50093 et. seq.

"Developed Parcel" means a Parcel that has Certificate of Occupancy for residential land uses issued after January 1, 2009.

"Dwelling Unit(s)" means the number of taxable developed residential unit(s) assigned to a Parcel, or a portion thereof, by the Administrator.

"Extremely Low-Income Affordable" means a Dwelling Unit located on a Developed Parcel that is Affordable Housing for households with incomes at or below 30 percent of the County Median Income.

"Fiscal Year" means the period starting July 1 and ending the following June 30.

"Low-Income Affordable" means a Dwelling Unit located on a Developed Parcel for Affordable Housing for households with incomes at or below 80 percent of the County Median Income.

"Market Rate" means a Dwelling Unit located on a Developed Parcel that is not Affordable Housing.

"Maximum Annual Special Tax" means the greatest amount of Special Tax that can be levied against a Developed Parcel calculated by summing the Maximum Annual Special Tax Rate for each Dwelling Unit and Tax Category assigned to a Developed Parcel.

"Maximum Annual Special Tax Rate per Unit" means the amount shown in **Attachment 1** for a Fiscal Year that is assigned to a Dwelling Unit by Tax Category.

"Parcel" means any County Assessor's Parcel in the CFD based on the equalized tax rolls of the County as of January 1 of each Fiscal Year.

"Parcel Number" means the Assessor's Parcel Number for any Parcel based on the equalized tax rolls of the County as of January 1 of each Fiscal Year.

"Public Parcel" means any Parcel, in its entirety, that is or is intended to be publicly owned that is normally exempt from the levy of general ad valorem property taxes under California law, including public streets, schools, parks, public drainageways, public landscaping,

wetlands, greenbelts, and public open space. These parcels are exempt from the levy of Special Taxes. Any such Parcel will be a Tax-Exempt Parcel.

"Second-Family Unit" means an attached or detached additional residential dwelling unit on a single-family residential Developed Parcel. The Second-Family Unit is not considered a Dwelling Unit in terms of assigning the Maximum Annual Special Tax.

"Special Tax(es)" mean(s) any tax levy under the Act in the CFD.

"Tax Category" means the four categories of housing Dwelling Units shown in **Attachment 1**.

"Tax Collection Schedule" means the document prepared by the Administrator for the County Auditor-Controller to use in levying and collecting the Special Taxes each Fiscal Year.

"Tax Escalation Factor" means an annual percentage increase in the Maximum Annual Special Tax Rate per Unit based on the Consumer Price Index (CPI) (as of February, San Francisco, All Urban Consumers [CPI-U] Index), the CPI (prior calendar year annual average, San Francisco, All Urban Wage Earners and Clerical Workers), or 2 percent, whichever is greater. The Tax Escalation Factor is applied in each Fiscal Year following the Base Year.

"Taxable Parcel" means any Parcel that is not a Tax-Exempt Parcel.

"Tax-Exempt Parcel" means a Parcel not subject to the Special Tax. Tax-Exempt Parcels are Public Parcels (subject to the limitations set forth in **Section 4,** below), Undeveloped Parcels, and nonresidential use parcels, such as commercial, office, retail, industrial, etc.

"Undeveloped Parcel" means a Parcel that is not a Developed Parcel.

"Very Low-Income Affordable" means a Dwelling Unit located on a Developed Parcel that is Affordable Housing for households with incomes at or below 50 percent of the County Median Income.

3. DURATION OF THE SPECIAL TAX

Parcels in the CFD will remain subject to the Special Tax in perpetuity.

If the Special Tax ceases to be levied, the City will direct the County Recorder to record a Notice of Cessation of Special Tax. Such notice will state that the obligation to pay the Special Tax has ceased and that the lien imposed by the Notice of Special Tax Lien is extinguished. The Notice of Cessation of Special Tax, in addition, will identify the book and page of the Book of Maps of Assessment and Community Facilities Districts where the map of the boundaries of the CFD is recorded.

4. ASSIGNMENT OF MAXIMUM ANNUAL SPECIAL TAX

A. Classification of Parcels. By June 30 of each Fiscal Year, using the Definitions in Section 2, above, the parcel records of the Assessor's Secured Tax Roll as of January 1, and other City development approval records, the Administrator shall cause these:

1. Each Parcel to be classified as a Developed Parcel or Tax-Exempt Parcel.
2. Each Developed Parcel to be assigned a number of Dwelling Units.
3. Each Dwelling Unit to be further classified as Market Rate, Low-Income Affordable, Very Low-Income Affordable, or Extremely Low-Income Affordable.

B. Assignment of Maximum Annual Special Tax. **Attachment 1** shows the Base Year Maximum Annual Special Tax Rates per Unit. Each Fiscal Year following the Base Year, the Maximum Annual Special Tax Rate per Unit may be increased in accordance with the Tax Escalation Factor. **Attachment 1** also shows the Current Maximum Annual Special Tas Rates per Unit with the application of the annual Tax Escalation Factor since the Base Year.

The Maximum Annual Special Tax is then assigned to Taxable Parcels using the steps below:

1. **Developed Parcels**. Dwelling Units are assigned by the Administrator by Tax Category (as shown in Attachment 1) to Developed Parcels. The Maximum Annual Special Tax for each Developed Parcel is the sum of the Maximum Annual Special Tax Rates per Unit (as increased by the Tax Escalation Factor each Fiscal Year after the Base Year) for each Dwelling Unit (and Tax Category assigned thereto).
2. **Undeveloped Parcels.** Undeveloped Parcels are Tax-Exempt Parcels until developed as one of the residential uses discussed above.

C. Conversion of a Tax-Exempt Parcel to a Taxable Parcel. If a Tax-Exempt Parcel is not needed for public use and is converted to a taxable use or transferred to a private owner, it shall become subject to the Special Tax. The Maximum Annual Special Tax for such a Parcel will be assigned according to the **Section 4.A** and **Section 4.B** above. Conversely, if a privately owned parcel is converted to a public use, it shall become tax-exempt.

5. CALCULATING ANNUAL SPECIAL TAXES

The Administrator will compute the Annual Costs and determine the Maximum Annual Special Tax for each Taxable Parcel based on the assignment of the Special Tax in **Section 4.** The Administrator will then determine the tax levy for each Taxable Parcel using the following process:

A. Compute the Annual Costs using the definition of Annual Costs in **Section 2.**
B. Calculate the Special Tax levy for each Developed Parcel by the following steps:
   - Step 1: Compute 100 percent of the Maximum Annual Special Tax Revenue for all Developed Parcels.
   - Step 2: Compare the Annual Costs with the Maximum Annual Special Tax revenue calculated in the previous step.
   - Step 3: If the Annual Costs are lower than the Maximum Annual Special Tax Revenue, decrease proportionately the Special Tax levy for each Developed Parcel until the revenue from the Special Tax levy equals the Annual Costs.
C. Levy on each Taxable Parcel the amount calculated above.
D. Prepare the Tax Collection Schedule and, unless an alternative method of collection has been selected pursuant to **Section 9,** send it to the County Auditor requesting that it be placed on the general, secured property tax roll for the Fiscal Year. The Tax Collection Schedule will not be sent later than the date required by the Auditor for such inclusion.

The Administrator will make every effort to correctly calculate the Special Tax for each Parcel. It will be the burden of the taxpayer to correct any errors in the determination of the Parcels subject to the tax and their Special Tax assignments.

6. RECORDS MAINTAINED FOR THE CFD

As development and subdivision occurs in the CFD, the Administrator will maintain a file containing records of the following information for each Parcel:

- The current County Assessor's Number.
- Number of Dwelling Units assigned by the Administrator to Developed Parcels.
- The Tax Category for each Dwelling Unit assigned to a Developed Parcel.

The file containing the information listed above will be available for public inspection.

7. INTERPRETATION, APPLICATION AND APPEAL OF SPECIAL TAX FORMULA AND PROCEDURES

Any taxpayer who feels that the amount of the Special Tax assigned to a Parcel is in error may file a notice with the Administrator appealing the levy of the Special Tax. The Administrator will then promptly review the appeal, and if necessary, meet with the applicant. If the Administrator verifies that the tax should be modified or changed, the Special Tax levy will be corrected and, if applicable in any case, a refund will be granted.

Interpretations may be made by Resolution of the Council for purposes of clarifying any vagueness or ambiguity as it relates to the Special Tax rate, the method of apportionment, the classification of properties, or any definition applicable to the CFD.

Without Council approval, the Administrator may make minor, non-substantive administrative and technical changes to the provisions of this Exhibit that do not materially affect the rate, method of apportionment, and manner of collection of the Special tax for purposes of the administrative efficiency or convenience or to comply with new applicable federal, state or local law.

8. PREPAYMENT OF THE SPECIAL TAX OBLIGATION

The Maximum Annual Special Tax for a Taxable Parcel may not be prepaid. The Special Tax is collected to fund Authorized Services in perpetuity, or until the Council determines that the Special Tax should no longer be collected.

9. MANNER OF COLLECTION

The Special Tax will be collected in the same manner and at the same time as ad valorem property taxes, provided, however, that the Administrator or its designee may directly bill the Special Tax and may collect the Special Tax at a different time, such as on a monthly or other periodic basis, or in a different manner, if necessary, to meet the City's financial obligations.

Attachment 1

City of Milpitas
CFD No. 2008-1 (Public Services)
Maximum Annual Special Tax Rates Per Unit

Dwelling Unit Tax Category	**Base Year Special Tax Rate Per Unit FY 2009-2010 [1]**	**Current Year Special Tax Rate Per Unit FY 2020-2021**
Market Rate [1]	$510.00	$698.86
Low Income Residential [2]	$408.00	$559.09
Very Low Income Residential [3]	$255.00	$349.43
Extremely Low Income Residential [4]	0	0

[1] May be increased by the Tax Escalation Factor in each Fiscal Year after the Base Year 2009-2010.

[2] Initially set at 80% of the Market-Rate Maximum Annual Special Tax Rate per Unit. When such Parcel is no longer subject to Affordable Housing status, it will be assigned to the Market Rate Tax Category.

[3] Initially set at 50% of the Market-Rate Maximum Annual Special Tax Rate per Unit. When such Parcel is no longer subject to Affordable Housing status, it will be assigned to the Market Rate Tax Category.

[4] Initially set at 0% of the Market-Rate Maximum Annual Special Tax Rate per Unit. When such Parcel is no longer subject to Affordable Housing status, it will be assigned to the Market Rate Tax Category.

RESOLUTION NO. 2021 - __

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS, CALIFORNIA, ACTING IN ITS CAPACITY AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES) DECLARING THE RESULTS OF A SPECIAL ELECTION IN THAT TERRITORY DESIGNATED AS COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES), ANNEXATION NO. 21 AND ADDING SUCH TERRITORY TO SUCH COMMUNITY FACILITIES DISTRICT

WHEREAS, the City Council of the City of Milpitas, California (the "City Council") has previously undertaken proceedings to create and did establish a Community Facilities District pursuant to the terms and provisions of the "Mello-Roos Community Facilities Act of 1982," being Chapter 2.5, Part 1, Division 2, Title 5 of the Government Code of the State of California (the "Act"). The Community Facilities District has been designated as "Community Facilities District No. 2008-1 (Public Services) (the "District") and such territory proposed to be annexed is referred to as Annexation No. 21 (the "Territory"); and

WHEREAS, the City Council did call for and order to be held an election to submit to the qualified electors of the Territory a proposition relating to the levy of special taxes within the Territory; and

WHEREAS, the City Clerk of the City of Milpitas has caused a ballot to be distributed to the qualified elector of the Territory, has received and canvassed such ballot and made a report to the City Council regarding the results of such canvass, a copy of which is attached as Exhibit "A" hereto and incorporated herein by this reference; and

WHEREAS, at this time said election has been held and the measure voted did receive the favorable 2/3's vote of the qualified electors, and this City Council desires to declare the results of the election in accordance with the provisions and the Elections Code of the State of California and to order that the Territory be added to the District; and

NOW, THEREFORE, THE CITY COUNCIL, ACTING AS THE LEGISLATIVE BODY OF COMMUNITY FACILITIES DISTRICT NO. 2008-1 (PUBLIC SERVICES), DOES HEREBY RESOLVE, DECLARE, FIND, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. **Recitals.** The above recitals are true and correct.

SECTION 2. **Certification.** This City Council hereby receives and approves the Certificate of Election Official and Statement of Votes Cast, as submitted by the City Clerk, acting in her capacity as the Election Official, said Statement setting forth the number of votes cast in the election, the measure voted upon, and the number of votes given for and/or against the measure voted upon. A copy of said Certificate and Statement is attached hereto, marked Exhibit "A", referenced and so incorporated.

SECTION 3. **Minutes**. The City Clerk is hereby directed, pursuant to the provisions of the Elections Code of the State of California, to enter in the minutes the results of the election as set forth in said Statement of Votes Cast.

SECTION 4. **Levy of Special Taxes**. This City Council does hereby determine and declare that the Territory is now added to and becomes a part of the District. The City Council hereby further determines that the City Council is now authorized to levy the special taxes within the Territory as approved and authorized by the qualified electors of the Territory.

SECTION 5. **Effective Date.** This Resolution shall become effective upon its adoption.

ADOPTED by the City Council of the City of Milpitas, California, at a Regular Meeting thereof held this _____ day of June 2021, by the following roll call vote to wit:

AYES:

NOES:

ABSENT:

ATTEST:

_____
Wendy Wood, City Clerk

APPROVED:

_____
Rich Tran, Mayor

APPROVED AS TO FORM:

_____
Christopher J. Diaz, City Attorney

EXHIBIT "A"

CERTIFICATE OF ELECTION OFFICIAL
AND STATEMENT OF VOTES CAST

STATE OF CALIFORNIA)

) ss.

COUNTY OF SANTA CLARA)

The undersigned, ELECTION OFFICIAL OF THE CITY OF MILPITAS, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, DOES HEREBY CERTIFY that pursuant to the provisions of Section 53326 of the Government Code and Division 12, commencing with Section 17000 of the Elections Code of the State of California, I did canvass the returns of the votes cast at the

CITY OF MILPITAS
COMMUNITY FACILITIES DISTRICT NO. 2008-1
(PUBLIC SERVICES)
SPECIAL ELECTION
ANNEXATION NO. 21

held on the election date established for each parcel located within the territory included in Annexation No. 21.

I FURTHER CERTIFY that this Statement of Votes Cast shows the whole number of votes cast in the area proposed to be annexed to Community Facilities District No. 2008-1 for or against the Measure are full, true and correct.

VOTES CAST ON PROPOSITION 1: YES _____

NO: _____

WITNESS my hand this _____ day of _____, 2021.

_____
CITY CLERK
ELECTION OFFICIAL
CITY OF MILPITAS
OF THE STATE OF CALIFORNIA

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Receive a Presentation on the Draft Parks and Recreation Master Plan and provide direction to staff**
Category:	Community Services and Sustainable Infrastructure
Meeting Date:	6/15/2021
Staff Contact:	**Steve Erickson, Engineering Director/City Engineer, 408-586-3301: and Renee Lorentzen, Recreation and Community Services Director, 408-586-3409**
Recommendation:	Receive a Presentation on the Draft Parks and Recreation Master Plan and provide direction to staff

Background:
The City adopted a Parks and Recreation Master Plan in December 2009 that provided an analysis of park conditions and recommended improvements to each of the City's 36 parks and 6 community facilities, and evaluate Recreation and Community Services program, events and services. Due to the age of the Plan, the Council approved funding for the Parks and Recreation Master Plan Update (Project No. 5115) as part of the 2020-2025 Adopted Capital Improvement Program. The project provides funding for the Parks and Recreation Master Plan including analysis of the conditions of City parks, recommendations and estimated costs for park improvements and enhancements as well as recommendations for recreation program fees and cost recovery options.

The firm of Gates & Associates (Gates) along with sub-consultant Matrix Consulting Group (Matrix) was retained in November 2019 to provide the comprehensive Master Plan update including fee assessment and cost recovery recommendations. On March 16, 2021, Gates and Matrix presented the parks and recreation fee assessment and cost recovery policy to Council, which was subsequently adopted. On May 3, 2021, Gates presented the draft Master Plan (**Attachment 1**) to the Parks Recreation Cultural Resource Commission (PRCRC) for review and comment. The PRCRC accepted the document and recommended it be presented to the City Council for adoption.

Analysis:
The Master Plan Update is a long-range planning tool to assist staff with the effective utilization and improvement of park infrastructure, recreation programs and services, and the exploration of future park and recreation development opportunities. The Plan provides an assessment of existing park conditions including regulatory compliance, recommended maintenance and improvements with associated estimated costs, potential funding opportunities, and it addresses recommended future park and programming needs to accommodate growth given the limited parkland within Milpitas.

The draft Master Plan update was developed in collaboration with several City Departments and conforms with policies adopted with the new 2040 General Plan, and will be consistent with the Bike, Pedestrian and Trails Master Plan update and the Metro Specific Plan which are underway.

Community Engagement
Staff completed three rounds of community outreach that consist of in-person events (2), commission meeting presentations (11), virtual townhall meeting presentations (3), Focus Group meetings (4), meetings with Milpitas Unified School District (2), and online surveys (2) to assess the type of park improvements and infrastructure desired by the Milpitas community. These outreach events were publicized on the City's website and social media, recreation and community services customer emails, media press releases, and through eblas

Recreation and Community Center customers. All outreach information was translated into Chinese, Vietnamese, and Spanish. These outreach efforts resulted in receiving more than 1,500 responses and comments on the Plan. Information and data gained from these outreach events assisted Gates in its analysis of the City's existing park infrastructure and recreation programs and formulation of the recommendations contained in the draft Plan.

Recommended Master Plan Goals

In order to develop an integrated Parks and Recreation system that is tailored to the needs and priorities of the Milpitas community, a comprehensive set of goals, standards, and recommendations for parks, recreational programs, events, facilities and services is recommended. The eight goals shown below establish a vision and framework for the allocation of City resources and investment in the City's Parks and Recreation system over the next 20 years:

1. Strategically grow and evolve park and recreation programs to provide comprehensive opportunities and amenities to meet the needs of our diverse community.

2. Create an inclusive park system with recreational programs and events that meet the needs of all residents, especially the most vulnerable and under-served members of the community.

3. Enhance equitable access to the City's parks and recreation system.

4. Enhance community health and wellness by providing places that support social interaction and connection to nature and physical fitness.

5. Reflect the cultural diversity of the Milpitas community through the parks and recreation system.

6. Continue to expand partnerships with other public agencies and private entities to enhance the City's ability to meet community park and recreation needs.

7. Advance management and stewardship of an environmentally resilient park system.

8. Develop and utilize a diverse palette of funding sources to support parks and recreation needs.

9. Offer of a diversity of program and service options for all abilities

Parks System Assessment and Estimated Improvement Cost

Gates has completed an inventory and assessment of the City's 36 parks to evaluate their condition, amenities, recreational uses, accessibility and their overall health. The associated cost of recommended repairs and improvements is categorized in short-term and long-term improvements. It is anticipated that short-term improvements and repairs would be completed within the next 5 years, and long-term improvements would be performed between 5 and 20 years. This process allows staff to prioritize and fund repairs and improvements accordingly **(Attachment 2).**

Overall, the City's park system is in fair condition with 24 parks noted as in good to fair condition, however, 12 parks are in poor to critical condition. The estimated short-term and long-term cost to repair and improve all 36 City parks including the Sports Center facility is $7.96M for short-term repairs to be completed over the next 5 years, and $81.1M for longer term improvements that are recommended to be completed over the next 20 years.

In focusing on just the short-term improvement of the 12 parks noted in critical condition, the estimated cost to repair is $2.8M. For example, Sinnott Park is in critical condition where site furnishings need replacement and exercise equipment and play surfaces are not compliant with current standards. The estimated short-term and long-term repair and improvement cost for Sinnott Park are $374,000 and $6.04M respectively.

Master Plan Park Implementation strategies

In order to provide a range of opportunities and increase the level of services for the City's park system, the following implementation strategies are recommended:

- Explore new funding sources to improve and maintain the City's park infrastructure
- Routinely rebuild and replace existing park facilities in need to repair
- Provide programming and community events to encourage more residents to visit City parks and public spaces
- Improve connections between parks and an integrated network of streets, sidewalks, and trails
- Work with other agencies such as the County, Milpitas Unified School District, the Cities of San Jose and Fremont to provide new shared park and recreation opportunities such as extending the pedestrian trail system
- Expand the park system with privately owned and publicly accessible recreation areas through the development process.

<u>Funding Strategies</u>
Park maintenance and improvement is funded from the City's Park Fund, Transit Area Specific Plan Fee (TASP), the General Fund, and Community Facility District Funds, however these sources are proving to not be sufficient for the perpetual maintenance and improvement of the City's park infrastructure.

The Capital Improvement Program has funded an average of $6M in park repair and improvement projects over the last 5 years. 60% of the funding is from TASP fees for projects within the defined TASP area. Only $2.5M in funding came from the General Fund for parks outside the TASP area. This level of funding is not enough and the finance gap between the cost of the desired level of annual maintenance and improvement versus available funding will continue to grow as park infrastructure ages and the burden of safety mandates increases.

Gates has reviewed the funding gap and has made the following recommendations for ongoing funding sources:

1. Explore increasing the City's Development Impact Fee structure to confirm it reflects the true cost to acquire, develop, and maintain park facilities. Milpitas park in lieu development fees are calculated based on the value of land in the City. In contrast, other cities' park in lieu fees are based on the types of building improvement, number of building units, and number of bedrooms. In comparison with other Cities within Santa Clara County **(Attachment 3)**, the current Milpitas development park in lieu fee is lower than other communities. Milpitas could benefit from increasing its fee to be more in line with that of other communities and it is recommended this be explored further.

2. Explore potential nexus study to broaden use of development impact fees to add amenities and enhance capacity of existing parks throughout City. Currently, development impact fees generated from TASP/Midtown Specific Plan areas are only permitted to be used for park improvements within the Specific Plan areas. However, due to the limited amount of parkland within the specific plan areas, it is estimated that residents will likely visit other parks within Milpitas Thus, development impact fees should be allowed to be used for the improvement of all City's parks.

3. Explore the cost/benefit and community support in creating a special assessment district such as a new City-wide Community Facilities District or an Enhanced Infrastructure Financing District with the purpose of improving and maintaining the City's park system.

4. Explore the cost/benefit and community support in placing a Bond Measure or park related property tax on the ballot to fund park maintenance and improvements.

To alleviate the most pressing rehabilitations and repairs, the Council could allocate ARPA funds or other one-time sources.

Programs and Services
Based on the survey results from over 1,500 community members on the programs, classes and events, Recreation and Community Services are offering many of the program and services of desire in the community. Additional classes, events, program and services will be assessed by staff and evaluated for cost recovery. In cases where additional resources are needed, staff will return to City Council for additional staff and General Fund support.

Next Steps
Following the presentation of the draft Parks Master Plan, staff will incorporate direction received from the Council and will continue with revisions to the draft document. Staff is also completing the review of the draft document for compliance with the State's Environmental/California Environmental Quality Act ("CEQA") review process, and it is anticipated the final Parks and Recreation Master Plan document incorporating directions from the City Council will be brought back to the Council for adoption in Fall, along with the required environmental analysis needed to examine any environmental impacts from the Master Plan..

Fiscal Impact:
There is no fiscal impact associated with receiving this presentation. However, after the adoption of the Master Plan, funding will be required in order to implement the improvements recommended and complete CEQA review.

California Environmental Quality Act:
The City, as lead agency, determined that the Parks and Recreation Master Plan Update is a "project" within the definition of California Environmental Quality Act (CEQA). The consultant is currently preparing a programmatic initial study to support the adoption of a Mitigated Negative Declaration (MND) to comply with the requirement of CEQA. The document will be ready for public hearing in fall 2021 and will be considered by the City Council prior to any adoption of the Master Plan.

Recommendation:
Receive a Presentation on the Draft Parks and Recreation Master Plan and provide direction to staff.

Attachments:
Attachment 1: Draft Parks and Recreation Master Plan Document
Attachment 2: Park Condition Assessment & Cost Estimate
Attachment 3: Development Fee Impact Comparison

Play Milpitas

CITY OF MILPITAS

PARKS & RECREATION DRAFT MASTER PLAN UPDATE

JUNE 2021

Prepared for the City of Milpitas by Gates + Associates with Matrix Consulting Group

City of Milpitas

455 E. Calaveras Blvd.

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ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

WHAT IS THE PARKS AND RECREATION MASTER PLAN?

The Master Plan is a visioning document rather than an implementation plan. It identifies potential policy changes and upgrades and/or enhancement projects that could gradually be implemented to improve the public park and recreation system. The Master Plan identifies potential enhancement projects at the City's 36 public parks; focusing on recommendations that could enhance park and recreation opportunities for Milpitas residents. Not all of these projects can or should be implemented over the coming decade; however, the Master Plan includes prioritization criteria that can help City decision-makers identify projects to include within the annual Capital Improvement Program (CIP) budget.

1. Need for Master Plan Update

The Milpitas community places a high value on it's Park and Recreation system. The City provides a variety of beloved parks and recreation experiences. The Recreation and Communicty Services Department offers a diverse range of classes and programs for youth, adults and 50+ residents. During the pandemic, the department strategically adapted programs to offer on-line opportunities to meet community needs. The department hosts numerous popular, well attended cultural and civic events throughout the year. The department also provides social services support connecting residents with financial aid, health care, caregiving, food resources, housing options, mental health resources, legal services and more.

The General Plan anticipates over the next 20 years the Milpitas population will grow from 80,000 to 113,000 residents. Much of this growth will occur in Specific Plan areas. The majority of the new housing in these areas will be in higher density multi-family neighborhoods. These residents will rely on the park system to address many of the recreation and socialization needs typically accommodated in a suburban backyard. This growth and increasing land values have also limited the opportunities for the City to acquire new park land. Even achieving the reduce park acreage requirement, established in the General Plan for the Specific Plan areas, will be a challenge. Thus, the Park and Recreation Master Plan update identifies strategies to address current recreation need and plan for future growth.

The 2009 Parks and Recreation Plan prioritized the protection and upkeep of the existing park system. It identified a need for over $100 million (in 2009 dollars) to implement the renovations and improvements contemplated in 2009 Master Plan. Based on those recommendations, the City invested $26 million in the park system including improvements to the sports center, a new skate park, and renovations of several neighborhood parks and playgrounds.

2. Community Needs

Many of highest community priorities from in the 2009 Parks and Recreation Master Plan continue to be high priorities in the update:

- acquisition and development of more park land
- renovation and enhancement of existing parks
- enhanced connectivity with a community wide trail system
- new/updated playgrounds

- construction of a large community park
- continuing partnerships with Milpitas Unified School District (MUSD) to provide sports fields

Emerging needs for the community include: demand for cricket pitches, community gardens, amenities to support teen use of parks, better park lighting, reservable picnic facilities, programming of activities in parks and more community events. Creating a park system that is inclusive and welcoming to people of all-abilities, ages and ethnic background is very important to community. There is an urgent need to accommodate girls softball fields displaced by an MUSD field rennovation at Thomas Russell Middle School. This, coupled with the need to accommodate a growing cricket demand, will necessitate the redesign of the Sports Complex, Cardoza Park and Dixon Landing Park.

3. Methodology

The planning process used to update the 2009 Parks and Recreation Master Plan was a sythesis of the following:

- an assessment of the existing parks (deficiencies and future renovation opportunities)
- an assessment of the existing recreation programs and fees
- integration with current General Plan Update, Pedestrian and Bicycle Master Plan and the Metro Specific Planning efforts
- city staff insights and experiences
- community engagement

Public participation was fundamental to the Parks and Recreation Master Plan Update process. The plan incorporated a multi-layered outreach strategy with a variety of input opportunities over the course of the project to gather a range of perspectives that reflect of the needs and desires of the Milpitas community.

Project information, including input opportunities, was distributed frequently over the course of the project through established City communication channels including social media and email blasts. A project web page linked on the City website served as an information portal throughout the process. The outreach process included pop-up events, virtual town halls, virtual focus group meetings, presentations to multiple City commissions and 2 online surveys.

4. Key Policy Recommendations

DEFICIENCY OF PARK LAND

To address this need, the Parks and Recreation Master Plan Update recommends:

- continued partnerships with other public agencies such as MUSD and the County of Santa Clara, in pursuing joint-use agreements. Providing adequate flat acreage for sports fields in collaboration with MUSD will be essential.
- maximizing recreation opportunities, capacity, and experiences in new parks developed in Specific Plan areas emphasizing experience over acreage. Parks should be designed to accommodate physical, social and passive use by residents with a variety of interests, ages, abilities and backgrounds.
- utilizing park in-lieu fees generated by new development to fund the improvements of existing parks, and enhancing recreation capacity and experiences. As existing parks are enhanced, they will become destinations for residents of Specific Plan areas seeking experiences and uses that cannot be accommodated by the limited parkland in Specific Plan areas.

PROGRAM ASSESSMENT AND COST RECOVERY FOR RECREATION PROGRAMS

The Master Plan Update includes an assessment of current recreation programing and a review of peer communities program offerings, user fees and cost recovery policies . Under a separate process, a cost recovery policy was adopted and set an overall goal of 40% cost recovery through user fees for both direct and indirect program cost. For some classes, the marketplace can accommodate a higher cost recovery target, allowing a partial cost underwriting of desired classes and programs with less cost recovery potential. These cost recovery goals will be phased in over the next 5 years. City staff will need to continually monitor programming offerings to efficiently adjust in response to evolving community needs and marketplace demands.

NEED FOR INCREASED PARK FUNDING SOURCES

The Master Plan Update identifies numerous park improvements to address current deficiencies and unmeet community needs and the potential associated costs to implement these improvements. It also provides criteria for prioritizing projects based on level of need, condition of existing facilities, recreation parity between quadrants of the City and other factors. Thus providing a roadmap towards implementation. However numerous proposed park improvement plans have been put on hold due to a lack of funding.

If the cost to implement the proposed park improvements were to be averaged over the next 10 years, the cost in year one would be $8.3 million. Currently, the average CIP budget provided for Parks in the last 5 years averaged $6 million/year; leaving a gap of $2.3 million/year. This gap will grow over time without additional funding sources. While the City continually pursues grants and other funding sources, there is a need to establish a secure, predictable funding stream to allow park improvements projects to proceed in a cost effective and timely manner.

In addition to addressing existing park and recreation needs, the projected growth of the City will require additional parkland and recreation facilities to meet the needs of future residents. Currently this need is addressed by requiring new development to provide parks for their communities funded through impact fees. However, with the cost and shortage of available land in Milpitas, this has been a challenge to implement and will compound existing deficiencies.

In order to secure funding to meet future Milpitas park and recreation needs, the City should consider:

- review of the current Development Impact Fee structure to confirm it reflects the true costs to acquire park land and develop park facilities to meet the needs of future residents. The current fees are lower than other Santa Clara communities. Some cities have park impact fees for an office, rental, individual and institutional uses. The city may wish to explore similar fee structures.
- exploring a potential nexus study to broaden use of Development Impact Fees to add amenities and enhance capacity of existing parks throughout City to meet the needs of new residents.
- exploring benefits and costs as well as potential support for development of special assessment districts (Community Facilities Districts or Enhanced Infrastructure Financing Districts) or a bond measure to fund improvements. An assessment or bond could address funding for much needed improvements to existing community buildings as well.
- clarifying expectations for use of tax measure funds for park improvements.

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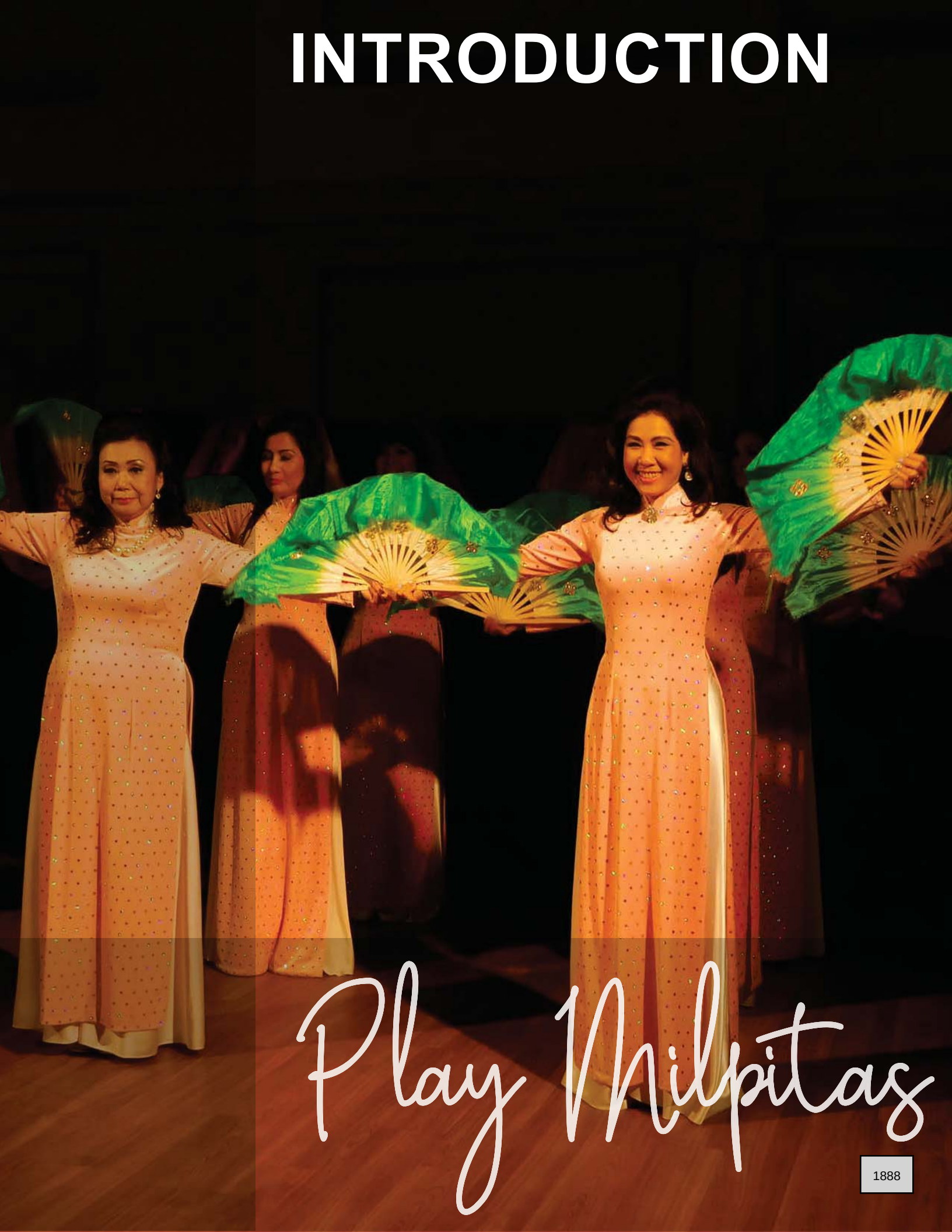
INTRODUCTION



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1

OVERVIEW

This Parks and Recreation Master Plan is intended to provide a road map to guide decision making to help the City maintain, manage and develop the envisioned park and recreation system and provide the community with the recreational opportunities that they desire. The Parks and Recreation Master Plan studies the existing park and recreation system and draws on extensive community engagement to identify a planning blueprint to expand, improve and protect these assets for the future.

PURPOSE OF THE DOCUMENT

The City of Milpitas has undertaken a coordinated planning effort in order to ensure that it provides adequate infrastructure for its current and future residents, visitors and employees. This Parks and Recreation Master Plan is a part of that coordinated effort, and lays out the City's vision for the future of its parks and recreation facilities.

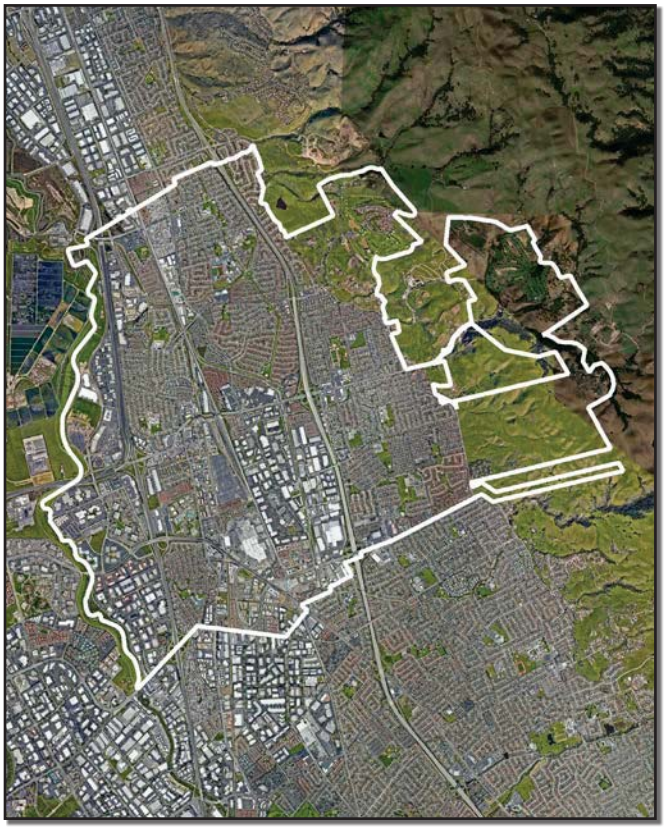
The Parks Master Plan is a strategic document. It studies the existing park system and facilities, and identifies a planning blueprint to expand, improve and protect the City's network of parks and facilities as the City continues to grow.

The Parks Master Plan process is similar to many strategic plan processes: the context is analyzed, demographic analysis is conducted, an inventory of resources is conducted, community input and guidance is solicited, a needs assessment is performed, standards are proposed, goals and recommendations result, and an implementation plan is adopted. This plan builds on itself, section by section, with each chapter using the previous chapter(s) information to define steps required to address issues identified.

The Parks and Recreation Master Plan provides:

- background and context for evaluating the existing parks and recreation system;
- an inventory of existing parks and recreation facilities and programs;
- an analysis of the appropriate standards that will meet the needs of the current and future population;
- recommendations for improving and maintaining the existing parks and recreation system;
- recommendations for acquiring or obtaining access to additional properties for future park uses;
- a strategy for addressing recreation needs, as well as managing and maintaining recreational facilities;
- an approach for implementation of improvements and long term maintenance;
- a record of the community involvement in developing the plan; and
- recommendations to seek additional funding for the Parks and Recreation Master Plan.

The Parks and Recreation Master Plan provides both a long-term vision for the City's park system, and specific policies and standards to direct day-to-day decisions. It sets forth a framework that will allow the City to respond to new opportunities as they arise, and to ensure that new development provides adequate parks and recreation facilities to meet the needs of Milpitas' future residents.



Aerial photo of Milpitas

ROLE OF PARKS & RECREATION

As stated in the City of Milpitas' General Plan 2040, "The Parks, Recreation, and Open Space Element provides the framework to ensure all Milpitas residents, employees, and visitors have a safe, convenient, and equitable access to a diverse range of outdoor activities, naturalized open space areas, and recreational opportunities."

Parks meet the diverse recreational needs of the community. They promote health and wellness at a time when lifestyles are tending to become more sedentary. They help people deal with the stress of daily living, and support positive social interactions. The Recreation and Community Services Department provides programs that focus on health and wellness for everyone.

A high quality park system provides economic benefits. It enhances community character and identity, creating a more attractive place to live, work and visit. This, in turn, raises property values, attracts quality employers, and generates revenues for local businesses.

MILPITAS RECREATION AND COMMUNITY SERVICES

MISSION

The City of Milpitas Recreation and Community Services Department's mission is to enrich our community through exceptional programs and services. Our vision is a Milpitas where all residents have access to excellent, affordable, innovative and well-run recreation activities, programs, facilities and community services. Our work encourages cultural unity and hometown pride, creates a sense of place, supports economic development, promotes health and wellness, fosters human development, addresses important social service needs and adds fun to the lives of those who live and work in Milpitas.

EXECUTIVE SUMMARY

1. Introduction

This chapter gives a brief overview of the purpose and value of the Master Plan process, and a summary of the document.

2. Planning Context

This chapter discusses the role of parks and recreation in a community. It also discusses the factors which influence the vision and priorities addressed in the Master Plan. The chapter describes the physical setting in which the park system is being planned, as well as the demographics of the Milpitas community. It discusses current trends in park use, recreation programming, and attitudes towards parks and recreation. It also reviews the Parks and Recreation Master Plan's relationship to other City planning documents and policies.

3. Recreation

This chapter studies the existing programs, services and events offered by the City of Milpitas. It compares programs and fees currently offered by the City and comparable agencies, and recommends adjustments. It also synthesizes community input regarding the programs, events and services and recommends changes the residents of Milpitas desire.

4. Needs Assessment

This chapter reviews the process used to analyze the Milpitas community's needs and priorities, now and in the future. It describes the extensive community participation in the development of the plan, as well as benchmarking and survey information that informed the Master Plan. It summarizes some of the immediate needs and deficiencies.

5. Goals & Recommendations

This chapter sets out the goals, standards, and recommendations for Milpitas' Parks and Recreation system. It addresses acreage and access standards, sports field and facility standards, and considerations regarding locations and components of future community parks and community serving facilities.

6. Implementation

This chapter includes an approach for assessing City priorities for park and recreation expenditures. It further discusses options for financing park and facility improvements, and summarizes projected park and facilities costs at short, medium and long term ranges.

7. Appendices

- Community Outreach
- Prioritization Matrix
- Program Fee Analysis
- Recreation Value System
- Facility Condition Assessment
- Public Works O&M Costs
- Milpitas Playground Rehabilitation Project
- 90% PS&E Estimate for Sandalwood Park
- 100% PS&E Estimate for Sandalwood Park

PLANNING CONTEXT

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OVERVIEW

To plan a park and recreation system that will best meet the needs of current and future residents of Milpitas, one must understand the context - the climate and physical setting, the current and projected demographics, other planning efforts that affect the Parks and Recreation Master Plan, and the evolving trends in the way people use parks and what they expect from their parks and recreation system.

The City of Milpitas is located in Santa Clara County, and has a population of approximately 85,000 residents. The City has experienced significant growth during the last decade and projects a population of 99,000 by 2040. Milpitas is committed to the strategic and financially sustainable development of the city, and this Master Plan Update will assist the Department of Recreation and Community Services and Public Works in achieving health and wellness for the Milpitas community.

SETTING

The City developed on the flat plain between the Mission Hills to the east and bay lands to the west. The Mission Hills and Monument Peak (elevation 2,594 feet) form a distinctive scenic backdrop to the city and are important to community identity and character. The community enjoys extensive hillside views of the foothills and the tree-lined Coyote Creek corridor which provide Milpitas with a scenic backdrop and visual reference points.

Milpitas is often called the "Crossroads of Silicon Valley" with most of its land situated between two major freeways (I-880 and I-680), State Route 237, and a County expressway. Milpitas' location affords residents, visitors and employers convenient access to all parts of Silicon Valley and the San Francisco areas.

Milpitas features a variety of housing options, quality schools and conveniently-located neighborhood parks. The City provides a variety of recreational opportunities, including aquatics, cultural arts and theater, sports leagues and activities, youth programming and senior activities and services.

Based on the recommendations of the 2009 Parks and Recreation Master Plan, in the ensuing 10 years the City invested over $26 million in park system improvements. The City undertook a number of major renovation projects including:

- **Milpitas Sports Complex** – pool rehab, new synthetic fields, locker room upgrades, lighting and bleacher improvements
- **Higuera Adobe Park**
- **Pinewood Park**
- **Alviso Adobe Park and Building**
- **Creighton Park** - including dog play area
- **Cardoza Park Playground**
- **Calle Oriente Park and Playground**
- **Milpitas Skate Park** - including concession and restroom building
- **Sandalwood Park** – in design process

During this time period, the City also completed a number of smaller renovation projects including:

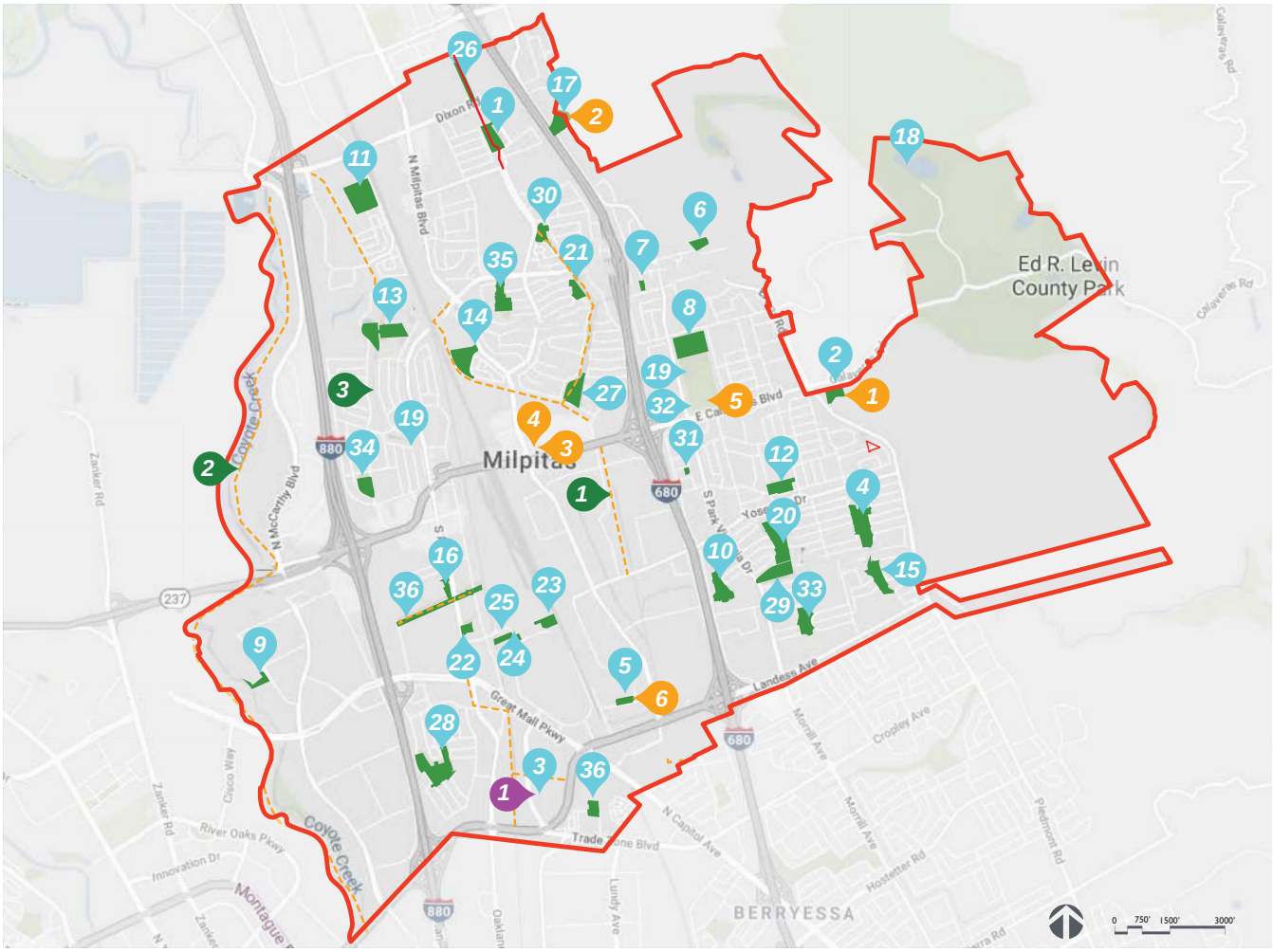
- **Sunnyhills Albert Augustine Park**
- **Peter Gill Memorial Park Sports Court**
- **Foothill Park**
- **Robert E Browne Park** - path and court resurface, ball wall
- **Dixon Landing Park** - lawn
- **Milpitas Park** – pathways
- Repairs and renovations to citywide parks and playgrounds

PROJECT HERITAGE

Milpitas is a unique community with a distinctive history. Several key factors that have shaped Milpitas over the years have a direct bearing on the recommendations contained within this Parks and Recreation Master Plan. Historically, most of the City's parks were created in a relatively compressed time period during the 1960s and 1970s as part of a subdivision developments boom. As a result, many of the parks were similar in design, appearance, and range of amenities offered.

The City park system currently consists of over 36 parks, several miles of trails, and six community service buildings. Many of the parks are 30 to 40 years old, and suffer from declining infrastructure. Over the past decade, the City has undertaken a process to strategically update these parks.

MILPITAS PARKS AND FACILITIES MAP



PARKS

1. Sunnyhills Albert Augustine Memorial Park
2. Alviso Adobe Park
3. Augustus Rathbone Park
4. Ben Rodgers Park
5. Bob Mcguire Park
6. Calaveras Ridge Open Space
7. Calle Oriente Mini-Park
8. Cardoza Park (Tom)
9. Cerano Park
10. Creighton Park (Frederick)
11. Dixon Landing Park
12. Foothill Park
13. Hall Memorial Park
14. Hidden Lake Park
15. Hillcrest Park
16. John McDermott Park
17. Jose Higuera Adobe Park
18. Milpitas Dog Park
19. Milpitas Sports Center
20. Murphy Park
21. Oliver W. Jones Memorial Park
22. O'Toole Elms Park (John)
23. Parc Metro East
24. Parc Metro Middle
25. Parc Metro West
26. Pecot Park (Bob)
27. Peter Gill Memorial Park
28. Pinewood Park
29. Robert E Browne Park
30. Sandalwood Park
31. Selwyn Park
32. Skate Park
33. Sinnott Park (John)
34. Starlite Park
35. Strickroth Park (Henry)
36. Tom Evatt Park

FACILITIES

1. Alviso Adobe
2. Higuera Adobe
3. Milpitas Community Center
4. Barbara Lee Senior Center
5. Milpitas Sports Center
6. Sal Cracolice

FUTURE PARKS

1. McCandless Park
   Midtown Park
   Transit Area Parks

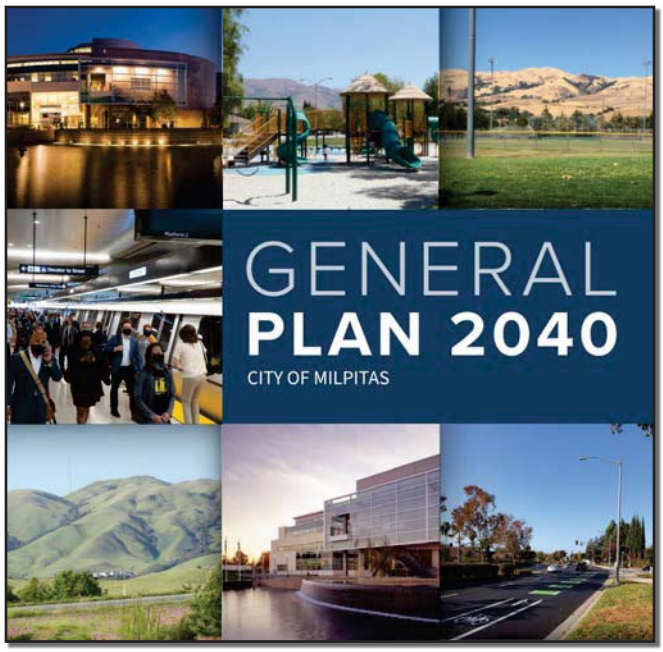
TRAILS

1. Berryessa Creek
2. Coyote Creek
3. Penitencia Creek

Figure 2-1: Existing City Parks and Facilities

Additionally, Milpitas has experienced a recent surge in residential building activity in recent years, with a considerable increase in residential permit applications, development entitlements, and new construction. In large part, these changes have been brought on by the adoption of two specific plans for areas adjacent to an existing VTA station and the City's planned BART station. The increased development made possible by these specific plans has prompted the conversion of areas once dominated by vacant and underutilized land and aging industrial space into high-density transit-oriented development. Part of this new development includes a strategy and funding to provide additional parkland for the new residents.

Historically, the majority of Milpitas residents lived in single family detached homes served by local neighborhood parks. The 2018 DeNova Report on existing conditions prepared for General Plan update, identifies over 8,000 new multi-family homes under construction or pending approvals. The majority of these units are proposed for Metro Specific Plan Area (formerly TASP) with another 500 are in the Midtown Specific Plan Area.



The General Plan update is proposing some land use modifications that will require additional park amenities in specific portions of the City, including:

Milpitas Metro Specific Plan *(formerly Transit Area Specific Plan (TASP))* - The plan envisions 30 acres of trails, parking and open space, of which __ acres have been constructed. An update to the plan is currently underway to allow changes to densities and boundaries in some areas.

Calaveras Gateway / Main Street Specific Plan *(formerly Midtown Specific Plan)* – The update to this specific plan may impact park land demand.

California Circle – A future specific plan for this transition area may include residential development in a mixed use format, with a priority placed on affordable housing. This plan will need to include a parks and trail system consistent with parkland standards for new facilities.

Milpitas Town Center – The General Plan's recommended policies to add new multi-family residential and mixed use will require new park land.

Sunnyhills Commercial Center - This may include limited amounts of new residential uses, and associated park facility demand.

Calaveras & North Park Neighborhood Node - This may include limited amounts of new residential uses, and associated park facility demand.

Landless Neighborhood Node - This may include limited amounts of new residential uses, and associated park facility demand.

In addition to the General Plan, the City is currently updating the Trails and Bicycle / Pedestrian Master Plan. This Master Plan will explore options to provide

greater opportunities for non-motorized access to parks.

PLANNING CONTEXT

This Parks and Recreation Master Plan will create a road map for the development of Milpitas parks and recreation programs for the next 20 years. The Master Plan must be compatible with the City's existing plans and coordinated with concurrent planning efforts as described in this section.

GENERAL PLAN 2040

A stated goal of the General Plan update is to provide a diversified and high quality public park and trail system that provides recreational opportunities for all residents.

The General Plan recognizes the need for additional parks and sports fields to accommodate the projected growth. Based on 2016 US Census data, the population of Milpitas was approximately 77,528. With 156.6 acres of parkland, the City provides 2.02 acres of parkland for every 1,000 people. The Association of Bay Area Governments projects the population of Milpitas will reach 97,295 by 2035 with 1.61 acres per 1,000 residents, well below the General Plan's PROS Policy 1-3 that states the City shall achieve a ratio of 5 acres of parkland for every 1,000 residents outside of the Specific Plan areas.

Several Action items are listed in the General Plan to close that gap. PROS-1f and PROS-1g call for coordination and cooperation between the City of Milpitas and Santa Clara County Parks, Santa Clara Water District, and the San Francisco Public Utilities Commission to develop and enhance parks, trails, and related infrastructure to maximize available park land for residents' use. PROS 1-4 calls for park land acreage dedication and/or in-lieu fees in areas both within and outside of Specific Plan areas. PROS 1-6 encourages private owners to permit public access to all provided parks, trails and recreation facilities.

The General Plan lists 36 public parks located with Milpitas. The existing parks listed in Figure 2-1 and described more fully in Chapter 5 (Goals and Recommendations), have been updated to reflect current conditions and characteristics, some of which have changed since the adoption of the General Plan. In addition to City parks, Santa Clara County Parks provides Milpitas residents with access to Ed Levin Park. There is also an active Joint Use Agreement between the City of Milpitas and the Milpitas Unified School District that allows the mutual use of facilities at reduced rental rates.

Applicable Policies and Tasks in the General Plan 2040:

Public Spaces and Public Art

- **Goal CD-9:** Enhance the quality and character of Milpitas' public spaces to provide safe, comfortable, and enjoyable passive and active recreation opportunities for all users.
- **Policy CD 9-1:** Promote vibrant, publicly-accessible spaces that encourage gathering and other active uses. Provide adequate shading though shade structures or trees and incorporate formal and informal seating to encourage both short-term and long-term use of public spaces. Place a variety of uses adjacent to public spaces at sufficient concentrations to encourage the use of the spaces throughout the day and night.
- **Policy CD 9-2:** Provide for community and neighborhood activity centers at appropriate locations that create recreational opportunities, encourage social interaction, and provide a sense of public space and centers for neighborhood gathering.
- **Policy CD 9-3:** Encourage the incorporation of

publicly accessible spaces, such as plazas and pocket parks, into new and existing commercial, multi-family, and mixed-use developments to encourage social interaction. The spaces should be appropriately scaled and programmed and complement the characteristics of the district and/or neighborhood and the surrounding development.

- **Policy CD 9-6:** When development is proposed adjacent to existing or planned park chains, include frontage roads along the public park in the development in order to maximize access to park lands, to provide separation between urban land uses and parkland without the use of "back-up" design, and to maximize public exposure and view of park lands for scenic and security purposes. Also, encourage development to provide common open space contiguous to such areas.

Park and Trail System

- **Goal PROS-1:** Provide a diversified and high quality public park and trail system that provides recreational opportunities for all residents.
- **PROS 1-1:** Provide a park and recreation system that is equitably distributed, safe, accessible, and designed to serve the needs of all residents of the community.
- **PROS 1-2:** Develop and maintain a high-quality system of parks, trails, and recreation facilities to create diverse opportunities for passive and organized recreation.
- **PROS 1-3:** Achieve and maintain a minimum overall citywide ratio of 5 acres of park land for every 1,000 residents outside of the City's adopted Specific Plan Areas. Within adopted Specific Plan Areas, achieve and maintain the parks standard and ratios specified in the Specific Plan, with an emphasis on publicly-accessible spaces and facilities.
- **PROS 1-4:** Parkland acreage dedications and/or equivalent in-lieu fees shall be required for new development in accordance with the following standards:

  1. For areas outside of a Specific Plan, require land dedication or in lieu fees equivalent to the 5 acres/1,000 residents standard, but allow credit for private recreation space for up to 2 acres/1,000 residents for private open space. Private recreation credit will be given at the discretion of the City and pursuant to the criteria specified in the City's Subdivision Regulations (Title XI, Chapter 1, Section 9.08 of the Milpitas Municipal Code).

  2. For areas within a Specific Plan, require land dedication or in-lieu fees equivalent to the parkland standard established in the relevant Specific Plan, allowing credit for private recreation space for up to 1.5 acres/1,000 residents for private recreation space. Private recreation credit will be given at the discretion of the City and pursuant to the criteria specified in the City's Subdivision Regulations (Title XI, Chapter 1, Section 9.08 of the Milpitas Municipal Code).

- **PROS 1-5:** Encourage the provision and dedication of parkland within future development projects, rather than the payment of in-lieu fees, in order to ensure that the City maintains an extensive network of neighborhood parks that serve all areas of the community.
- **PROS 1-6:** Encourage private owners to permit public access to all private parks, trails, and recreation facilities to the greatest extent feasible.
- **PROS 1-7:** Design parks to enhance public safety by providing visibility of all areas both to and from the street, adequate lighting, and access for public safety responders.
- **PROS 1-8:** Expand, renovate, and maintain high quality recreation facilities, programs, and services to accommodate existing and future needs; encourage traditional and non-traditional recreation; and support active and passive recreation, wellness, historic assets, cultural arts, environmental education, conservation, accessibility, inclusion, diversity, safety, and new technology that equitably serves the most

vulnerable populations of the community.

- **PROS 1-9:** Prioritize funding and City resources to improve the condition, maintenance, and upkeep of existing City parks and recreational facilities.
- **PROS 1-10:** Require publicly-accessible parks and recreational facilities that are owned and operated by homeowner's associations (HOAs) and special assessment districts to be maintained in a safe and aesthetically-pleasing manner.
- **PROS 1-11:** Pursue opportunities for cooperation and partnerships with other agencies to develop and enhance publicly-accessible trails and linear parks along local drainages, creeks, and utility corridors.
- **PROS 1-12:** Encourage and support the expansion of an integrated trail network that connects users to neighboring local and regional trail systems and to community amenities such as schools, open space areas, park and recreation facilities, commercial and job centers and residential areas to encourage both recreational and utilitarian travel.
- **PROS 1-13:** Require new development to provide direct pedestrian connections, such as sidewalks, trails, way-finding measures and other rights-of-way and infrastructure improvements to the existing and planned network of parks and trails wherever feasible.
- **PROS 1-14:** Further expand public access to a variety of park and recreational facilities through the pursuit of joint use agreements with entities and organizations that control existing non-city owned open space lands, such as public and private schools, Santa Clara Valley Water District, Santa Clara County and other public agencies, private entities and businesses and nonprofit groups.
- **PROS 1-15:** Design and maintain park and recreation facilities to minimize water, energy and chemical (e.g., pesticides and fertilizer) use. Incorporate the use of recycled water, native and/or drought-resistant vegetation and ground cover where appropriate. Pursue opportunities for multi-beneficial park developments that incorporate flood control facilities, stormwater management and groundwater recharge areas.
- **PROS 1-16:** Recognize the importance of regional facilities and continue to foster relationships with Santa Clara County, the San Francisco Bay Trail, and neighboring jurisdictions to identify opportunities for additional trail connections.

Recreational Opportunities

- **Goal PROS-2:** Provide recreational opportunities that meet the needs of all residents, especially the most vulnerable and under-served members of the community.
- **PROS 2-1:** Emphasize and prioritize public outreach and educational programs that inform the community of available parks, trails, and recreation facilities, programs, and services available in order to increase and enhance community use of these facilities, programs, and services.
- **PROS 2-2:** Emphasize and prioritize public participation and workshops when developing new park facilities, and/or substantially renovating existing parks, trails, and other recreation facilities. Provide diverse outreach resources that enable close collaboration with a variety of members of the community in the design, and programming, of parks and recreation facilities to ensure that these facilities meet community needs.
- **PROS 2-3:** Ensure that the City continues to offer a wide range of programs to serve diverse populations of all ages, abilities, income levels and cultural backgrounds. Develop programs, activities, and facilities that appeal to a broad audience, including but not limited to youth, young adults, seniors and those of varying ethnicities, backgrounds, and abilities.
- **PROS 2-4:** Support recreational activities, events, organized sports leagues, and other programs that serve broad segments of the community.
- **PROS 2-5:** Encourage the development of private/

commercial recreation facilities that are open to the public to help meet existing and future recreational demands.

- **PROS 2-6:** Pursue partnerships with organizations to enhance public-private partnerships that support youth and senior recreational programs.
- **PROS 2-7:** Consider Community Development Block Grant (CDBG) funds from the Department of Housing and Urban Development (HUD) to fund park and recreational facility upgrades. CDBG upgrades should prioritize low and moderate income areas, and under-served areas within the city.

Open Spaces

- **Goal PROS-3:** Ensure the provision and preservation of diverse and accessible open spaces throughout the planning area.
- **PROS 3-1:** The General Plan land use designations of Permanent Open Space (POS), Hillside Very Low Density (HVL), and Waterways (WW) shall be considered open space. Additionally, lands designated as Public Facilities which are zoned Parks and Open Space shall also be considered open space as defined by this General Plan.
- **PROS 3-2:** Preserve open space for conservation, as well as active and passive recreation uses. Prohibit any land designated on the General Plan Land Use Map as Parks and Open Space (POS) from being re-designated for any other land use unless the proposed re-designation of that land is first approved by a two-thirds vote of the voters of Milpitas at a general or special municipal election.
- **PROS 3-3:** The construction of any residential, commercial or industrial buildings or structures on any land designated on the General Plan Land Use Map as Parks and Open Space (POS) shall be prohibited, unless the proposed construction is first approved by a two-thirds vote of the voters of Milpitas at a general or special municipal election. Undeveloped land that is designated for urban uses by the General Plan Land Use Map is not considered open space and may be developed consistent with the Land Use Map.
- **PROS 3-4:** Where feasible, integrate open space, drainage and stream corridors with trails and other recreational open space amenities in an environmentally sustainable manner.
- **PROS 3-5:** Recognize and demonstrate through policy and practice that urban open space and hillside open space are essential to maintaining a high quality of life within the Milpitas Planning Area. Future planning decisions shall seek to preserve and maintain open space resources to the greatest extent feasible, as these resources are irretrievable.
- **PROS 3-6:** Support regional and local preservation plans and policies that retain and protect open space within the Milpitas Planning Area.
- **PROS 3-7:** Encourage public and private efforts to preserve open space.
- **PROS 3-8:** Encourage innovative open space and recreational amenities within urban activity centers including green roofs, rooftop parks and gardens, and support public access to these amenities.
- **PROS 3-9:** Encourage clustered development that preserves a sense of openness, particularly in areas adjacent to open spaces and scenic resources.

OTHER PLANNING EFFORTS

The City has, is currenlty, or will be undertaking several planning level efforts in conjunction with this Parks and Recreation Master Plan. Coordination between these different efforts is necessary to provide comprehensive and complete planning documents for the City to implement in the coming years.

Milpitas Metro Specific Plan *(formerly Transit Area Specific Plan (TASP))* - The plan envisions 30 acres of trails, parking and open space, of which __ acres have been constructed. An update to the plan is currently underway to allow changes to densities and boundaries in some areas.

Calaveras Gateway / Main Street Specific Plan *(formerly Midtown Specific Plan)* – A future update to this specific plan may impact park land demand.

California Circle – A future specific plan for this transition area may include residential development in a mixed use format, with a priority placed on affordable housing. This plan will need to include a parks and trail system consistent with parkland standards for new facilities.

Bicycle/Pedestrian & Trails Master Plan – Currrently underway, these plans will provide the City with a vision and action plan to make it safer and more convenient to walk, bike, and roll in Milpitas.

Milpitas Tree Management Plan – Developed with a focus on the short and long-term maintenance needs of all inventoried trees within the City limits, this completed report addressess the economic, environmental and social benefits that trees provide to the City of Milpitas.

Climate Action Plan and Qualified Greenhouse Gas Reduction Strategy – Adopted in May 2013, this plan is designed to streamline environmental review of future development projects in the City of Milpitas consistent with the California Environmental Quality Act (CEQA). This plan identifies a strategy, reduction measures, and implementation strategies the City will use to achieve the state-recommended green house gas emission reduction target.

FACILITY AND PARK CLASSIFICATIONS

Existing Parks

Existing parks and recreation facilities are summarized in Figure 2-1. It includes approximately 201 acres of developed City parkland and 1,544 acres of Ed Levin Park, part of which is within City limits. Definitions of the General Plan park classifications follow.

City-Owned Parkland

- **Community Parks:** Community Parks typically contain regulation-size ball fields and courts, space for informal games and activities, picnic and gathering areas, children's play areas, and parking. The only existing community park, the 24.4 acre Sports Center, serves as a special-use facility because it contains sport fields and facilities.
- **Neighborhood Parks:** Neighborhood parks in the City fall into two categories: typical walk-to parks that serve the immediate neighborhood, providing open space for informal play; and parks containing a community-use facility, such as a regulation size, prepared ball field. In addition to serving the immediate neighborhood, the latter category also draws people from the larger community, some of whom may drive to the facility. The City's current inventory includes 43.3 acres of neighborhood parks.
- **Special-Use Parks:** This category includes mini-parks, creek trails, flood retention areas, Community Garden, Senior Center, Rancho Milpitas Middle School Ball Field and Community / Civic Center. A total of 15 acres of the City's inventory consists of special-use parks. Additional linear parks through the creek trail system will be developed within the Midtown and Transit Specific Plan areas with future residential development.
- **Urban Parks:** Urban parks are small facilities, generally less than one acre in size, which accommodate the daily recreation or passive needs of nearby residents. They typically can include children's play areas, sitting areas and limited green space but are not large enough to contain sports fields.
- **Linear Parks:** Linear parks are narrow corridors of land that have been developed primarily as a trail system. Linear parks may also include other small scale facilities such as picnic tables and benches. Milpitas has taken advantage of the Hetch-Hetchy right-of-ways for development of a linear park system.

Non-City-Owned Parks and Recreation Resources

- **Regional Parks:** Regional parks are generally larger than 100 acres in size and serve the entire city or the region. While regional parks can provide for varying degrees of recreation activity, a portion of the park is generally maintained in a rustic setting for passive recreation use. While a number of regional parks serve Milpitas residents, the Planning Area includes only one such facility, the Ed Levin County Park.
- **Private Recreation Facilities:** Besides parks and recreation facilities, private recreation facilities in the Planning Area include: private fitness clubs, aquatic facilities, indoor sports gyms (badminton, multi-sport), and golf courses. Newly developed residential communities contain private recreational facilities and amenities such as pools, community rooms and playgrounds.
- **Joint-Use Facilities:** The City has a joint use agreement with the MUSD that allows mutual use of facilities at a reduced rental rate, as well as a joint use agreement for a future MUSD School and City Park in the TASP area for mutual use of basketball courts, a sports field and parking lot.

DEMOGRAPHICS

HOUSEHOLD COMPOSITION

Milpitas has many large households. The City's average household size in 2017 was 3.35 persons per household, higher than both Santa Clara County and the Bay Area. The City's household composition is weighted towards family households with children. However the construction of new multi-family residential units has resulted in smaller households or households with no children moving into the City in recent years, a trend that is likely to continue.

AGE DISTRIBUTION

The population in Milpitas has aged in recent years as baby boomers reach retirement. Between 2000 and 2020, the number of residents in Milpitas over the age of 55 more than doubled. However, new multi-family development may result in a greater number of young families as well as senior adults using the Milpitas park system.

RACE/ETHNICITY

Milpitas has become a racially and ethnically diverse community. Between 2000 – 2020 the ethnic composition of Milpitas changed significantly. The proportion of residents of Asian descent grew to more than 65%, while the percent of non- Hispanic white residents fell to less than 12%. The City is home to a large community of Filipino and Vietnamese residents. The share of Latino population has also increased.

RECREATION TRENDS

PUBLIC HEALTH AND WELLNESS

The general plan recognizes "the places where people live, work and play profoundly shape the health of a community." The Plan also notes that among other factors, accessible park safety provides a framework for a healthy community and the development of spaces by addressing public health and wellness. The Milpitas General Plan Update acknowledges the profound effects of the lack of access to public spaces, and lack of opportunities for recreation and physical activity on community health and well-being.

Planning decisions play a role in determining community members' behavioral and lifestyle choices that ultimately impact their physical health and mental well-being. The quality, safety, location, and convenience of

the pedestrian or bicycle environment may impact a resident's decision to use them, which in turn influences physical activity levels. Similarly, neighborhood parks and open space provide an avenue for increased physical activity.

RECONNECTING WITH NATURE

Country-wide, there is a movement to reconnect with nature and the outdoors. This is a response to the recent COVID pandemic as well as the decreased time people spend outdoors compared to previous generations. The negative physical and mental health impacts are many and well-documented. People of all ages are voicing their concerns about the ill effects of a sedentary lifestyle, screen time, and lack of exploratory, unstructured outdoor activities. Public health organizations and parks and recreation departments are working to reverse these negative impacts.

LET'S GET CONNECTED

Californians spend more recreation time outside on trail-related activities such as walking, hiking, biking and running than the rest of the country. The desire for these trails to be interconnected to parks and recreation centers is at an all time high.

KEY COMMNITY HEALTH AND WELLNESS INDICATORS

	Santa Clara County Residents	California Residents
Children (ages 5-11) active every day for at least 1 hour	14.9%	23.9%
Teens active every day for at least 1 hour	7.0%	11.5%
Teens who volunteered/did community service in the past year	48.8%	46.0%

Table 2-1: Community Health and Wellness Indicators
Source: General Plan 2040, City of Milpitas

ACTIVE AGING POPULATION

Baby boomer and millennial generations are the largest population segments driving outdoor recreation trends. As people live longer and in multi-generational housing, the population we call 'seniors' includes multiple generations, that are less interested in typical 'senior center' activities. Instead, they are seeking leisure activities for older adults or multi-generational parks and programs that they can enjoy with their younger family members.

GET ONLINE

With Milpitas' proximity to San Francisco and Silicon Valley, technology and tech culture have a large impact on the City's residents and working populations. People want to be able to connect to Wi-Fi in parks or connect to an interactive workout program or have the opportunity to take their work outside.

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RECREATION

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3

OVERVIEW

The following is a summary of the recreation programs and services provided by the Department of Recreation and Community Services. Recreation plays a valuable part in the health and wellness of a community. This chapter takes a deeper dive into the specific recreational programs currently being offered, their fees related to peer agencies, and events and social services offered to the residents and non-residents of Milpitas.

PROGRAMS

OVERVIEW

The City of Milpitas, as part of the Parks and Recreation Master Planning effort, is evaluating the structure of recreation fees currently charged by the City to support recreation programming activities. The following section summarizes observations and recommendations related to the fees charged by the City for various recreation programming activities. At the present time, recreation programming is limited by the existing facilities and programming spaces available to the City.

The City of Milpitas Recreation and Community Services Department offers a wide variety of program in the following areas: Senior Services, Youth Programs, Special Events, Performing Arts, General Classes, Aquatics, and Sports & Fitness. In general, it provides a holistic approach to courses and attempts to meet the diverse and unique needs of the City's residents. This review of programs compared Milpitas to four similar agencies, where population and program offerings were most similar.

COMPARATIVE ASSESSMENT OF COURSE/PROGRAM FEES

City of Milpitas fees for selected programs and services (generally offered by multiple similar agencies) were compared to those charged by comparative agencies. Figure 3-1 below summarizes the findings of this effort for Fremont and San Jose - the two primary comparables to the City of Milpitas. As shown, the fees charged for the majority of programs are below the average charged by San Jose and Fremont indicating some ability for the City to adjust some select fees and still remain competitive in the public sector market. Detailed tables and graphs for each program and service surveyed are provided in Appendix C and show how the City of Milpitas compares to the entire set of agencies selected: Fremont, Mountain View, Redwood City, and San Jose.

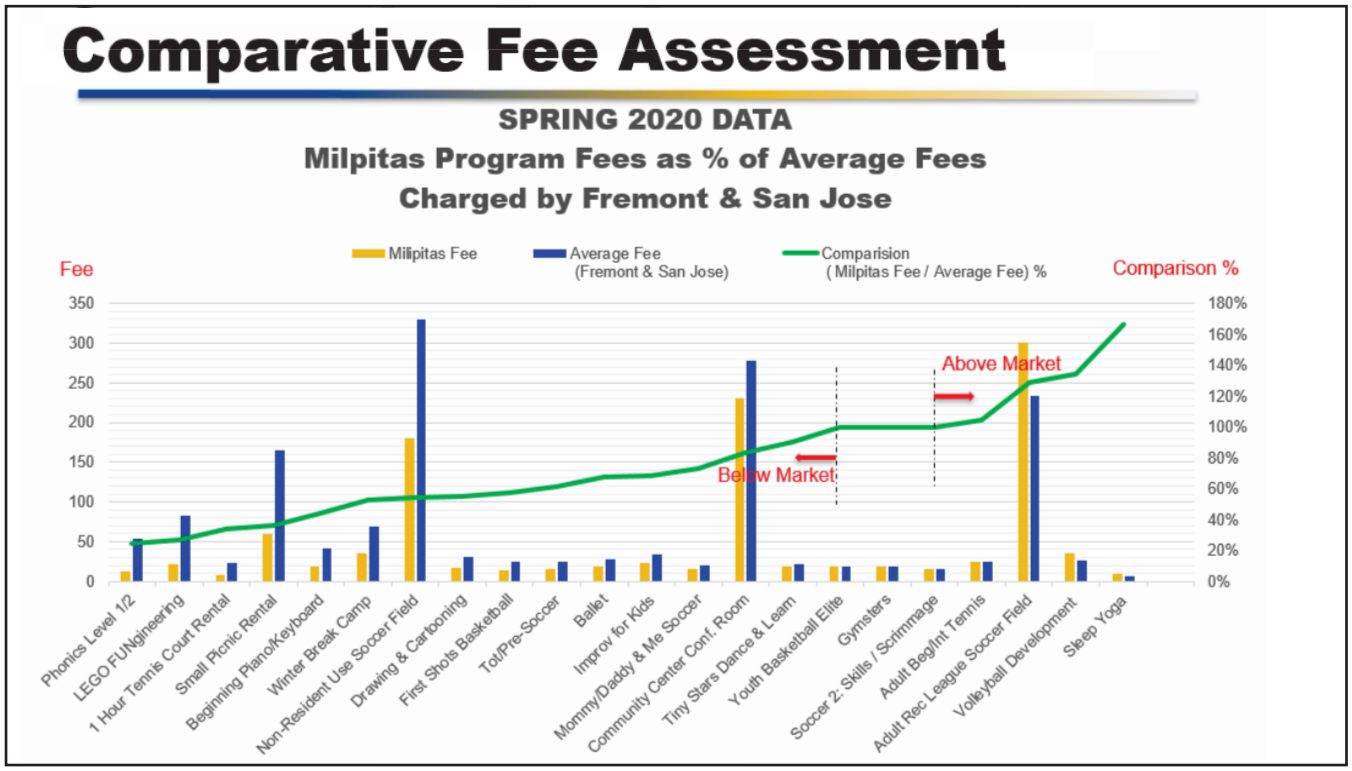


Figure 3-1: Milpitas Program and Rental Fees Compared to Average Fees Charged by Fremont & San Jose

Local Market Fee Comparison

In addition to comparing fees to other communities, a small sample of programs and services were compared to local providers within the City of Milpitas to conduct a "reasonableness" test against costs for similar programs conducted by the private sector. While it is difficult to develop a completely equitable comparison between the City's services and those of other providers due to differences in facilities and gym offerings, this information provides at least an approach to gauging whether or not fees are aligning with market conditions.

In general, this analysis supports the conclusion that the City is charging appropriate fees for programs but may have some capacity to increase rental rates for meeting and banquet facilities if desired.

The specific programs and services were identified in consultation with City staff and then outreach conducted to the providers to ascertain the costs they were charging for the similar services. The results are shown in the following table.

BANQUET HALLS AND MEETING ROOMS	
Service Provider	**Fee Amount**
India Community Center	$3,500 per day weekdays and $8,000 per day weekends - includes 10 hours per day with set up, tables, chairs, and linens included. Anything else is extra.
Spring Valley Golf Course	Indoor facility for 165 people. Patio seating for a total of 300 guests. Room rental fee of $500 which is waived if total cost is over $7,500. Required minimum $4,300 in food and beverage, not including service charge of 17% or applicable taxes.
School District	76 person community meeting room at Mattos Elementary School is $95 per hour or $1,520 per day.
Summit Pointe Golf Club	150 person inside and 50 outside banquet room/patio. Includes full banquet staff, buffet menu, set up/clean up, tables and chairs, coffee, water, and tea. 4 hour minimum. 15-59 people $800. 60-119 people $1,200. 120-200 people $1,800. $200 per hour after initial 4. $100 cleaning
GYM MEMBERSHIP	
Service Provider	**Fee Amount**
India Community Center	$10 initiation. $45/monthly or $449 annually. Family $69 monthly or $699 annually. Student $29 or $299. Senior $15-25 month or $160-$249 annually (basic or full access membership difference).
India Community Center	Adult join $90/Monthly $73. Senior 90/66. Youth 45/37. Family (max) 165/161.
Fitness 19 Milpitas	Monthly rates from $10-30 depending on access to features. 1-year commitment required.
Milpitas Star Aquatics	$40 annual maintenance fee. Gym $50 sign up and $20 monthly (first person, $15 second person and $10 each third+). Gym and pool membership is $50 sign up and $40 monthly. $30 second person and 3rd+ each $20 per month. 25 yard heated 7 lane pool for laps. 20 yard heated shallow pool for family swim.
City of Milpitas	Sports Center Unlimited Membership of $60/monthly or $480/year with reduced rates for seniors of $235/year.

Table 3-1: Milpitas Public & Private Recreation Service Providers and Associated Fees

While services and offerings between these facilities are not entirely consistent, the cost comparison does indicate that the City is in line with the rates being charged by other local service providers.

When considering additional programs or expanded programming, the following local market information may be useful in ensuring that the rates charged by the City are in alignment with fees in the local market.

YOGA	
Service Provider	**Fee Amount**
Bikram Yoga	1 year / $1,200
Worlds Yoga	$25 initiation. Yearly - $79/mo. 6 months $89/mp. 3 months $99/mo. Drop in $20. Class package 5=$75. 10=$130. 20=$240. 30=$330.
PROGRAMMING / EVENTS / TUTORING	
Service Provider	**Fee Amount**
Christ Community Church	$10 initiation. $45/monthly or $449 annually. Family $69 monthly or $699 annually. Student $29 or $299. Senior $15-25 month or $160-$249 annually (basic or full access membership difference).
Kumon Math	Adult join $90/Monthly $73. Senior 90/66. Youth 45/37. Family (max) 165/161.
The Tutoring Center	Monthly rates from $10-30 depending on access to features. 1-year commitment required.
PEL Learning Center, Inc.	$40 annual maintenance fee. Gym $50 sign up and $20 monthly (first person, $15 second person and $10 each third+). Gym and pool membership is $50 sign up and $40 monthly. $30 second person and 3rd+ each $20 per month. 25 yard heated 7 lane pool for laps. 20 yard heated shallow pool for family swim.
Science Nature Labs at Pump It Up	Sports Center Unlimited Membership of $60/monthly or $480/year with reduced rates for seniors of $235/year.
KidzToPros	Introducing to “Python Programming”. Grades 6-8. June 15-19 from 9 am – 3 pm. $595. Computer programming skills held at Curtner Elementary School.
KidzToPros	Digital Arts Camp. Grades 6-8. June 29 – July 3. 9 am – 3 pm. $595. Students learn how to use a graphics tablet with a digital pen, transforming their creative ideas with digital effects held at Curtner Elementary School.

Table 3-1 (cont.): Milpitas Public & Private Recreation Service Providers and Associated Fees

EVALUATION OF PROGRAMS OFFERED

A comprehensive assessment was made of the programs offered by the City of Milpitas’ Department of Recreation and Community Services against those offered by comparative municipalities. For the purposes of the fee and program offering assessment, the following communities were utilized as comparatives: Fremont, Mountain View, Redwood City and San Jose.

Table 3-2 on the following pages shows a summary of the most frequently offered classes that other communities provide that are not currently provided by the City of Milpitas. This listing shows only those programs where two or more of the comparable entities provide the class. A detailed listing is provided in Appendix C that shows the entire comparison and highlights classes that only one other entity offered.

This information is useful, as one tool, to evaluate new potential courses or programs that the City of Milpitas should consider in the future.

RECREATION CLASSES (FROM FALL & WINTER 2019 ACTIVITY GUIDE)	Fremont	Mountain View	Redwood City	San Jose
Chess Beginner (ages 5-13)	$99 1 day/wk 1 hr class, 7 classes	Not Offered	$231 1 day/wk 1.33 hr class, 9 classes	Not Offered
Chess Advanced (ages 6-8, 9-11)	$99 1 day/wk 1 hr class, 7 classes	Not Offered		Not Offered
Math Olympiad (ages 6-8, 9-11)	$449 1 day/wk 2.25 hr class, 9	Not Offered	$180 1 day/wk 1 hr class 4 classes	Not Offered
Children's Little Theater (ages 4-6)	$189 1 day/wk 1 hr class, 9 classes	$170 Res/$213 NR 1 day/wk .75 hr class 5 classes	$330 1 day/wk 1.5 hr class 8 classes	Not Offered
Young Rembrandts: FUNdamental Drawing (ages 4-6)	$129 1 day/wk 1 hr class, 6 classes	Not Offered	Not Offered	$118 1 day/wk 1 hr class, 6 classes
Adult Ballet (ages 16+)	$139 1 day/wk 1 hr class, 10 classes	Not Offered	$199 1 day/wk 1 hr class, 11 classes	Not Offered
Adult Beginning Tap (ages 16+)	$139 1 day/wk 1 hr class, 10 classes	Not Offered	$78 1 day/wk 1 hr class, 6 classes	Not Offered
Zumba Dance Fusion (ages 18+)	$69 1 day/wk .67 hr class 6 classes	Not Offered	$126 1 day/wk 1 hr class, 10 classes	$43 Res/$47 NR 1 day/wk, 1 hr class 6 classes
Beginner Belly Dancing (ages 18+)	Not Offered	$198 Res/$248 NR 1 day/wk 1 hr class 12 classes	$62 1 day/wk 1 hr class, 10 classes	Not Offered
Karate for Kids (ages 7-12)	$109 1 day/wk .5 hr class 10 classes	$135 Res/$169 NR .83 hr class 7 classes	$98 2 day/wk .92 hr class 7 classes	Not Offered
Tae Kwon Do (ages 5-19)	Not Offered	$125 Res/$157 NR 2 days/wk 1.5 hr class 24 classes	$162 2 day/wk 1 hr class 12 classes	Not Offered
Guitar (ages 6-16)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk, .83 hr class 13 classes	Not Offered	$154 +$10 material fee 1 day/wk, .75 hr class 6 classes
Adult Guitar (ages 17+)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk .83 hr class 12 classes	Not Offered	$154 +$10 material fee 1 day/wk .75 hr 7 classes
Ukulele for Fun! (ages 4+)	$175 1 day/wk .75 hr class 6 classes	Not Offered	$25 1 day/wk 2 hr class, 1 class	$154 +$10 material fee 1 day/wk, .75 hr class 6 classes
Violin Study (ages 4+)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk .83 hr class 12 classes	Not Offered	Not Offered
Skateboarding Lessons - Beginning Level (ages 6-12)	$169 1 day/wk .75 hr class 4 classes	Not Offered	$131 1 day/wk 1 hr class, 5 classes	$171 Res/$175 NR 1 day/wk, 2.5 hr class 6 classes
Skateboarding Lessons - Intermediate Level (ages 6-12)	$169 1 day/wk .75 hr class 4 classes	Not Offered	$131 1 day/wk 1 hr class 5 classes	$171 Res/$175 NR 1 day/wk, 2.5 hr class 6 classes
Tennis: Red Ball (ages 5-6, 7-8)	$79 1 day/wk 1 hr class, 5 classes	Not Offered	$92 1 day/wk .67 hr class, 6 classes	$125 1 day/wk 1 hr class, 6 classes

Table 3-2: Classes Offered by Peer Communities, but Not Currently Offered by City of Milpitas

RECREATION CLASSES (FROM FALL & WINTER 2019 ACTIVITY GUIDE)	Fremont	Mountain View	Redwood City	San Jose
Tennis: Orange Ball (ages 9-10)	$79 1 day/wk 1 hr class, 5 classes	Not Offered	$92 1 day/wk .67 hr class, 6 classes	$125 1 day/wk 1 hr class 6 classes
Tennis: Fremont Tennis Academy (ages 11-17)	$79 1 day/wk 1 hr class, 5 classes	Not Offered	$92 1 day/wk .67 hr class, 6 classes	Not Offered
Tennis: Adults Beginner (ages 18+)	$75 1 day/wk 1 hr class, 5 classes	Not Offered	$92 1 day/wk 1 hr class, 6 classes	Not Offered
Tennis: Adults intermediate (ages 18+)	$75 1 day/wk 1 hr class, 5 classes	Not Offered	$92 1 day/wk 1 hr class, 6 classes	Not Offered

Table 3-2 (cont.): Classes Offered by Peer Communities, but Not Currently Offered by City of Milpitas

There are multiple opportunities, based on demand for classes seen in other communities, to explore the addition of new programs within the City of Milpitas' portfolio of classes. Additional opportunities are likely to be identified as part of the larger Parks and Recreation Master Planning process once information becomes available from ongoing community input, and arising from recommended park and facility improvements.

RECOMMENDED FEE ADJUSTMENTS

Based upon the comparative assessment, it is recommended that fees for the City's recreation programs be adjusted to match the average of the comparable programs unless there is specific information available that warrants maintaining a fee below market rate. At the present time the project team is not aware of any specific data that would warrant charging a below market rate. The detailed program assessment is included in Appendix C. For programs where market adjustments are not required, the City of Milpitas should consider implementing fee increases to cover cost of living increases to ensure that annual internal cost increases (personnel, contractual, utilities, etc.) do not impact the cost recovery of the Department.

Based upon the market assessment, the following table summarizes the types of market adjustments that are warranted based upon the comparative assessment. Where no change is recommended for market adjustment, the City may still consider a small cost of living adjustment to account for increased operating costs year over year attributable to internal cost increases.

PROGRAM	ADJUSTMENT
Sleep Yoga	Increase from $10/class to $14/class
Phonics Level 1/2	Increase from $13/class to $25/class
Soccer 2: Skills and Scrimmage	Increase from $15/class to $16/class
Drawing & Cartooning	Increase from $17/class to $19/class

Table 3-3: Recommended Program and Rental Fee Adjustments

PROGRAM	ADJUSTMENT
Beginning Piano/Keyboard Lessons	Increase from $18/class to $30/class
Non-resident use of Soccer Field with Lights for 2 hour rental	Increase from $180 to $200
Line Dancing	Increase from $2/class to $3/class
Lego FUNGineering	Increase from $22/class to $40/class
Improv for Kids	Increase from $23/class to $40/class
Resident use of gymnasium for 3 hours - peak hours	Increase from $260 to $400
Winter Break Camp	Increase from $4/hour to $9/hour
Small Picnic rental for Residents (<50, Saturday)	Increase from $60 to $90
Non-primetime 1 hour Adult Resident Tennis Court Rental	Increase from $8 to $15
Mommy/Daddy & Me Soccer Class	No Change
Ballet Level 1	No Change
Youth Basketball Elite	No Change
Tai Chi Fitness 2	No Change
Sports Center Drop in Sports Class	No Change
Tot/Pre Soccer	No Change
Tiny Stars Dance & Learn	No Change
Tap & Ballet Combo Level 1	No Change
Hip Hop & Break Dance	No Change
Gymsters	No Change
Satellites Tennis	No Change
Volleyball Developments Clinic	No Change
Adult Use/Int Tennis	No Change
Adult Use, Artificial Turf (2 hour rental)	No Change
Community Center Conference Room	No Change

Table 3-3 (cont.): Recommended Program and Rental Fee Adjustments

PROGRAM ASSESSMENT FINDINGS

The assessment showed that of the programs reviewed, 55% warranted no change in fees based solely upon market competitiveness. The remaining 45% had market adjustments recommended with some being very minor but some being significantly below the market rate. At a minimum, a cost of living adjustment should be applied to each program to address internal cost increases year over year.

COMMUNITY INPUT

As part of the community outreach for the Master Plan, the public was asked to provide input regarding the programs offered through the Community and Recreation Department. Questions were asked regarding the time of classes and programs offered, variety of programs offered and frequency of programs offered. Based on the responses, the top desires of the community in regards to programs are as follows:

General

- Offer more weekend classes (Saturday and Sunday)
- Offer more evening classes (after 6pm)
- Offer more lunch time classes (noon-1pm)
- Continue to offer fee-based programs online and offer them at a lesser cost than in-person programs
- Ensure that access to programs and their content is equitable to users of all abilities
- Explore partnering with outside groups to offer inclusive classes and/or assistance for people with different ability levels
- Explore partnering with outside groups to provide additional inclusivity training for instructors in order to meet the needs of all students/participants

Online Fee-Based Programs

- Adult fitness, adult enrichment and youth enrichment programs were the most requested.

Adults

- Expand adult class offerings: fitness, health and wellness, enrichment, urban farming/gardening, art classes, and dance classes
- Expand the times adults classes are offered (evenings and weekends)

Seniors

- Expand senior program offerings: health and wellness, enrichment classes, field trips

Teens Ages 13-17 Years

- Provide additional sports programming and enrichment classes
- Offer programming for teens ages 13-17 at more locations throughout the city and at more times

Youth Ages 10-12 Years

- Provide additional sports programming and art classes for youth ages 10-12
- Offer programming for youth ages 10-12 at more locations throughout the city and at more times

Youth Ages 5-9 Years

- Expand the times youth programs are offered
- Provide additional sports programs, art classes and enrichment classes

Youth Ages 18 Mos - 4 Years

- Expand the times youth programs are offered
- Offer additional pre-school and enrichment classes
- Expand the times programs are offered
- Offer classes at a lower cost

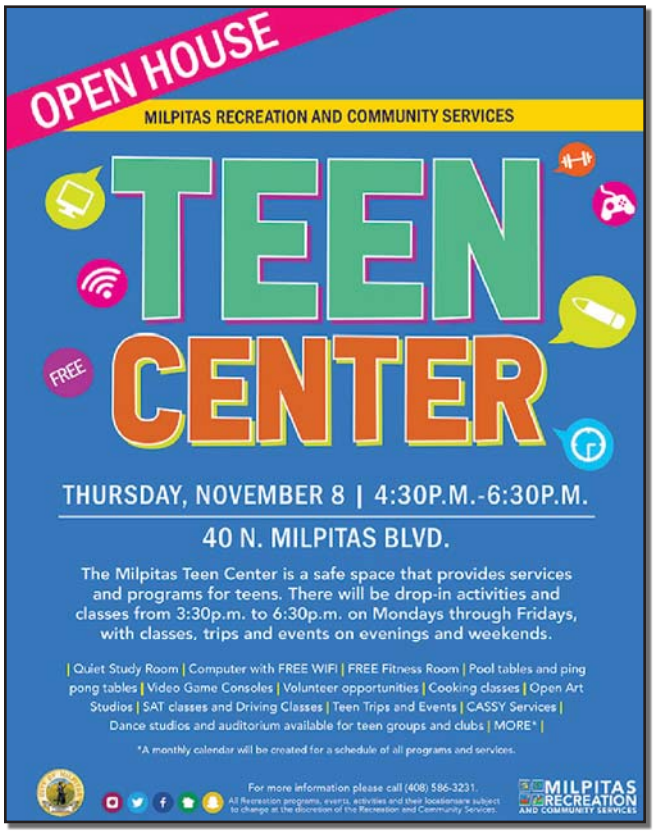
Indoor Sports

- Identified as a high priority for the community
- Dedicated yoga studio, additional ping pong/table tennis, cricket pitch and basketball courts were the most requested

KEY FINDINGS

The key findings from the program and fee assessment include:

- Fee adjustments should be made to bring select fees in the City of Milpitas in line with the identified market rates charged by comparable communities
- Where market data is not available, the City should implement at least a cost of living adjustment over current rates to cover internal cost increases (personnel, contractual, utility and other costs) to prevent cost recovery from being impacted by the annual increases.
- Continue to explore the expansion of recreation programs based upon community input and successful programming provided by other comparable communities' recreation departments.
- The City should seek to selectively increase those fees where they are below market the coming year, implement annual escalators for future years, and conduct a more comprehensive fee assessment that links fees to actual costs of providing service in the future.
- Post COVID, there is a desire to continue expanded online program offerings.



COST RECOVERY

On March 16, 2021 the Milpitas City Council adopted a Resolution approving a Cost Recovery Policy for the Recreation and Community Services Department. The adopted policy provides the following measures:

- Establishment of cost recovery targets for Recreation and Community Service Department programs
- Proposal to structure fees based on total costs instead of only direct costs.
- Recommendation to group programs into three categories with different cost recovery targets
- Recommendation to achieve an average of a 40% total cost recovery for recreation programs and services

EVENTS

OVERVIEW

The City of Milpitas Recreation and Community Services Department offers a wide variety of events throughout the year that are open to the public. The City is committed to providing high quality events year round, and understands the importance of events in maintaining civic pride and stewardship.

The community was polled in regards to the type and frequency of events, in the following categories:

- Events that support local businesses (e.g. art walk)
- Family focused events (e.g. pumpkins in the park, family game night)
- Holiday events (e.g. tree lighting)
- Health and wellness events (e.g. bike to work day, 5k run or walk)
- Large city-wide event (e.g. 4th of July fireworks)
- Events that generate revenue for the City (e.g. sponsorships)
- Performances (e.g. community theater, band concert)
- Events that celebrate diversity (e.g. Lunar New Year, LGBTQ+Pride)
- Events for special interest groups (e.g. car shows)

COMMUNITY INPUT

As part of the community outreach for the Master Plan, the public was asked to provide input regarding the events hosted by the Department of Recreation and Community Services. The focus of the outreach was to identify the event types offered as well as access to those events. The key priorities from the community include:

- Increase advertisement of City-hosted events. Often residents were not aware of an event or when/where it was being hosted
- Offer smaller events within community or neighborhood parks to foster neighborhood connections
- Provide more transparency regarding accessibility of event for users of all abilities
- Events that support local businesses, family-focused events and holiday events are the highest priority events
- Explore hosting more events that appeal to teens and seniors

SUMMARY

Events are an important aspect of the Department of Recreation and Community Services. The programs currently being offered, and offered in the past, are well attended and loved by the community. As the City of Milpitas grows in size and diversity, it will be important to explore additional events and ways to serve this new and growing population. Access and accessibility to events will continue to be a priority.

COMMUNITY SERVICES

OVERVIEW

The City of Milpitas Recreation and Community Services Department has numerous programs and facilities that serve community members in the following special populations:

- Seniors
- At risk teens
- People with physical disabilities
- People with developmental disabilities
- People with mental illness
- People whose primary language is not English
- People who are low or very low income

COMMUNITY INPUT

Residents were asked to provide input regarding these services and any unmet needs. Key ideas from the community include:

- Provide signs and other forms of community awareness of inclusion in parks, facilities and at events
- Diversity in play options for all abilities
- Opportunities for teens and seniors to participate in programs together
- Explore expanded hours for the teen center
- Explore an ally support program where children and teens are trained to support those groups that are marginalized
- Collaboration with local Police, Fire and special populations to build trust

- Explore additional training opportunities for City staff and program teachers so that special populations feel more welcome at events and in classes
- Explore partnerships with private groups that would allow for inclusive design and development within parks

SUMMARY

Inclusion is the emerging theme from the outreach efforts. The City should explore ways to ensure all populations are and feel welcome at events and in classes, and that any unmet needs are being addressed through community service programs.

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NEEDS ASSESSMENT

Play Milpitas

1922

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OVERVIEW

The City of Milpitas' Department of Recreation and Community Services oversees planning, implementation and programming Milpitas' 210+ acres of park land, recreation facilities, programs and events. With significant input and participation from City staff, an engaged and informed community, Council and commissions, the needs of the community were identified.

The following is a summary of the community engagement efforts, peer community comparisons and needs and deficiencies analysis for this Parks and Recreation Master Plan Update.

COMMUNITY OUTREACH

METHODOLOGY

The community engagement efforts were organized into three rounds, each with an overarching goal.

ROUND 1: What is the vision for our recreation programs and parks?

ROUND 2: Confirm, clarify and prioritize.

ROUND 3: What are our priorities?

The first two rounds used a combination of in-person and virtual events and an online survey. In March 2020, all in-person events were transitioned to virtual platforms in light of Covid-19. Online surveys were available to supplement the outreach events and gather additional community insights on the existing parks and recreation facilities. All project communication and marketing material were available in English, Spanish, Chinese and Vietnamese. Over 1,400 community members provided input through the various means of outreach.

OUTREACH ADVERTISEMENT

Print and digital methods were used to increase awareness of the Master Plan process and events. The project team also advertised a paid youth internship, successfully recruiting 5 teens. In addition to the project website, online surveys and all outreach events and updates were communicated through the following channels:

MEDIA

City Website

City Social Media *(Facebook, Twitter, Instagram, NextDoor)*

Mailing Lists *(e.g. Bike/Pedestrian)*

City Park & Recreation Activity Guide

COUNCIL

Milpitas City Council

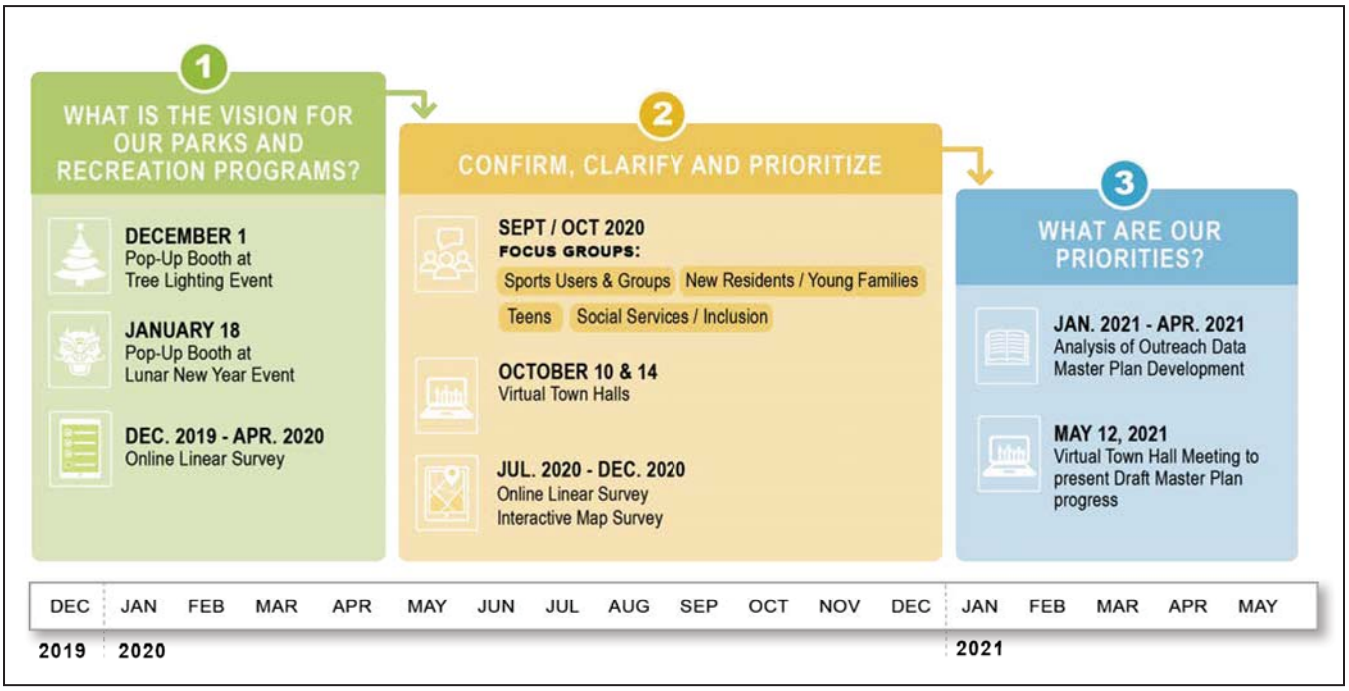


Figure 4-1: Outreach schedule

COMMISSIONS

Arts
Community Advisory
Economic Development & Trade
Energy & Environmental Sustainability
Library & Education Advisory
Parks, Recreation & Cultural Resources
Planning
Public Safety & Emergency Preparedness
Science, Technology & Innovation
Senior Advisory
Veterans
Youth Advisory

ROUND 1 ENGAGEMENT

The goal of the first round of engagement was to get a broad sense of the community's vision for their parks and recreation system, including what they liked about the existing amenities and what they wanted to see addressed in regards to future park improvements and recreational programming. Input opportunities during the initial round included:

- **Online Survey -** available Dec. 2019 to April 2020
- **Tree Lighting Event Booth** – December 1, 2019
- **Lunar New Year Event Booth**– January 18, 2020

The online survey generated 203 responses. The two in-person events featured interactive dot boards where participants were encouraged to vote for their top preferences and priorities regarding park-specific amenities and future improvements, as well as write comments and suggestions directly onto the boards. Adults and children were given different types of dots so their responses could be tallied separately.

These three events collected input from 700+ unique participants who provided comments and expressed desires that began to develop initial feedback themes, which are illustrated on the following page.

2019-2020
Youth Internship

The Details:
Work with your local community to plan the future of Parks and Recreation in the City of Milpitas!

- Paid internship that helps shape your City
- Bilingual candidates encouraged for translation services
- Evening and weekend availability required
- Work alongside community engagement professionals

Duties may include:

- Surveying users in the parks
- Assisting at community meetings
- Photography for social media

Submit a Milpitas Parks Plan Application:
https://forms.ci.milpitas.ca.gov/forms/view.php?id=21581
Under "Volunteer Assignment Preference", list: Master Plan Intern

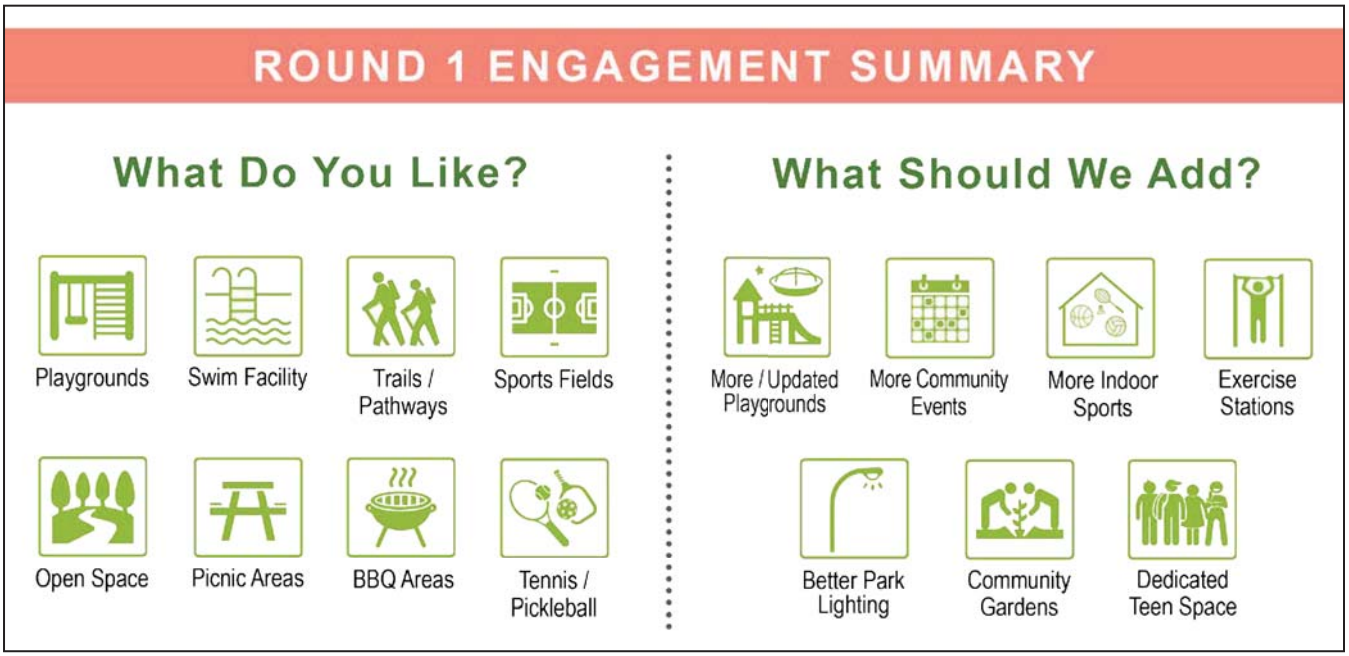
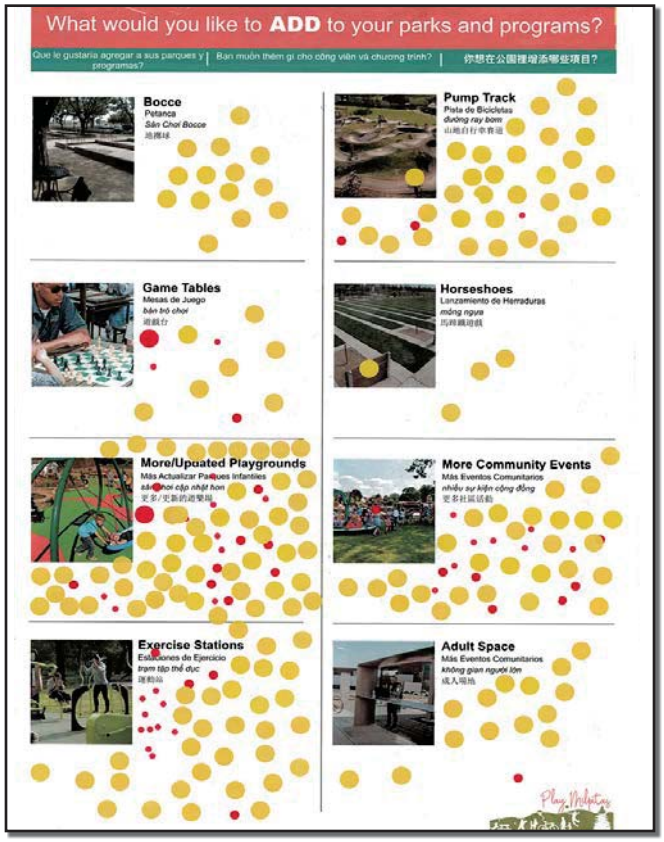


Figure 4-2: Round 1 Community Engagement Summary



ROUND 2 ENGAGEMENT

The next round of engagement sought to build upon, clarify and prioritize the themes that emerged from the initial round. From July 2020 to January 2021, this round included a mix of virtual workshops and input opportunities:

- **Online Linear Survey & Interactive Map** - available July 2020 - Dec. 2020
- **Focus Groups:**
  - **Sports Users & Groups** – Sept. 24, 2020
  - **Teens** – Sept. 24, 2020
  - **New Residents** – Oct. 1, 2020
  - **Social Services/Inclusion** – Oct. 19, 2020
- **(2) Virtual Town Halls** - Oct. 10 & 14, 2020

Focus Groups

Each of the four focus groups was comprised of between 10 and 25 participants, and allowed the project team to educate the community about the Master Plan process, provide a space for people to ask questions and share opinions about the City's parks and programming. These more intimate venues allowed for organic conversation, community brainstorming and opportunities for park-specific feedback from the groups who know the facilities best. These firsthand insights helped the project team develop a clearer understanding of both barriers to various groups using and enjoying the parks, as well as learn about the unique needs and desires of groups across a range of age groups, life stages, special needs, and interests. The project team worked with the City to recruit participants for each focus group.

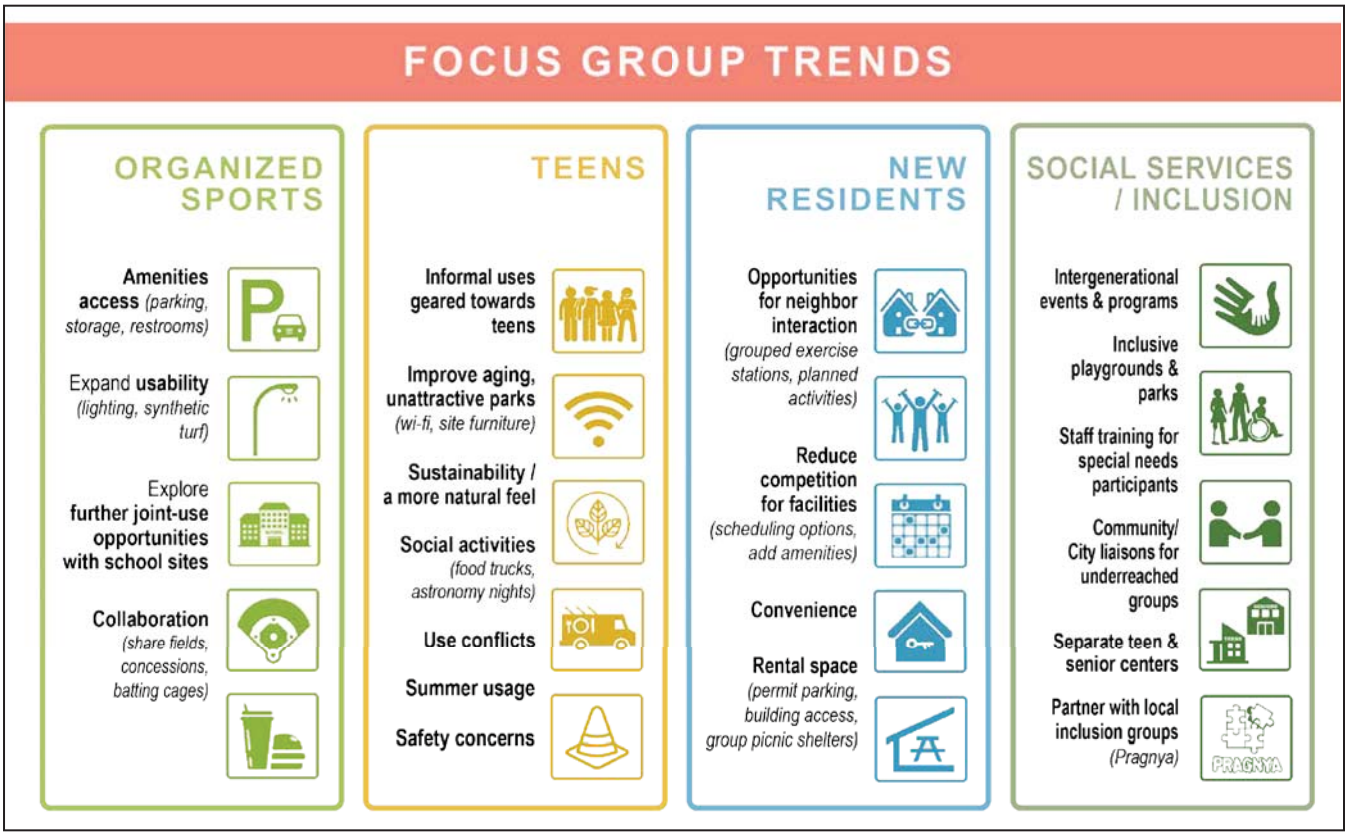


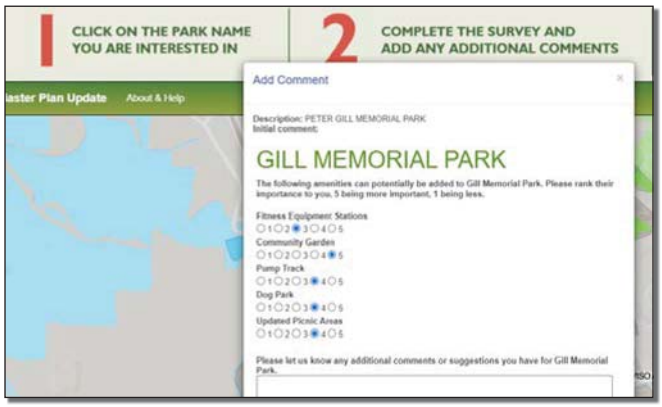
Figure 4-3: Focus Group Trends

Virtual Town Halls

Two virtual town hall meetings were held on October 10 & 14, 2020 via Zoom webinar. The interactive meetings combined had 40 participants and included a presentation summarizing the efforts-to-date, polling questions with realtime voting, and a Q&A session. Trends in feedback revealed a growth in and interest in cricket, desires for inclusive playgrounds/amenities in parks, recreational classes offered on evenings and weekends, and connectivity to other parks and trails.

Online Survey & Interactive Map

An online survey and interactive map were available from July 2020 to December 2020. Community members were able to leave park-specific comments via a WikiMapping interface, and included input from 740 unique participants.



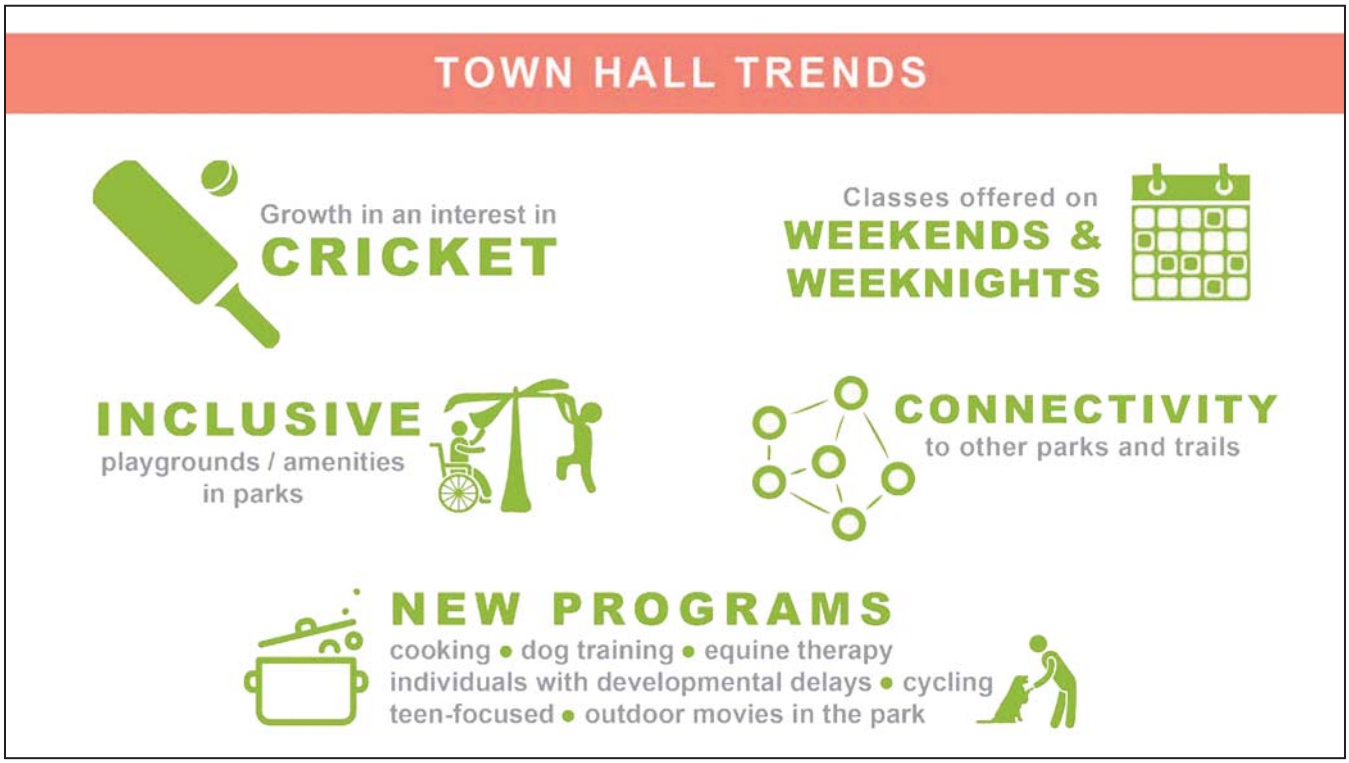


Figure 4-4: Town Hall Trends

ROUD 3 ENGAGEMENT - COMMUNITY PRIORITIES

Through all public engagement opportunities during the Master Plan process, Milpitas residents indicated they have a high level of satisfaction with the City parks and recreation programs, level of maintenance and community events. Feedback also indicates that people regularly use parks, facilities, and recreation programs, especially those close to their homes. They value the proximity of parks and typically get there by foot or bike. They use parks for relaxing outdoors, playing with kids, and for community events.

While satisfaction with existing services is high, the community has strong interest in further enhancing parks and recreation services. Community priorities that emerged from the public engagement process include:

- **Spaces and Programs for All -** Community members prioritize inclusiveness, so that people of all ages, genders, abilities and recreation interests can find a place in parks, recreation facilities and programs.
- **Access to Nature -** In keeping with national trends, residents would like additional opportunities to connect with nature in City parks.
- **More amenities -** Community members would like more exercise stations, cricket pitches, teen game areas, community gardens, reservable picnic areas and dog parks.
- **Safety -** The community identified a need for enhanced safety through lighting, natural surveillance and safe routes.
- **Community Events -** Residents appreciate the availability of events and activities and would like to continue and expand on these. (Food trucks, outdoor performance space, yoga in park, etc.)
- **Expanded Programming** - Community members would like an expansion in available programs.
- **Aesthetics** - There is an interest in upgrading parks (especially playground and site furnishings) and in integrating local character and identity.
- **Sustainability** - The community values sustainability and would like the park system to demonstrate environmental stewardship and sustainable design and operations.

These priorities were utilized to develop the goals and recommendations for Milpitas' parks and recreation facilities, detailed in the following chapter. Along with an overview of the Draft Master Plan Update, they were presented for public discussion at a Virtual Town Hall Meeting on May 12, 2021, which included 55 registrants.

BENCHMARKING

PARKS AND FACILITIES

Gates + Associates conducted a comparative analysis of the City of Milpitas' parks and facilities with those of four other comparable cities in the region. The cities were chosen based on similarity in population, income level, size and demographics. Each city's Director of Parks and Recreation, or their assignee, were asked to complete an online questionnaire regarding their parks and facilities. The responses were used to establish a benchmark for the City of Milpitas.

The benchmarking process provides insights into how the City of Milpitas compares to other peer municipalities. The benchmarking data from peer communities regarding parks and facilities can be used to measure how well Milpitas provides these amenities to their community, to establish goals for improvement, and to develop action plans.

Figure 4-5 Location of Benchmark Cities (MAP)

BENCHMARK COMMUNITIES

The cities of Cupertino, Dublin, Mountain View and Redwood City were identified as peer communities. These cites have similar characteristics to Milpitas, as shown in Table 4-1. All demographic data is from the US Census 2019 population estimates and the 2019 5-Year Estimates Program unless otherwise stated.

Although their populations are in a similar range, Milpitas and Dublin have been growing at a much higher rate, with population increasing by approximately 41% in Dublin and 26% in Milpitas between April 2010 and July 2019, while the other cities growth rates have been under 12%. Milpitas is in the mid range of the peer cities in terms of population density, indicating the importance of planning for and designating future park space as the city continues to grow.

Age ranges in these cities are also similar, with one-fifth to one-quarter of their populations under the age of 18, and roughly one-tenth to one-eighth of their populations 65 years and older. Providing for the needs of multiple age groups from youth to seniors are important elements of each city's parks and recreation needs.

All of these cities are ethnically and culturally diverse. Milpitas and Cupertino have majority Asian populations, although those groups are comprised of a wide range of ethnicities. In all of the cities, over 45% (67% in Milpitas) speak a language other than English at home. These factors highlight the importance of comprehensive outreach to the community to ensure that differing interests and needs are understood and addressed.

The peer communities have similar temperate climates, with average temperatures ranging from 50 to 70 degrees, making parks important and usable amenities throughout the year.

Each of these cities strive to provide a range of opportunities for parks, recreation facilities and programs for their residents, workers and visitors. All partner with their school districts to program and operate sports facilities and/or parks. The priorities, services, and operations of each park and recreation department reflect the values and priorities of the community they serve and the direction established by their elected officials.

As an additional source of comparison in some instances, reference is made to the National Recreation and Park Association (NRPA) 2020 Agency Performance Review. The NRPA report compiles and analyzes information gathered from 1,053 park and recreation agencies across the country. The NRPA figures cited in this chapter pertain only to cities with populations of 50,000 to 99,999 residents.

MILPITAS	Population	84,196
	% under 18	22.01%
	% 65 and over	12%
	Median household income	$125,165
	Land area	13.59
	Population per square mile	4,914
	County	Santa Clara County
CUPERTINO	Population	59,276
	% under 18	26.30%
	% 65 and over	13.90%
	Median household income	$163,945
	Land area	11.26
	Population per square mile	5,180
	County	Santa Clara County
DUBLIN	Population	64,826
	% under 18	26.10%
	% 65 and over	8.70%
	Median household income	$144,564
	Land area	14.91
	Population per square mile	3,088
	County	Alameda County

Table 4-1: Benchmark Communities (cont. on next page)

Sources: California Department of Finance January 1, 2020 Population Estimate; US Census 2019 Population Estimates; US Census 2019 5-Year American Community Survey

MOUNTAIN VIEW	Population	82,739
	% under 18	19.70%
	% 65 and over	10.80%
	Median household income	$128,252
	Land area	12.00
	Population per square mile	6,175
	County	Santa Clara County
REDWOOD CITY	Population	85,925
	% under 18	22.20%
	% 65 and over	12.40%
	Median household income	$107,469
	Land area	19.42
	Population per square mile	3,955
	County	Santa Clara County

Table 4-1 (cont.): Benchmark Communities

Sources: California Department of Finance January 1, 2020 Population Estimate; US Census 2019 Population Estimates; US Census 2019 5-Year American Community Survey

PARKS AND OPEN SPACE

Table 4-2 below shows the number of active use parks and the acres of developed parkland in each city. For a more representative comparison, the acreage per 1,000 residents is shown, calculated based on the data from the California Department of Finance 2020 Population Estimates. Additionally, the park acreage which includes sites owned by the respective school districts and subject to joint operating agreements with the cities is shown. Finally, for context, regional open space readily accessible by residents (either within city limits or adjacent to and accessible from the city) is indicated, whether owned by the city or by a regional entity.

	MILPITAS	CUPERTINO	DUBLIN	MOUNTAIN VIEW	REDWOOD CITY
ACTIVE USE PARKS					
Number of Parks	36	23	27	30	38
Acres developed parkland	171	186	187	118	185
Acres per 1000 residents	2.0	3.1	2.8	1.4	2.2
Residents per park	2,339	2,577	2,400	2,758	2,261
INCLUDING SCHOOL SITES					
Acres	196	410	230.6	202.8	229.2
Acres per 1000 residents	2.3	6.9	3.6	2.5	2.7
REGIONAL PARKS / OPEN SPACE					
Acres	1,558	5,962	780	797	467

Table 4-2: Parks and Open Space

Milpitas has the highest number of parks. In terms of residents per park, Milpitas has the best ratio, at 2,158 residents per park. This number is also considerably better than the median of 2,523 residents per park indicated in the NRPA report. At 2.0 acres per 1,000 residents, Milpitas is in the middle of the group in terms of developed park acreage, although slightly under the average of 2.4 acres per 1,000 residents.

All of the departments work with their school districts to provide additional park and field space, under a variety of joint use agreements regarding management and operation of district-owned sites. When these school sites are included, Milpitas increases to 2.3 acres per 1,000 residents, comparable to Mountain View and Redwood City. Cupertino has a robust program of cooperation with its schools, more than doubling its available acres for sports uses.

Milpitas residents do enjoy access to significantly more regional park open space than any city other than Cupertino. Mountain View's regional park / open space is owned and operated by the City rather than an outside entity, and is thus an integral part of their park system.

FACILITIES

Each of the peer departments operates various community and recreation facilities, as shown in Table 4-3 below.

Milpitas provides facilities that serve a wide segment of community members, from teens to seniors, and a wide range of interests and activities. It provides slightly more facilities per capita than Mountain View or Redwood City, and a wider range of facilities than Dublin or Redwood City, although its square footage per capita is lower than that of the comparable cities.

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
		per 10,000		per 10,000		per 10,000		per 10,000		per 10,000
FACILITIES										
Community Center	1	**.12**	1	**.17**	2	**.31**	1	**.12**	2	**.23**
Recreation Center	1	**.12**	5	**.84**	4	**.62**	0	**-**	5	**.58**
Senior Center	1	**.12**	1	**.17**	1	**.15**	1	**.12**	1	**.12**
Cultural Performing Arts	1	**.12**	0	**-**	0	**-**	1	**.12**	0	**-**
Youth/Teen Center	1	**.12**	1	**.17**	0	**-**	1	**.12**	1	**.12**
Gymnasium	1	**.12**	1	**.17**	0	**-**	2	**.24**	1	**.12**
Indoor Pool	0	**-**	0	**.17**	1	**.15**	0	**-**	0	**-**
Outdoor Pool	3	**.36**	2	**.34**	1	**.15**	2	**.24**	1	**.12**
Nature/Interpretive Center	0	**-**	1	**.17**	0	**-**	1	**.12**	0	**-**
Museum/Historic Sites	2	**.24**	4	**.67**	6	**.93**	2	**.24**	0	**-**
FACILITIES TOTALS										
Total S.F.		75,512		68,050		89,034		137,454		115,616
S.F./10,000		8,968		11,480		13,734		16,612		13,456
Facilities/10,000		**1.3**		**2.7**		**2.3**		**1.3**		**1.3**

Table 4-3: Facilities

SPORTS FIELDS

Although they are used by all ages, sports fields are particularly important to the youth of the community. Joint use with school districts can play an important role in providing fields for public use during non-school hours. Table 4-4 below focuses on city-owned sports fields.

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
		Residents per field		Residents per field		Residents per field		Residents per field		Residents per field
SPORTS FIELDS										
Football Field	1	84,196	0	-	0	-	2	41,370	0	-
Soccer Field	4	21,049	6	9,879	16	4,052	16	5,171	5	17,185
Diamond Field (Baseball/Softball)	11	7,654	7	8,468	16	4,052	17	4,867	5	17,185
Cricket Pitch	1	84,196	1	59,276	1	64,826	0	-	0	-
SPORTS FIELDS TOTALS										
Total Sports Fields	17		14		33		35		10	
Fields Per 10,000	2.0		2.4		5.1		4.2		1.2	

Table 4-4: Sports Fields

At a total of 17 sports fields, Milpitas is in the middle of the comparable cities. In terms of per capita ratios, it is in the middle range for provision of diamond fields (1 field per 7,654 residents), but provides fewer soccer fields (1 field per 21,049 residents) than all but Redwood City. It is one of only two cities that have a football field, and one of three that provide a cricket pitch. 14 of Milpitas' sports fields are lighted, allowing for more extensive use. This is higher than the numbers of lighted fields reported by the other cities.

Cupertino, which has fewer city-owned fields than Milpitas, programs and operates an additional 18 sports fields owned by the school district, bringing it in line with Dublin and Mountain View's 33 and 35 fields. Expanding partnerships with its school districts could bring Milpitas in line with these higher numbers as well.

SPORTS COURTS

Sports courts create opportunities for active recreation within a relatively small footprint. Table 4-5 below addresses outdoor sports courts, which are found in the parks. All of the comparable cities also have indoor facilities such as gymnasiums or recreation centers, typically with indoor basketball, volleyball, and pickleball courts.

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
		residents per court		residents per court		residents per court		residents per court		residents per court
SPORTS COURTS										
Outdoor Basketball Court	8	10,525	6	9,879	13	4,987	8	10,342	4	21,481
Tennis	25	3,368	28	2,117	12	5,402	35	2,364	7	12,275
Pickleball	6	14,033	7	8,468	0	-	2	41,370	5	17,185
Volleyball	1	84,196	0	-	5	12,965	1	82,739	0	-
Bocce Court	2	42,098	2	29,638	2	32,413	2	41,370	2	42,963
Handball Court	2	42,098	0	-	1	64,826	2	41,370	2	42,963

Table 4-5: Sports Courts

Milpitas is in the mid range for provision of outdoor basketball courts. With one court per 10,525 residents, Milpitas is close to the mean cited in the NRPA report (1 per 8,557 residents). It is similar to Cupertino and Mountain View, but provides about twice the courts per population as does Redwood City and slightly more than half of what Dublin provides.

Milpitas does better in providing outdoor tennis/pickleball courts, at one court per 3,368 residents. This is significantly more than the NRPA mean figure of one per 6,242, a bit less than Cupertino, but considerably more than Redwood City. The cities are fairly similar in regard to the other types of court sports, although not all have outdoor volleyball and handball courts, and Dublin is an outlier with 5 outdoor volleyball courts.

PARK FEATURES

The peer departments provided information on the types of special purpose parks (such as skate parks or dog parks) and on the features within their parks (such as playgrounds, or reservable picnic areas). Tables 4-6 and 4-7 below address some of the distinguishing features.

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
		Residents per area		Residents per area		Residents per area		Residents per area		Residents per area
PLAYGROUNDS & PICNIC AREAS										
Playground	31	2,716	16	3,704	19	3,412	8	10,342	4	21,481
Reservable Group Picnic/BBQ	42	2,005	9	6,586	12	5,402	25	3,310	7	12,275

Table 4-6: Playgrounds & Picnic Areas

	MILPITAS	CUPERTINO	DUBLIN	MOUNTAIN VIEW	REDWOOD CITY
PARK FEATURES					
Splash Pad	0	1	0	1	0
Skate Park	1	0	1	1	1
Dog Park	2	1	2	2	2
Outdoor Amphitheater	0	1	0	2	2
Golf Course	0	1	0	2	2
BMX Track	0	0	0	2	2
Community Garden	1	1	0	1	1

Table 4-7: Park Features

Milpitas provides the most playgrounds for its population, with its 31 playgrounds yielding a ratio of 1 playground per 2,716 residents, considerably better than the NRPA mean of 1 playground per 3,859 residents. Milpitas also offers more reservable group picnic/BBQ areas than any of the comparable communities, with its 42 picnic areas yielding a ratio of 1 per 2,005 residents.

Like all of its peer cities other than Cupertino, Milpitas has a skate park, a popular amenity serving teens. Similar to its peers, Milpitas also has two dog parks (Cupertino has only one). Some of the functions of special features identified by other departments are met through other facilities in Milpitas. For example, although Milpitas, along with Dublin and Redwood City, lacks a splash pad for water play, it does have 3 outdoor pools. Although it lacks an outdoor amphitheater, it (along with only Mountain View) has an indoor performing arts center.

NEEDS AND DEFICIENCIES

The needs assessment has identified a number of needs and deficiencies in the existing park and recreation system. Some of these may be remedied in the near term, and others inform the design and planning of future parks, programs and events.

AVAILABLE PARKLAND

- New or available parkland is limited or cost prohibitive.

FUNDING FOR NEW PARKS AND IMPROVEMENTS

- At the time of this document, there are several new parks and needed improvements that are not funded in the CIP budget projections. An adequate funding mechanism is not in place.
- Softball is losing their home at Russell Middle School due to bond improvements on site. A short term and long term plan for their future home base are needed.

RECREATION PROGRAMS

- Several programs and classes are under-valued or underutilized.
- There is no standard cost recovery program for recreation in place. In March 2021, City Council has provided direction on cost recovery goals.

EMERGING SPORTS

- Cricket has emerged as a popular and desired sport within Milpitas. Currently, there is no regulation sized pitch for local play or hosting tournaments.
- Pickleball players currently play on a converted handball court and on existing tennis courts when available.

SPORTS FIELDS

- Football, soccer, baseball, softball and cricket all compete for the use of various fields throughout the City.

COMMUNITY PARKS

- There is a need for a new community park to meet the recreation needs of the growing population in Milpitas.

ACCESS

- Safe and direct pedestrian and bike access to parks should be improved.
- Many parks, programs and events are not accessible to special populations.

SAFETY

- Safety concerns deter residents and certain user groups from using some of Milpitas' parks. Lighting, clear site lines and additional programming could mitigate these concerns.

AMENITIES AND EQUIPMENT

- Many of the parks lack amenities such as shade or programmed space.
- Parks lack modern conveniences such as Wi-Fi.

SERVICE LEVEL STANDARDS AND GAPS

Milpitas provides parks, facilities and amenities that are, in most categories, in the center of the range of what is provided by its peer communities. While its park acreage is about average, it provides more parks per resident than the other communities. While its square footage of facilities is on the lower end, it does provide a wide range of facility types, for youth and teens to seniors, for community gatherings and classes, active recreation, arts and cultural performances, and historic display. It provides all types of sports fields, including football and cricket, although the number of diamond ballfields and soccer fields could be increased, possibly through expanding partnerships with schools. Its parks have a full complement of features and amenities but lack adequate maintenance.

PARKS AND OPEN SPACES

Milpitas' population is projected to grow from 84,196 in 2019 to 99,505 by 2040. At 2019 population size, including public parks and joint-use agreements, Milpitas offers 2.3 acres per 1,000 residents. As discussed in Chapter 2 - Planning Context, the General Plan states that the City shall endeavor to achieve 5 acres per 1,000 residents in areas outside Specific Plan areas.

BUILDING FACILITIES

Currently, Milpitas provides less square footage per capita than that of its comparable agencies at 8,968 s.f./10,000 people. However, the facilities serve a wide segment of the community, interests and activities. In order to keep up with the increased demand due to population growth, an additional community facility, as identified in the General Plan, would help close the gap.

	NRPA Guidelines	Average Standard for Comparable Agencies	Milpitas Facilities	Milpitas Existing Level of Service	Proposed Guideline	FACILITIES NEEDED	
						Current Population (2019) 84,196	Projected Population (2040) 99,505
FACILITY							
Baseball/Softball Fields	1/9,611	1/8,643	11	1/7,600	1/7,600	0	2
Outdoor Basketball Courts	1/8,557	1/11,672	8	1/10,525	1/10,000	0	2
Community Centers	1/42,491	1/52,348	1	1/84,916	1/49,600	1	1
Soccer Fields	1/9,085	1/9,072	4	1/21,049	1/21,000	0	1
Tennis Courts	1/6,242	1/5,540	25	1/3,368	1/3,300	0	0
Outdoor Pickleball Courts	n/a	1/22,341	6	1/14,033	1/10,000	2	4
Cricket Pitches (regulation)	1/59,227	1/62,051	0	n/a	1/99,000	1	1
Playgrounds	1/3,859	1/9,735	31	1/2,716	1/2,700	0	5
Dog Parks	1/58,000	1/42,005	2	1/42,098	1/33,000	0	1
Outdoor Amphitheater	1/57,304	1/45,203	0	n/a	1/99,000	1	1

Table 4-8: Service Level Standards and Gaps

Service level projections based on adding additional community facility are:

- At 2019 population: 1.3 Facilities per 10,000 residents.
- At projected 2040 population with additional community facility: 1.21 facilities per 10,000 residents.

SPORTS FIELDS

With the current offerings of sports fields, Milpitas is in the middle of the comparable cities but offers a higher number of lighted fields than other cities, allowing for more extensive use. In order to meet the growing demands for soccer, baseball, softball and cricket:

- Convert baseball/softball only fields to multi-use fields allowing for more flexibility.
- Provide a minimum of (3) new softball fields at Cardoza Parks to meet demand and replace demolished fields at MUSD site.
- Explore a regulation size, permanent home for cricket at the Milpitas Sports Complex.
- Continue joint use agreement with MUSD to provide additional play and practice fields.
- At 2019 population: fields per 10,000 residents: 2.0
- At projected 2040 population: fields per 10,000 residents in 2040 including additional softball fields and cricket pitch: 2.1

SPORTS COURTS

Milpitas in is the mid-range for comparable agencies for sports courts. The number of basketball courts is close to the mean cited in the NRPA report, outdoor tennis and pickleball courts are higher than the NRPA mean figure. To meet future demand:

- There is high demand for outdoor pickleball courts. An additional (6) courts will ease demand on both dedicated pickleball courts and tennis courts.

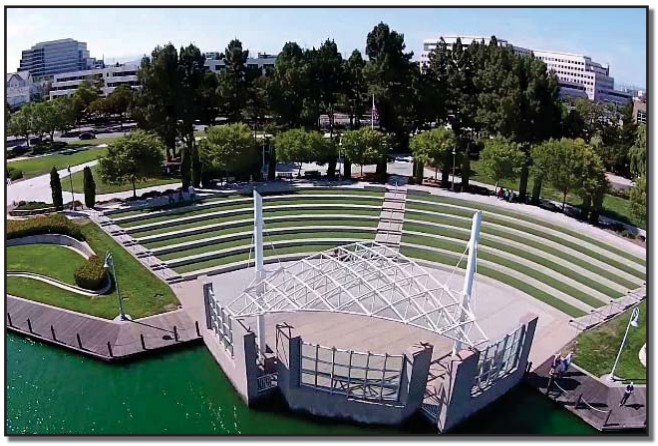
PARK FEATURES

Milpitas exceeds the NRPA mean for number of playgrounds, providing considerably more playgrounds than the average. With a skate park at the Sports Complex, Milpitas is in line with peer cities as far as amenities geared towards teens. Dog parks are on par with peer cities and although Milpitas lacks a splash pad or other water amenity, the Sports Center boasts 3 outdoor pools.

- With ample playgrounds already installed for the current population, explore updating playgrounds with all-inclusive designs. Continue to plan for new playgrounds and tot lots in new developments to meet future population growth.

- Dog parks within Milpitas are on par with peer cities, though there is high demand from the community for an additional dog park.

- Consider adding an outdoor amphitheater to meet future demands.



GOALS AND RECOMMENDATIONS

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5

OVERVIEW

In order to develop an integrated parks and recreation system that is tailored to the needs and priorities of the Milpitas community as it grows over time, a more comprehensive set of goals, standards and recommendations for the parks, programs, events, facilities and services must be in place. This chapter establishes goals and standards for quantifiable elements of the parks and recreation system, as well as recommendations for improvements of future parks, facilities, programs and events.

VISION FRAMEWORK

Create, enhance and sustain a comprehensive, connected system of parks and recreation programs that nurtures and inspires the Milpitas Community. The graphic to the right includes three elements:

The Department of Recreation and Community Services Mission, which describes the purpose of the department.

The Parks & Recreation Master Plan Vision, a statement that embodies the community's desire for the parks and recreation system.

Eight Park and Recreation Goals, that provide a strategic framework for achieving the vision.

These eight goals provide a guiding framework for allocation of City resources and investment over the next 10 to 15 years.

1. **Strategically grow and evolve parks and programs** to provide comprehensive recreation opportunities and amenities to meet needs of the diverse existing and future residents.
2. **Create an inclusive park system** with recreation programs and events that meet the needs of all residents, especially the most vulnerable and under-served members of the community.
3. **Enhance equitable access** to the parks and recreation system for all Milpitas Residents.
4. **Provide community health and wellness** by providing places that support social interaction, connections to nature and physical fitness.
5. **Reflect the cultural diversity** of the Milpitas community through the parks and recreation system.
6. **Continue to expand partnerships** with other public agencies and private entities to enhance the City's ability to meet community parks and recreation needs.
7. **Advance management and stewardship** of an environmentally resilient park system.
8. **Utilize a diverse palette of funding** resources to support parks and recreation needs.

GOAL 1

Strategically grow and evolve parks and programs to provide comprehensive recreation opportunities and amenities to meet needs of the diverse existing and future residents.

RECOMMENDATIONS

1.1 Utilize land acreage dedication and in-lieu fee requirements as established in the General Plan to acquire park land and fund improvements of existing parks to accommodate parks and recreation needs of future residents.

1.2 Where parkland credit is provided for privately owned, developed and maintained parkland, the private park facility must meet the standards established for public park land development and be designed to encourage public access.

1.3 A minimum of 1 acre of parkland average requirement must be developed within Specific Plan areas. Any recreation areas that are not accessible to the public will not be counted towards parkland.

1.4 Explore using park impact fees generated in Specific Plan areas to improve existing parks and facilities throughout the City in order to expand their recreation capacity and range of uses to meet existing and new resident needs.

1.5 Applicants for proposed developments shall meet with Department of Recreation and Community Services early in the design process to identify potential programs for any proposed new parks and to establish ownership and maintenance responsibilities for proposed parks.

1.6 Where feasible, provide flexible use spaces that can accommodate multiple functions and adapt to future recreation needs.

1.7 Re-purpose low-use and single purpose areas by strategically layering more activities into existing parks to accommodate additional park users.

1.8 Create new urban park and recreation amenities, recognizing the unique needs of residents who live in the higher-density, transit-oriented development areas.

1.9 Proactively explore opportunities to acquire parkland.

1.10 Adopt an approach to park design and programming that values recreation experience over acreage.

1.11 Continue to offer a diverse range of recreation programs and services that respond to the changing needs and demographics of the community.

1.12 Expand technology and Wi-Fi access in parks.

GOAL 2

Create an inclusive park system with recreation programs and events that meet the needs of all residents, especially the most vulnerable and under-served members of the community.

RECOMMENDATIONS

2.1 Incorporate principals of inclusive design in any new park construction.

2.2 Explore collaboration with local businesses and organizations with a similar mission to offer programs and trainings to all members of the community.

2.3 Promote park usage by designing safe and welcoming park environments using Crime Prevention Through Environmental Design (CPTED) best practices.

2.4 Continue to offer scholarships and key programs at rates accessible to all members of community.

2.5 Quickly adapt program offerings to meet current recreation trends and community needs.

2.6 Explore additional days and times that programs are offered - weekends, evening, and lunch time.

2.7 Continue to offer a diverse selection of events that are open to all community members.

2.8 Include features to welcome teens in parks, including amenities such as outdoor table tennis and foosball, and areas for teens to gather.

2.8 As appropriate, make paths wide enough that multiple uses can occur without conflict.

2.9 Provide adequate, conveniently located comfort features such as shade and seating.

2.10 Provide a diverse range of reservable gathering spaces (picnic tables and barbecues with shade structures) to accommodate family events.

GOAL 3

Enhance equitable access to parks and recreation system for all Milpitas Residents.

RECOMMENDATIONS

3.1 Continue to emphasize standards identified in the General Plan to service a radius of ¼ mile for urban parks and 3/8 mile for neighborhood parks.

3.2 Create physical connections (multi-use trails, bikeways and paths) that enhance public access to parks.

3.3 Monitor the distribution of special interest amenities (dog parks, community gardens, etc.) throughout the City and strive for parity across its four (4) quadrants so that all areas can accommodate multiple functions and adapt to future recreation needs.

3.4 Monitor the condition of park amenities to ensure parity of maintenance and retain the recreation value of amenities.

3.5 Enhance selected segments of the trail system with seating areas, group exercise stations, public art and other amenities to develop linear parks.

3.6 Provide facilities in parks, such as bike racks, loop paths and wayfinding signage, to encourage non-vehicular access to parks.

3.7 Develop a strategic staffing plan for recreational services and the maintenance of the City's parks.

GOAL 4

Provide community health and wellness by providing places that support social interaction, connections to nature and physical fitness.

RECOMMENDATIONS

4.1 Develop and enhance parks to provide opportunities to connect with nature.

4.2 Provide climate control features, such as wind breaks and shade structures, to encourage year-round use of parks.

4.3 Provide variety of amenities in parks to engage a range of fitness levels.

4.4 Design parks to facilitate casual social interaction at a variety of locations.

4.5 Respond to evolving Milpitas recreation trends (e.g. pickleball, cricket) to continue to encourage residents to "get outside" in the parks.

4.6 Continue to provide well-maintained diamond and rectangular fields.

GOAL 5

Reflect the cultural diversity of the Milpitas community through the park and recreation system.

RECOMMENDATIONS

5.1 Each park should have a unique theme that draws upon the special attributes of the setting and cultural heritage of neighborhood.

5.2 Integrate art in the parks to enhance, identify and interpret local environments.

5.3 Consider partnering with community arts and culture organizations, as well as other non-governmental groups to bring arts and culture programming and installations into City parks and recreation programs.

5.4 Support collaboration with the business community, service groups, cultural organizations, schools and other groups to use artistic resources and talents within the community in the design of park or recreation program offerings.

5.5 As appropriate, provide a range of outdoor performance opportunities within the parks system.

5.6 A future destination community park should include a community gathering space where the diverse Milpitas community can engage with each other.

5.7 Continue to offer a diverse range of community events.

GOAL 6

Continue to expand partnerships with other public agencies and private entities to enhance the City's ability to meet community park and recreation needs.

RECOMMENDATIONS

6.1 Continue to use and refine joint-use agreements with the Milpitas Unified School District to maximize use of school recreation and sports facilities including improvement, maintenance and scheduling of fields. Joint-use facilities available to the public should be carefully designed to welcome public use of designated facilities while respecting school functionality and security needs.

6.2 Continue to expand collaboration with local organizations and non-profits whose missions will contribute to the range of programs and community social services available to Milpitas residents.

6.3 Continue to explore opportunities to work with the Santa Clara County Park Department to expand recreation opportunities at Ed Levin Park.

6.4 Applicants for proposed developments should meet with the Recreation and Community Services Department early in the planning process to identify potential programming for new parks proposed as part of these developments and to establish access, ownership and maintenance responsibilities for the proposed parks.

GOAL 7

Advance management and stewardship of an environmentally resilient park system.

RECOMMENDATIONS

7.1 Utilize ecologically sustainable, best practices tools.

7.2 Integrate storm water treatment and management and green infrastructure in overall park design.

7.3 Utilize low water use, climate appropriate vegetation; minimize use of intensive maintenance selections. Where appropriate, incorporate "smart" technology in park facilities including water efficient irrigation management system and renewable energy resources such as electric vehicle charging stations.

7.4 Where feasible, encourage stewardship opportunities in the parks and recreation system, focused on creeks and natural systems.

7.5 Consider durability, maintenance requirements and impacts on environmental systems when selecting materials and site furnishings.

7.6 Design and invest in facilities that are of low maintenance and high quality materials to reduce overall facility maintenance and operation requirements and costs.

7.7 Incorporate maintenance considerations early in the planning and design process of all park facilities and establish maintenance service levels for each of the parks.

7.8 Implement reduction measures outlined in the Milpitas Climate Action Plan when planning and maintaining parks and facilities.

7.9 Implement the planting strategy outlined in the Milpitas Tree Management Plan in accordance with individual park recommendations outlined in this chapter.

GOAL 8

Utilize a diverse palette of funding resources to support parks and recreation needs.

RECOMMENDATIONS

8.1 Because the impacts of the recreation needs of new residents will be felt throughout the Milpitas parks and recreation system, recommend that park impact fees generated in Specific Plan areas be used to make improvements to existing parks throughout the City to expand their recreation capacity and range of uses to meet current and new resident needs.

8.2 Implement cost recovery goals (direct and indirect) for recreation programs.

8.3 Strive for overall 40% total cost recovery (direct and indirect costs) for programs, recognizing that some programs can accommodate greater cost recovery targets in order to underwrite other desired program costs.

8.4 Continue to maintain and update the diversity of recreation programs to serve the evolving community.

8.5 Continue to offer online recreation programs.

8.6 Periodically review the guiding fee policy and update fees accordingly in coordination with the citywide master fee schedule.

8.7 Leverage developer fees and/or expectations to create high quality public parks and open spaces that meet the needs of Milpitas' growing residential and working population.

8.8 Expand funding through donations, grants and alternative sources.

8.9 Explore new funding mechanisms, especially for operations, from major companies that operate in City.

8.10 Consider public/private partnerships and vendor agreements that bring additional amenities and opportunities into the parks system.

8.11 Leverage and expand partnerships that support stewardship and fundraising efforts for the Milpitas parks and recreation system.

PARK DESIGN GUIDELINES

The guidelines to strive to provide a consistent quality of parks through community-specific criteria for each type of amenity is linked with the recreation value system. (See Appendix C - Recreation Value System).

PLACEMAKING

- Create a unique identity for each park by incorporating physical, social, cultural and natural features of the site and neighborhood into the design of the park.
- The park should be the shared "living room" of the neighborhood. Ensure that park design relates to adjacent streets, architecture and uses. Where possible, homes or businesses should face onto parks for natural surveillance. Minimize conflict between private backyards and public park uses. Encourage synergistic relationships between adjacent business and the park.
- Capitalize on views into and from the park. Frame views of park features from surrounding areas. Preserve vistas of adjacent landmarks and natural features.
- Incorporate special design features that will attract a range of people to the park and make it an inviting destination or neighborhood focal point. This might include gardens, architectural element, fountain, and other unique park elements. Reuse or renovate existing historic or cultural features where feasible.
- Where appropriate, consider special signage or branding that reflects the historic, cultural or natural character of the community. Provide opportunities for interpretation of unique site features such as wetlands, tree groves, or historic elements.
- Integrate public art into the designs of the park. Art can be a featured piece, or part of the architectural elements of the spaces such as the paving or site furniture. Interactive art features are encouraged.

COMFORT

Great parks are comfortable for people of all ages, ethnicities and economic backgrounds. People need to feel attracted to the space, understand how to move through it, feel invited to linger, and delighted to come back.

- In parks over ½ acre, provide different spaces and experiences that encourage multiple park uses and users through the creation a variety of outdoor rooms. Define spaces within the park with topography, architectural elements or trees to create edges and to establish a transition from space to space.
- Provide a hierarchy spaces. Parks should have at least one primary space with smaller spaces, pathways and alcoves feeding off it. This hierarchy should orient visitors and encourage them to move through the parks providing multiple experiences, such as places to gather as a group, throw a Frisbee with friends, and/or to read a book alone.
- Consider solar exposure and natural ventilation in the placement of park, paths and amenities. These considerations are important in promoting park activities throughout different seasons. As required, provide screening to buffer wind and noise. Provide a balance of shaded and sunny areas. Shade elements should be incorporated into play areas and gathering areas. Water features can promote summer usage of park.
- Site elements should be located in places that maximize use and support the overall park concept. Specifically:
    1. **Seating and Tables:** Provide a variety of arrangements using comfortable and durable materials that are accessible to all ages and abilities. Permanent seating should be located at the edge of spaces and along connecting pathways. Conveniently locate seating for casual spectators and active participants.

2. **Trash and Recycle Bins:** Place in strategic locations with convenient access for collection and maintenance.

3. **Bike Racks:** Locate near play areas and other destinations in the parks. Design bike racks to be attractive, playful and functional.

4. **Drinking Fountains:** Provide drinking fountains near areas of physical activity that are accessible to all, such as playgrounds, multi-use courts, trailheads, and exercise equipment. Design drinking fountains to be attractive, playful and functional, with bottle fillers and dog bowls.

5. **Restrooms:** Provide public restrooms in community parks and selected tier 2 neighborhood parks where the community cannot rely on surrounding uses to provide service.

6. **Kiosks:** Provide a place for neighbors to learn about park activities and connect with neighbors.

7. **Wi-Fi:** Wherever possible, provide Wi-Fi access in park.

SAFETY

- Apply principles of CPTED including providing open lines of sight throughout parks. Encourage natural surveillance by strategic placement of trees, shrubs and furniture.
- Provide adequate lighting for evening events. Provide adequate light levels to support pedestrian safety and security at central spaces and pathways at night. Light levels and the direction of lighting should maximize safety yet minimize night sky light pollution and spillover into the surrounding neighborhood.
- Along walkways and more isolated park areas, use trees with high canopies and low shrub species to maximize sight lines and minimize places to hide. Maintain landscape so that there is permanent visibility across open spaces.

PROGRAMMING FLEXIBILITY

- Spaces should be designed to be flexible to accommodate multiple types of programs and events.
- Consider how events such as food trucks, games, movies, music, art, etc. can be accommodated over different times of the year. Consider appropriate infrastructure for these events (power outlets, storage, temporary parking).
- Community parks should provide areas for large-scale events such as performances and farmers' markets. Where possible, allow space for cafes, or street vendors.
- Consider outlets for seasonal lighting for events and in conjunction with reservable group picnic areas.
- Where appropriate, consider opportunities for temporary street closures to provide additional space for activities and events. Design public spaces to host different activities throughout the course of the day, week, or year.

CONNECTIONS

Successful public spaces are connected to their surrounding neighborhoods and easily accessible to all – including children, seniors and individuals with disabilities. Connections should prioritize the pedestrian/bicycle experience of arrival and departure, the navigation of the space, and the selection of different destinations.

- Integrate parks with the surrounding network of sidewalks, streets, trails and bike routes, and provide multiple entries to park. Design access points with distinguishing features so all visitors can be greeted and welcomed through a "front door" to the park/public space.
- Promote equitable access to all portions of the park.
- On selected paths, provide ample width to accommodate multi-users – joggers, baby strollers, dog walkers. Add mileage markers on various loop paths. Integrate universal access into site design.
- Work with local residents to provide adequate parking for park visitors without impacting residents. Avoid resident long term car parking in the park or along park street frontage. Consider permit parking for reservable park facilities.

ENVIRONMENTAL STEWARDSHIP

Incorporate and/or create settings that bring nature into the design of the park. To the extent possible, limit use of lawn to active areas and emphasize plant selection that provides seasonal interest and habitat value.

- Bio-swales, rain gardens, conservation landscapes and porous pavers should be incorporated into park design as a solution that balances both recreation space and habitat restoration/conservation.
- Where possible, use recycled or recyclable materials and/or materials with low environmental impacts.
- Work with the community and schools to develop early advocacy programs and activities to encourage nature appreciation, education, and environmental stewardship.

MAINTENANCE

- Design the spaces to allow efficient access for operations and maintenance. Consider maintenance needs from the beginning of the park design process and provide appropriate routes for maintenance vehicles.
- Based on life cycle, systematically replace aging equipment (site furnishing, play equipment, etc.) to maintain a high quality park environment.
- Plan for tree succession, proactively planting new trees to replace aging and declining trees.
- Utilize reclaimed water sources for irrigation wherever possible.

EXISTING SITE ASSESSMENT

MILPITAS PARKS AND FACILITIES

pg.	PARKS	RESOURCE TYPE	PARK SPACE (ACRE)
72	Sunnyhills Albert Augustine Jr. Park	NP	6.20
80	Alviso Adobe Park	SP	2.26
86	Augustus Rathbone Park	NP	0.73
90	Ben Rodgers Park	NP	8.66
98	Bob Mcguire Park	NP	3.00
102	Calaveras Ridge Park	SP	1.80
108	Calle Oriente Park	UP	0.35
114	Cardoza Park (Tom)	CP	10.15
126	Cerano Park	NP	2.00
134	Creighton Park (Frederick)	NP	5.00
138	Dixon Landing Park	CP	11.40
146	Foothill Park	NP	3.98
152	Hall Memorial Park	NP	9.91
160	Hidden Lake Park	NP	6.57
166	Hillcrest Park	NP	5.08
172	John McDermott Park	UP	0.94
178	Jose Higuera Adobe Park	SP	4.80
182	McCandless Park (Planned)	NP	4.00
186	Milpitas Dog Park (Joint Use SCCP)	SP	1.57
190	Milpitas Sports Center Complex	CP	20.33
198	Murphy Park	NP	8.30
206	Oliver W. Jones Memorial Park	NP	4.93
214	O'Toole Elms Park (John)	NP	1.63
220	Parc Metro Central	UP	0.58
226	Parc Metro East	UP	2.06
234	Parc Metro West	UP	0.98
242	Pecot Park (Bob)	LP	3.00
248	Peter Gill Memorial Park	NP	8.16
256	Pinewood Park	UP	9.88
262	Robert E. Browne Park	NP	4.93
270	Sandalwood Park	NP	3.88
278	Selwyn Park	UP	0.23
284	Sinnott Park (John)	NP	4.67
292	Skate Park	SP	1.23
294	Starlite Park	NP	3.44
302	Strickroth Park (Henry)	NP	4.87
310	Tom Evatt Park	NP	4.42

pg.	FACILITIES	RESOURCE TYPE
322	Alviso Adobe	Historic/Museum Tour Site
323	Jose Higuera Adobe	Historic Site
324	Milpitas Community Center	Community Center
325	Barbara Lee Senior Center	Community Center Resource
326	Milpitas Sports Center Complex	Sports Center
327	Sal Cracolice Recreation Facility	Recreation Facility

FUTURE PARKS	RESOURCE TYPE	PARK SPACE (ACRE)
Midtown Park	NP	TBD
Transit Area Parks	NP	TBD

JOINT USE AGREEMENT PARKS	RESOURCE TYPE
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RESOURCE TYPE:

NEIGHBORHOOD PARK (NP):

Neighborhood parks are typically pedestrian oriented parks that serve their immediate neighborhoods. They are primarily designed for non-organized recreation and play. These parks typically contain play equipment, seating, picnic areas, limited sports courts and small gathering spaces.

COMMUNITY PARK (CP):

Community parks are destinations for the greater Milpitas area. These parks typically contain regulation size ball fields and courts for organized sports, as well as picnic areas, gathering spaces, and passive recreation areas.

URBAN PARK (UP):

Urban parks are smaller facilities of less than one acre in size, which accommodate the daily recreation or passive needs of the immediate neighborhood. They typically include green spaces, sitting areas and children's play areas.

LINEAR PARK (LP):

Linear parks are narrow corridors that typically consist of walking or biking trail systems. They may include small scale amenities such as benches, picnic tables and workout stations.

SPECIAL PURPOSE PARK (SP):

Special purpose parks have very defined, specialized uses and cater to a specific user group. Examples include skate parks and historic sites.

ASSESSMENT LEGEND

All existing park amenities, sports facilities, and site infrastructure are classified as being in Good, Fair, or Poor Condition.

Good Condition

Features and facilities are functioning as intended with minimal wear or damage. No immediate action beyond preventative maintenance is required.

Fair Condition

Features and facilities are showing some signs of wear or damage. Function and service is minimally impacted, and preventative maintenance is recommended.

Poor Condition

Features and facilities are damaged or worn to the point where basic functionality or user safety is compromised. Immediate replacement is recommended.

ASSESSMENT METHODOLOGY

The City of Milpitas currently has 171 acres of parks and open space available to the public. This chapter catalogues and evaluates all existing parks and facilities to provide a roadmap for the future.

A detailed inventory was conducted to evaluate current conditions, amenities, recreational uses, accessibility and overall park health. It explores each park's relationship to the surrounding community and its connectivity to nearby parks.

RECOMMENDED IMPROVEMENTS

STANDARD AMENITY DEFINITIONS

Standard additions, updates and improvements to parks are listed below. Individual park's recommendations may vary from these standards based on specific site conditions.

REMOVE AND REPLACE PLAY AREAS: Replace existing play equipment with structures that provide accessible ground level play elements and integrated shade structures. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Replace all fencing with 42" black vinyl coated chain link.

UPDATE PICNIC AREAS: Replace all picnic tables and barbeques with current Milpitas standard. Pave picnic areas with decomposed granite or concrete and provide trash/recycle and ash receptacles. Add shade structures where existing tree canopies do not provide shade.

COMMUNITY EVENT SPACE: Paved plaza areas with perimeter seating and overhead shade structures, to be used for performances, farmers markets, holiday celebrations etc. Lawn space for overflow seating to be provided. Unless adequate parking is already provided on site, additional parking will need to be added to accommodate increased capacity.

COMMUNITY GARDEN: Fenced community garden with raised wood planters, irrigation and fiber surfacing.

SYNTHETIC TURF FIELD: Synthetic turf field, striping for full size soccer field and at least two U10 fields, lighting, bleachers and perimeter fencing.

MULTI-USE SYNTHETIC TURF FIELD: Synthetic turf field, striping for full size soccer field, two or more softball infields, backstops, shaded dugouts, lighting, bleachers and perimeter fencing.

FENCED DOG AREA: Fenced dog area with separate small and large dog spaces, fenced entry area, dog stations and benches.

HANGOUT SPACE: Paved (concrete or asphalt) seating area with overhead shade structure, concrete ping pong/game tables and seating with integrated power/charging stations.

UPDATED PARKING LOT: Resurfaced and restriped parking lot, meeting all current accessibility codes including all ramps, striping, slope requirements and signage.

NEW PARKING LOT: New parking lot with accessible spaces, accessible pedestrian access and all associated signage.

NEW CONCRETE PATH: 9' Wide, 4" Concrete over 6" Class II aggregate base.

NEW ASPHALT PATH: 9' Wide, 3.5" Asphalt over 14.5" Class II aggregate base.

BENCHES: Replace all existing benches with current Milpitas standard, placed on concrete pads to ensure accessibility.

FITNESS STATIONS: Single or grouped fitness stations placed on poured in place safety surfacing. Provide adequate fall zones and regulatory signage.

REFURBISH RESTROOM BUILDING: Refurbish existing restroom building based on site specific conditions and the Facility Condition Assessment.[1]

1. See Appendix E: Facility Condition Assessment

RESTROOM BUILDING REPLACEMENT: New restroom building by Public Restroom Company or approved equal. Provide accessible path of travel to all public entrances of restroom building.

INCREASE LANDSCAPE MAINTENANCE: General Landscape maintenance operations are as follows:

> Weed and prune landscaped areas, clear dead or dying vegetation. Prune trees where necessary. Replace dead or dying plants with drought-tolerant California natives. Mulch landscaped areas. Clear, edge and aerate all lawn areas.

See individual park recommendations for frequency of specific maintenance treatments.

REPLANT: Replant area with California Native drought tolerant planting. Adjust or repair irrigation as needed. Mulch with 3" layer of recycled wood mulch per Milpitas City standards.

DRAINAGE IMPROVEMENTS: Regrade areas that regularly hold standing water to ensure proper drainage. Pave high traffic decomposed granite or gravel areas where feasible to eliminate erosion and rutting due to standing water. Address overwatering concerns at lawn areas that regularly have excess water and muddy areas.

Where new parking lots, pathways, plazas or any new hardscape areas are proposed, ensure proper drainage and grading.

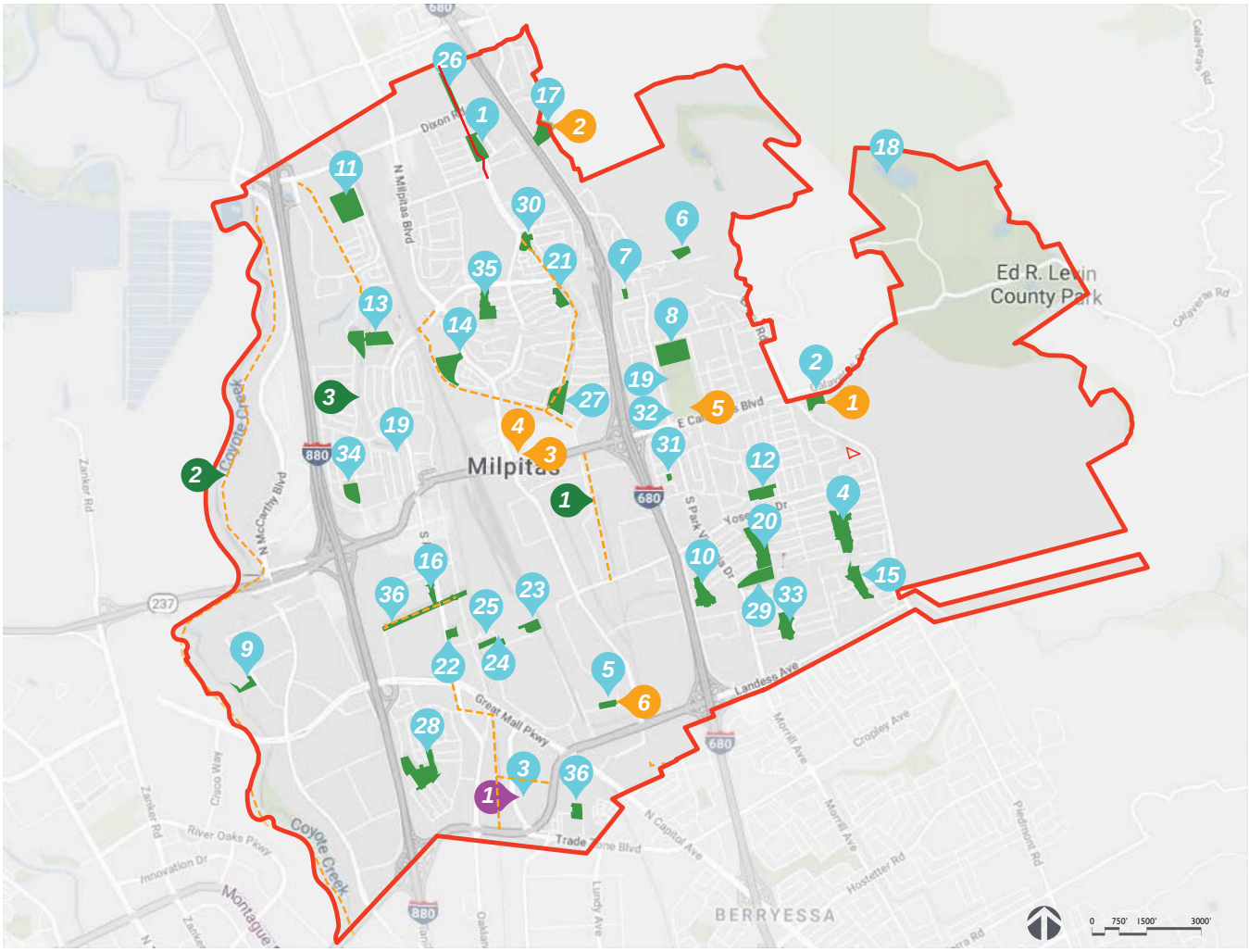
IMPROVEMENTS COSTS

Table 5-1: Park Improvement Cost Summary, located on the following page, provides an overview of the total short term and long term improvement costs for each park, as well as the anticipated future annual maintenance costs for each park after the improvements are implemented.

Park	Short Term Repairs	Long Term Improvements	Total Cost	Additional Annual Maintenance
Albert Augustine Jr. Park	$646 896.00	$5 530 438.00	$6 177 334.00	$2 220.00
Alviso Adobe	$75 400.00	$0.00	$75 400.00	$0.00
Augustus Rathbone	$8 450.00	$0.00	$8 450.00	$0.00
Ben Rogers Park	$102 050.00	$3 858 750.00	$4 497 500.00	$7 500.00
Bob Mcguire Park	$83 287.00	$0.00	$83 287.00	$0.00
Calaveras Ridge	$0.00	$1 681 313.00	$1 681 313.00	$17 510.00
Calle Oriente Mini Park	$370 500.00	$0.00	$370 500.00	$0.00
Cardoza Park	$339 300.00	$9 823 825.00	$10 163 125.00	$23 863.00
Cerano Park	$243 313.00	$109 375.00	$352 688.00	$804.00
Creighton Park	$0.00	$0.00	$0.00	$0.00
Dixon Landing	$379 600.00	$3 689 219.00	$4 068 819.00	$2 160.00
Foothill Park	$198 250.00	$2 707 250.00	$2 905 500.00	$0.00
Hall Memorial Park	$444 275.00	$4 600 313.00	$5 044 588.00	$0.00
Hidden Lake Park	$319 150.00	$2 681 000.00	$3 000 150.00	$7 500.00
Hillcrest Park	$87 100.00	$2 541 000.00	$2 628 100.00	$7 500.00
John McDermott	$125 067.00	$446 250.00	$571 317.00	$1 307.00
Jose Huigera Adobe Park	$128 050.00	$0.00	$128 050.00	$0.00
McCandless Park	$0.00	$0.00	$0.00	$77 128.00
Milpitas Dog Park	$39 000.00	$0.00	$39 000.00	$0.00
Milpitas Sports Center	$1 443 750.00	$0.00	$1 443 750.00	$148 925.00
Murphy Park	$299 000.00	$4 857 125.00	$5 156 125.00	$2 880.00
Oliver Jones Memorial	$36 400.00	$1 992 375.00	$2 028 775.00	$0.00
O toole Elms	$227 315.00	$0.00	$227 315.00	$0.00
Parc Metro Central	$29 250.00	$582 925.00	$612 175.00	$0.00
Parc Metro East	$204 100.00	$647 500.00	$851 600.00	$0.00
Parc Metro West	$237 250.00	$953 750.00	$1 191 000.00	$0.00
Pecot Park	$54 275.00	$568 750.00	$623 025.00	$0.00
Peter Gill	$478 400.00	$3 451 000.00	$3 929 400.00	$1 307.00
Pinewood Park	$435 642.00	$0.00	$435 642.00	$0.00
Robert E Browne	$202 800.00	$3 688 125.00	$3 890 925.00	$8 424.00
Sandalwood Park	$89 700.00	$2 662 920.00	$2 752 620.00	$7 620.00
Selwyn Park	$127 390.00	$1 027 950.00	$1 155 340.00	$0.00
Sinnott	$517 400.00	$5 666 063.00	$6 183 463.00	$2 160.00
Skate Park	$0.00	$0.00	$0.00	$0.00
Starlite Park	$931 450.00	$4 054 750.00	$4 986 200.00	$6 000.00
Strickroth	$242 450.00	$5 106 675.00	$5 349 125.00	$13 520.00
Tom Evatt East	$798 779.00	$0.00	$798 779.00	$0.00
TOTALS	9,945,039.00	72,928,641.00	83,410,380.00	338,328.00

Table 5-1: Park Improvement Cost Summary

MILPITAS PARKS AND FACILITIES MAP



PARKS

1. Sunnyhills Albert Augustine Memorial Park
2. Alviso Adobe Park
3. Augustus Rathbone Park
4. Ben Rodgers Park
5. Bob Mcguire Park
6. Calaveras Ridge Open Space
7. Calle Oriente Mini-Park
8. Cardoza Park (Tom)
9. Cerano Park
10. Creighton Park (Frederick)
11. Dixon Landing Park
12. Foothill Park
13. Hall Memorial Park
14. Hidden Lake Park
15. Hillcrest Park
16. John McDermott Park
17. Jose Higuera Adobe Park
18. Milpitas Dog Park
19. Milpitas Sports Center
20. Murphy Park
21. Oliver W. Jones Memorial Park
22. O'Toole Elms Park (John)
23. Parc Metro East
24. Parc Metro Middle
25. Parc Metro West
26. Pecot Park (Bob)
27. Peter Gill Memorial Park
28. Pinewood Park
29. Robert E Browne Park
30. Sandalwood Park
31. Selwyn Park
32. Skate Park
33. Sinnott Park (John)
34. Starlite Park
35. Strickroth Park (Henry)
36. Tom Evatt Park

FACILITIES

1. Alviso Adobe
2. Jose Higuera Adobe
3. Milpitas Community Center
1. Barbara Lee Senior Center
2. Milpitas Sports Center Complex
3. Sal Cracolice Recreation Facility

FUTURE PARKS

1. McCandless Park
Midtown Park
Transit Area Parks

TRAILS

1. Berryessa Creek
2. Coyote Creek
3. Penitencia Creek

SUNNYHILLS ALBERT AUGUSTINE JR. PARK

Conway St. and Coelho St.

Type: Neighborhood Park
Size: 6.2 acres
Construction Date: 1963
Latest Renovation: 2002 (Playground)

PARK OVERVIEW

Sunnyhills Albert Augustine Jr. Park is a large neighborhood park surrounded by residential neighborhoods to the east and west, and the Joseph Weller Elementary School and Milpitas Community Garden to the north.

The park contains a public sundial art piece at the entrance on Coelho Street, a restroom, pedestrian lighting, various type of walking pathways, passive lawn areas and two playgrounds which were renovated in 2002. The site is in need of a renovation due to lack of ADA complaint amenities, the aging furnishings and infrastructure, eroding decomposed granite pathway, and sparse landscaping. The park has pedestrian lighting that was not in operation at the time of this document.

The west side of the site consists of a linear walking trail and planting areas running through the City and County of San Francisco Hetch Hetchy pipeline property that connects to the Elementary School and Community Garden. Any renovations in this area require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Two wood benches in poor condition are provided at picnic areas, and three composite benches in fair condition at the perimeter trail. All wood picnic tables and barbeques are in poor condition. One bike rack is in good condition. One dog station is in poor condition.

2 **Park Signage:** Entry sign is in good condition.

Accessibility

1 **Pathways:** Concrete pathways at the entrance of the park and an asphalt trail running through the Hetch Hetchy easement are in good condition. The decomposed granite path on the north side of the park has major drainage issues and pooling. The decomposed granite is up to 4” lower than adjacent paving at transitions to adjacent paths.

2 **Furnishings:** No accessible picnic tables or benches are provided. Most picnic tables and benches are in non ADA accessible locations.

3 **Play Areas:** Limited accessible elements are provided. Poured in place surfacing at the larger play area is separating from adjacent concrete paving, creating a 1-2” vertical lip and horizontal gap in some areas. Sand surfacing at the smaller play area is low, creating 6”+ drops from adjacent poured in place surfacing.

Landscaping & Maintenance

1 **Landscape Planting:** The landscape planting within the park is sparse and requires maintenance. Perimeter landscape planting areas and planting areas within the Hetch Hetchy easement are bare of vegetation. Wisteria vines on restroom trellis are unmanaged and overgrown.

2 **Trees:** Trees are in fair condition

3 **Fencing:** Chain link fencing at play areas is in need of repair.

Turf: Turf is in good condition with some minor gopher issues.

Irrigation: This park is on the central irrigation system using reclaimed water.

Restroom: Restroom is in fair condition. The drinking fountain and floor drain are non-operational. Minor ADA issues are present. [1]

Lighting: Pedestrian lighting was not operating at the time of site inspection.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace north entry sign with Milpitas standard.
- Playground equipment and surface repairs: Replace existing sand surfacing with poured in place surfacing and engineered wood fiber. Replace all fencing with 42" black vinyl coated chain link. Replace equipment per the Milpitas Playground rehabilitation project.[2]
- Replace all picnic tables and barbeque's with current Milpitas standard, provide ADA accessible models and ash receptacles.
- Replace all benches with current Milpitas standard, place on concrete pads to ensure accessibility.
- Replace dog waste station
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1] Prune vines on attached trellis structure.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Replace decomposed granite walking path with 9' wide concrete path. Ensure proper drainage.
- Community Event Space: Community plaza area with perimeter seating and overhead shade structure.
- Remove and Replace Play Areas: Replace existing play equipment with structures that provide accessible ground level play elements and integrated shade structures. Replace poured in place surfacing and engineered wood fiber. Replace all fencing with 42" black vinyl coated chain link.
- Add 20-car parking lot along Coelho St.
- Add 6 fitness stations along loop path.
- Pave picnic areas with concrete, add shade structures where existing tree canopies do not provide shade.
- Dog Areas: Add a fenced dog area with separate small and large dog spaces, fenced entry area, dog stations and benches.
- Replace pedestrian lighting.
- Right of Way Improvement: Install ADA curb ramps at park entrances, accessibility signage, driveway approaches with bollards, crosswalk striping, and sidewalk, curb and gutter repairs as needed.

1. See Appendix E: Facility Condition Assessment
2. See Appendix G: Milpitas Playground Rehabilitation Project

SUNNYHILLS ALBERT AUGUSTINE JR. PARK
PROPOSED IMPROVEMENT SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Entry Sign (City Standard)	2	EA	$5,000.00	$10,000
2	BBQ & Ash Receptacle	7	EA	$5,000.00	$35,000
3	Bench	5	EA	$3,000.00	$15,000
4	Dog Waste Station	1	EA	$1,500.00	$1,500
5	Picnic Table	9	EA	$4,000.00	$36,000
6	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$109,000.00	$109,000
7	Repair fencing at playground area	1	LS	$5,000.00	$5,000
6	Playground Equipement & Surface Repairs	1	LS	$286,112.00	$286,112
	SUBTOTAL Short Term Park Improvements				$497,612
	Soft Costs (Administration, Inspection) - 30%				$149,284
				Short Term Repairs & Upgrades TOTAL	$646,896
B.	Long Term Park Improvements				
1	Demolition & Grading	70,000	SF	$5.00	$350,000
2	Pave Walking Path (9' Wide, 4" Concrete over 6" CL II AB)	14,000	SF	$16.00	$224,000
3	Event Space (4" Concrete over 6" CL II AB)	7,500	SF	$16.00	$120,000
4	Parking Lot (3.5" AC over 14.5" CL II AB)	8,500	SF	$12.50	$106,250
5	Drainage	1	LS	$125,000.00	$125,000
6	Replace Pedestrian Lighting	1	LS	$150,000.00	$150,000
7	Site furnishing	1	LS	$100,000.00	$100,000
8	Large Shade Structure	1	LS	$200,000.00	$200,000
9	Right of Way Improvement	1	LS	$50,000.00	$50,000
10	Dog Park (.25 acre) (Includes 42" HT Chain Link Fencing)	1	LS	$150,000.00	$150,000
11	Fitness Stations (Including Surfacing & Curb)	6	EA	$10,000.00	$60,000
12	Play Structure	9,000	SF	$70.00	$630,000
14	Play surface - Pour In Placed	9,000	SF	$30.00	$270,000
15	Landscape and irrigation	6.2	Acres	$75,000.00	$465,000
16	Pave Pincinc Areas (Concrete)	10,000	SF	$16.00	$160,000
	SUBTOTAL Long Term Park Improvements				$3,160,250
	Mobilization - 15%				$474,038
	Design & Construction Contingency - 30%				$948,075
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$948,075
				Long Term Park Improvements TOTAL	$5,530,438
				IMPROVEMENTS TOTAL	$6,177,333
C.	Additional Features Annual Maintenance Cost				
	Parking lot cleaning (Weekly)	8500	SF	$0.12	$1,020
	Dog park (Twice Weekly)	10,000	SF	$0.12	$1,200
				Annual Maintenance TOTAL	$2,220

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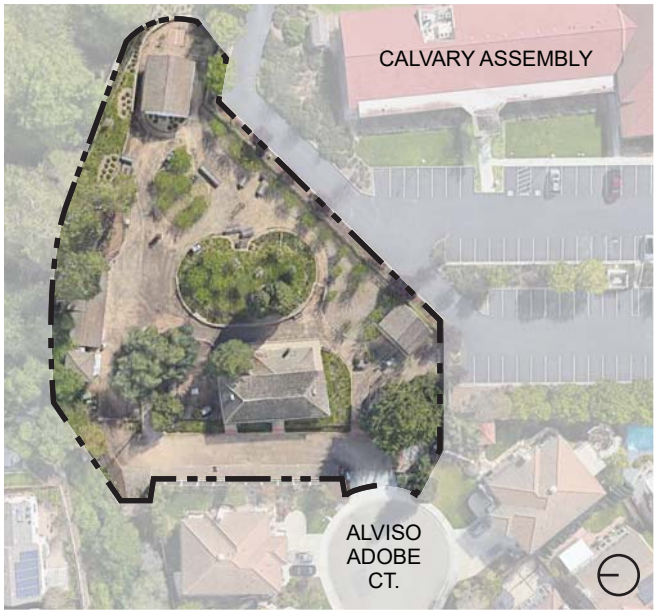


ALVISO ADOBE PARK

2087 Alviso Adobe Ct.

Type: Special Purpose
Size: 2.26 acres
Construction Date: ~1837
Renovations:

- Phase 1: Adobe Building Replacement - 1999
- Phase 2: Park Drainage Improvements - 2009
- Phase 3: Adobe Building Renovation - 2010
- Phase 4: Park Construction & Out-Building Restoration – 2013
- Phase 5: Adobe Museum - 2022

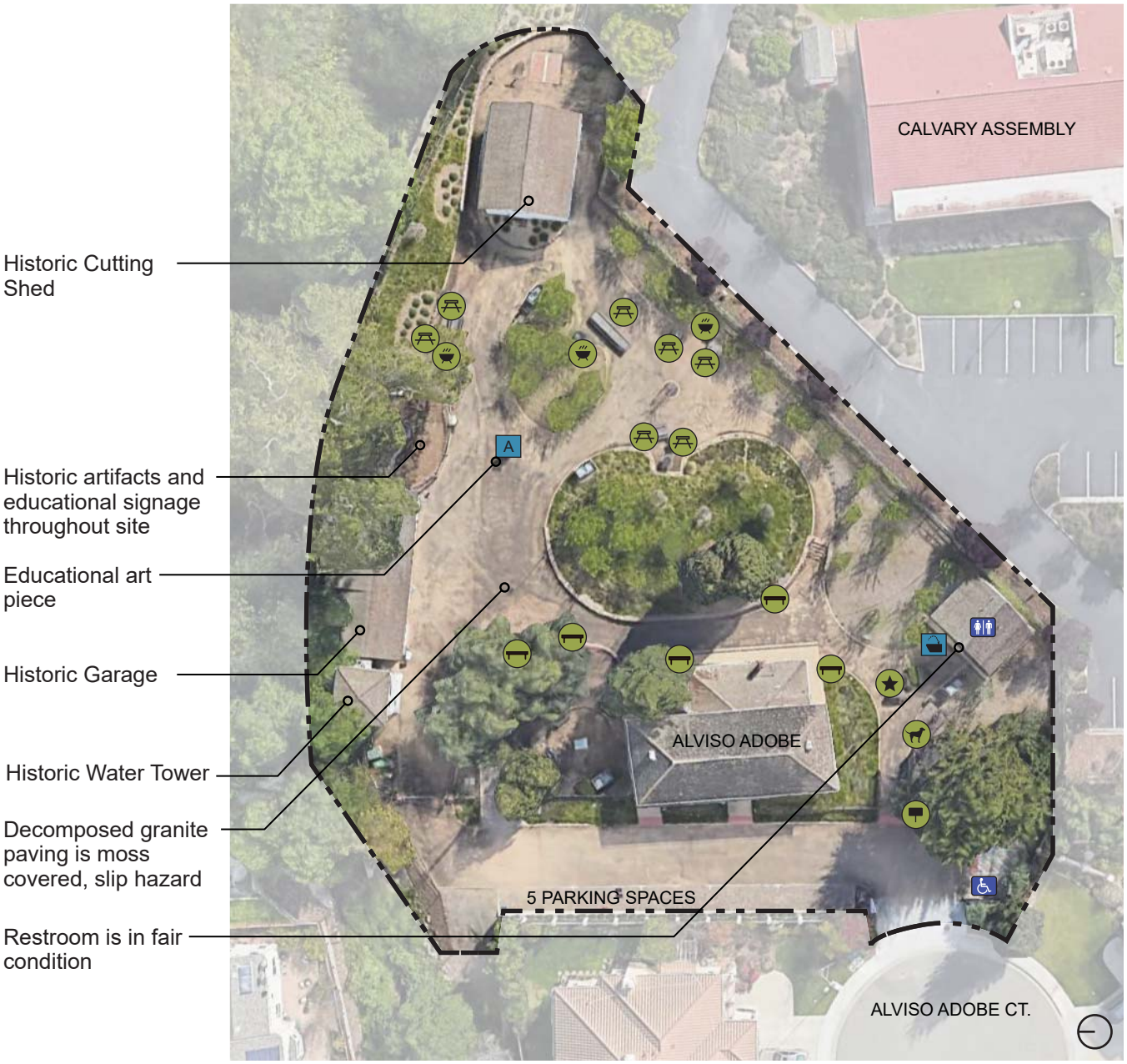
SITE OVERVIEW

Alviso Adobe Park is a special purpose park containing several historic buildings (water tower, carriage shed and fruit drying shed) and artifacts from the historic Alviso Adobe ranch. The park is built around the José Maria Alviso home. Constructed in 1837, it was perhaps the longest continually inhabited adobe home in California until the City of Milpitas acquired it in 1996. The City is in the final phase to restore the interior of the adobe buildings and open it to the public as educational museum in 2022.

The park is accessed at the end of Alviso Adobe Court with a dedicated parking lot with handicapped spaces. Well-maintained decomposed granite paths connect to the site from the parking lot. The north end of the site features several small picnic areas with accessible tables. Distributed through the planting areas are historic artifacts from the days of the Adobe's habitation, with interpretive educational signage. An educational art piece is located at the center of the park and there is a public restroom and drinking fountain at the entrance.

Currently there are no major improvements proposed for this park, only small repair and maintenance work is required specified in the Proposed Improvements section.

EXISTING SITE ASSESSMENT



LEGEND

- A Art (1)
- BBQ (3)
- Bench (5)
- Dog Station (1)
- Drinking Fountain (1)
- Picnic Table (7)
- Sign (1)
- ADA Parking Stall (1)
- Restroom (1)
- Dedication

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Wood picnic tables and one ADA table are provided, all in good condition. All barbeque's are in good condition. Wood benches are in good condition. Two dog stations with waste receptacles are in fair condition. One water fountain at the restroom is in good condition.

2. **Park Signage:** Entry sign is not Milpitas standard but is consistent with the character of the park. Two park rules signs and nine interpretive signs are in good condition.

Accessibility

1. **Pathways:** All paths within site are compacted decomposed granite. Paving is smooth and uniform with minor areas of deterioration. Moss growing in shaded areas poses a slip hazard. Running slopes exceed 5% by small margins at stairs and ramps.

2. **Furnishings:** One ADA accessible picnic table is provided. All benches are compliant with current code.

3. **Parking:** Parking surface is a combination of vehicular pavers as well as GraniteCrete resin pavement, replaced in 2020. Six standard spaces and one ADA stall are provided.

Landscaping & Maintenance

1 **Landscape Planting:** Planting areas are lush although largely unmaintained. Grasses and weeds are prevalent.

2 **Trees:** Trees are in good condition. Olives adjacent to Alviso Adobe drop excessive fruit on paved areas.

2 **Fencing:** Site fences and walls are in good condition.

Irrigation: This park is on the City's centralized irrigation system, using potable water.

Restroom: Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment, pg 589

PROPOSED IMPROVEMENTS

Currently there are no major improvements recommended for this park, only short term repair and maintenance work is required.

- Clear pathways of moss.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary. Replace dead or dying plants with drought-tolerant California natives. Mulch landscape areas annually. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Ensure that pathways are clear of moss annually or as needed.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]

PROPOSED IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$58,000	$58,000
	SUBTOTAL Short Term Park Improvements				$58,000
	Soft Costs (Administration, Inspection) - 30%				$17,400
				Short Term Repairs & Upgrades TOTAL	$75,400
B.	Long Term Park Improvements				
	No major improvement is proposed				
				IMPROVEMENTS TOTAL	$75,400
C.	Additional Features Annual Maintenance Cost				

1. See Appendix E: Facility Condition Assessment

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AUGUSTUS RATHBONE PARK

Expedition Ln. and Jubilee Dr.

Type: Neighborhood Park
Size: .73 acres
Construction Date: 2017

PARK OVERVIEW

Augustus Rathbone Park is a modern, compact neighborhood park. It is well-maintained, featuring modern ADA compliant play equipment and amenities. The entrance of the park features a large art piece entitled "Watching You" and ornamental planting areas. Shaded picnic areas with accessible seating sit adjacent to a well-maintained playground and open lawn.

EXISTING SITE ASSESSMENT

Turf is sparse in areas

Low mulch at planting areas

LEGEND

- A Art (1)
- Bench (4)
- Bike Rack (1)
- Picnic Table (4)
- Play Structure (2)
- Sign (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** All site amenities are in good condition
2. **Play Equipment:** Play equipment and poured in place surfacing are in good condition.

Accessibility

1. **Pathways:** All concrete pathways are in good condition with no cracking or heaving. All slopes and ramps are ADA compliant.
2. **Furnishings:** ADA accessible benches and tables are provided.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in overall good condition. Mulch in planted areas is low.
2. **Turf:** Turf is in good condition with some sparse areas.

- **Irrigation:** This park is on the City's centralized irrigation system using reclaimed water.

PROPOSED IMPROVEMENTS

Currently there are no major improvements recommended for this park, only ongoing maintenance work is required.

BEN RODGERS PARK

Grand Teton Dr. off Sequoia Dr.

Type: Community Park
Size: 8.66 acres
Construction Date: 1970 - North Section
1989 - South Section
Latest Renovation: 2020 (Playground)

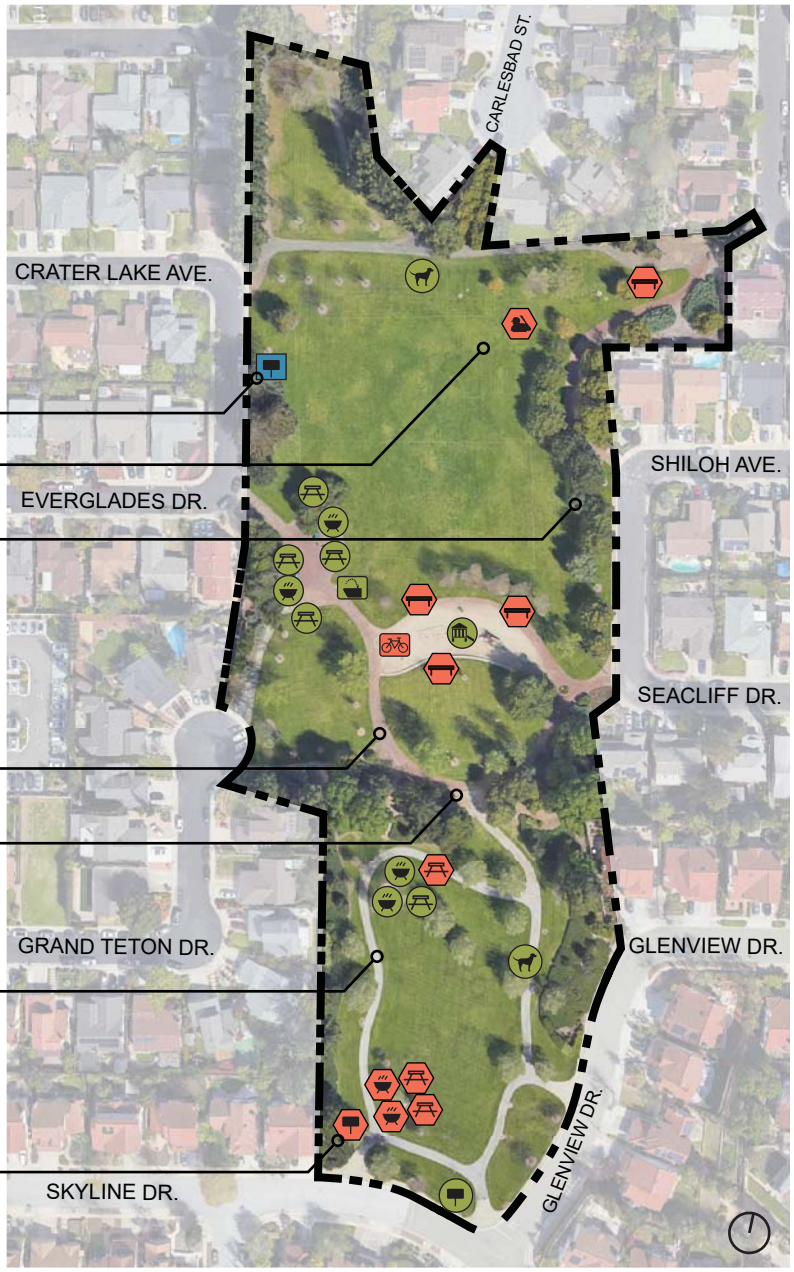
PARK OVERVIEW

Ben Rodgers Park is a large community park intended for passive recreation with multiple access points to the surrounding neighborhood. There are several picnic areas, open lawns and a play area. The north and south sections of the park were constructed at different times and feature different furnishing, pathway and lighting styles. The park needs renovation due to lack of ADA compliant furnishings in the north section, aging amenities and eroding decomposed granite and gravel pathways. There is a lack of contiguous pedestrian lighting between the north and south sections.

The north side of the park is primarily an open field used as a baseball pitch, one small chainlink backstop is provided. The entrance has a picnic area with several picnic tables and barbeques. The play area was renovated in 2020 with ADA accessible equipment and poured in place surfacing. This side of the site is accessed by gravel and decomposed granite paths in poor condition. Significant ponding and drainage issues were noted during the site visit.

The south side of the site consists of well-maintained asphalt paths connecting several picnic and seating areas. Modern pedestrian lighting is provided in this side of the park.

EXISTING SITE ASSESSMENT



Hours panel missing from sign

Informal baseball field

Magnolia trees drop fruit

Gravel paths

ADA issues at transition between gravel and asphalt paths

Asphalt paths

Park rules sign is illegible

LEGEND

- Backstop (1)
- BBQ (6)
- Bench (4)
- Bike Rack (1)
- Drinking Fountain (1)
- Picnic Table (8)
- Play Structure (1)
- Sign (3)
- Dog Station (2)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

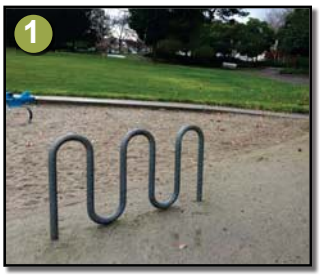
EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** All existing wood picnic tables and benches are in poor condition One concrete drinking fountain is in poor condition. One dog station missing a waste receptacle is in poor condition. One bike rack is in good condition.

2 **Play Equipment:** Play equipment, poured in place and fiber surfacing was updated in 2020 and is in good condition.

3 **Signage:** Two entry signs are in good condition, however the sign along Everglades Drive is missing the park hours attachment. Of two park rules signs, one along Skyline Dr. is faded.



Accessibility

1 **Pathways:** Gravel pathways on the north side of the park are significantly impacted. Slopes exceed 5% at many areas. Uneven surfaces, abrupt dips, and ruts from maintenance vehicles collect water during rain events. Asphalt paths on the south side of the site are in good condition and are ADA compliant.

2 **Furnishings:** No ADA accessible benches, drinking fountains or tables are provided. All furnishings on the north side of the site are located on non-accessible paths of travel.

3 **Play Equipment:** Accessible play elements and paths of travel are provided

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in good condition with some sparse areas of planting.
2. **Turf:** Turf is in good condition with some gopher issues.
3. **Trees:** Trees are in good condition overall. Magnolia trees along Seacliff Drive drop excessive fruit onto sidewalk.

- **Irrigation:** This site is on the City's centralized irrigation system using potable water.
- **Lighting:** Lighting is in overall good condition. The north side of the site has older fixtures than the south side of the site, however it is functional and provides adequate evening lighting

PROPOSED IMPROVEMENTS

Short Term Improvement

- Repair entry sign.
- Replace all park rules signs.
- Replace bike rack.
- Picnic Areas: Replace all picnic tables and barbecues with current Milpitas standard, provide ADA accessible models. Provide ash receptacles.
- Replace all benches with current Milpitas standard, placed on concrete pads to ensure accessibility.
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Update Picnic Areas: Pave picnic areas with concrete. Provide one trash/recycle receptacle per picnic area and one ash receptacle for every two barbeques or at least one per picnic area. Add shade structures where existing tree canopies do not provide shade.
- Add group picnic area adjacent to play area. Provide ADA accessible tables, trash/recycle receptacles, group barbeques, prep tables, ash receptacles and shade structures. Pave with concrete.
- Add restroom adjacent to picnic area and baseball and soccer field.
- Replace backstop at baseball field, add two player benches.
- Pave gravel trails at north of site with 9' wide asphalt paths
- Replace pedestrian lighting on both north and south areas of the park, standardize fixtures.
- Right of Way Improvement: Installation of ADA curb ramps at all public entrances, accessibility signage, and sidewalk, curb and gutter repairs, and sidewalk expansion as necessary.

BEN RODGERS PARK

PROPOSED IMPROVEMENT SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Repair Entry Sign	1	EA	$1,000.00	$1,000
2	Bike Rack	1	EA	$2,500.00	$2,500
3	BBQ & Ash Receptacle	6	EA	$5,000.00	$30,000
4	Bench	4	EA	$3,000.00	$12,000
5	Picnic Table	8	EA	$4,000.00	$32,000
6	Replace Entry Sign Hours Panel	1	EA	$1,000.00	$1,000
	SUBTOTAL Short Term Park Improvements				$78,500
	Soft Costs (Administration, Inspection) - 30%				$23,550
				Short Term Repairs & Upgrades TOTAL	$102,050
B.	Long Term Park Improvements				
1	Demolition & Grading	30,000	SF	$5.00	$150,000
2	Drainage	1	LS	$150,000.00	$150,000
3	Pave walking path (9' Wide, 3.5" AC over 14.5" CL II AB)	40,000	SF	$12.50	$500,000
4	Pedestrian Lighting Replacement	1	LS	$150,000.00	$150,000
5	Site Furnishing	1	LS	$175,000.00	$175,000
6	Right of Way Improvement	1	LS	$125,000.00	$125,000
7	Prefabricated Restroom (Single Stall)	1	LS	$200,000.00	$200,000
8	Utilities for New Restroom (Water, Sewer, Electric)	1	LS	$100,000.00	$100,000
9	Backstop (10' Wide)	1	EA	$75,000.00	$75,000
10	Landscape and irrigation	7	Acres	$75,000.00	$525,000
11	Pave new Group Picnic Area	5,000	sf	$16.00	$80,000
12	Large Shade Structure	2	EA	$130,000.00	$260,000
13	Pave Picnic Area	5,000	SF	$16.00	$80,000
	SUBTOTAL Long Term Park Improvements				$2,570,000
	Mobilization - 15%				$385,500
	Design & Construction Contingency - 30%				$771,000
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$771,000
				Long Term Park Improvements TOTAL	$4,497,500
				IMPROVEMENTS TOTAL	$4,599,550
C.	Annual Maintenance Cost				
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
				Annual Maintenance TOTAL	$7,500

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BOB MCGUIRE PARK

791 Garden St.

Type: Neighborhood Park
Size: 3.00 acres
Construction Date: 2015

PARK OVERVIEW

Bob McGuire Park is the namesake of the first director of Parks and Recreation for the City of Milpitas. This park was included with the construction of the surrounding multi unit housing developments.

This park serves a variety of users with four tennis courts, two playgrounds, a covered amphitheater and access to the Sal Cracolice Recreation Facility. The park has a dedicated parking lot with handicapped spaces, and ample street parking.

This park is in good condition with modern, ADA accessible amenities and well-maintained planting areas.

EXISTING SITE ASSESSMENT

Bioretention garden

Tennis courts

Bioretention area

2-5 Play area

5-12 Play area

Covered amphitheater and stage

Sal Cracolice Recreation Facility

LEGEND

- BBQ (4)
- Bench (6)
- Bike Rack (2)
- Picnic Table (4)
- Play Structure (2)
- Entry Sign (4)
- ADA Parking Stall (3)
- Restroom (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Two metal picnic tables and two ADA accessible tables are provided, in good condition. There are four double barbeques in good condition. Six metal park benches are in good condition. Two ornamental bike racks and two standard bike racks are in good condition. One drinking fountain is provided at the Sal Cracolice Recreation Facility.
2. **Play Equipment:** One 2-5 play area and one 5-12 play area are provided. Equipment is modern, set on poured in place safety surfacing.

Accessibility

1. **Pathways:** All concrete pathways, ramps and stairs are ADA-accessible.
2. **Furnishings:** Two ADA-accessible tables are provided. All park benches meet current code.
3. **Play Equipment:** Play equipment meets current safety compliance and ADA requirements.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in good condition. Maintenance costs are high due to diverse plant palette.
2. **Turf:** Turf is in good condition.

- Sports Courts: Tennis courts are in good condition
- **Trees:** Trees are in overall good condition. Some young trees are failing.
- **Irrigation:** This park is on the City's centralized irrigation system using reclaimed water.

PROPOSED IMPROVEMENTS

No improvements are proposed at the time of this document.

CALAVERAS RIDGE PARK

Calaveras Ridge Dr.

Type: Open Space Park
Size: 1.80 acres
Construction Date: NA

PARK OVERVIEW

Calaveras Ridge Park is a largely undeveloped lot overlooking Milpitas and the surrounding Bay Area, located at the Country Club Estates. The area was in the 2009 Parks and Recreation Master Plan as a stargazing lookout with picnic tables, barbecues, public art and a loop walking path. Those amenities were never installed and the park now consists of a small parking lot and a grassy slope with views over the Bay.

EXISTING SITE ASSESSMENT

Landscape and Maintenance

1 **Parking Lot:** Parking lot is in poor condition with weeds growing through the asphalt.

2 **Landscaping:** Park is entirely unmaintaned.

PROPOSED IMPROVEMENTS

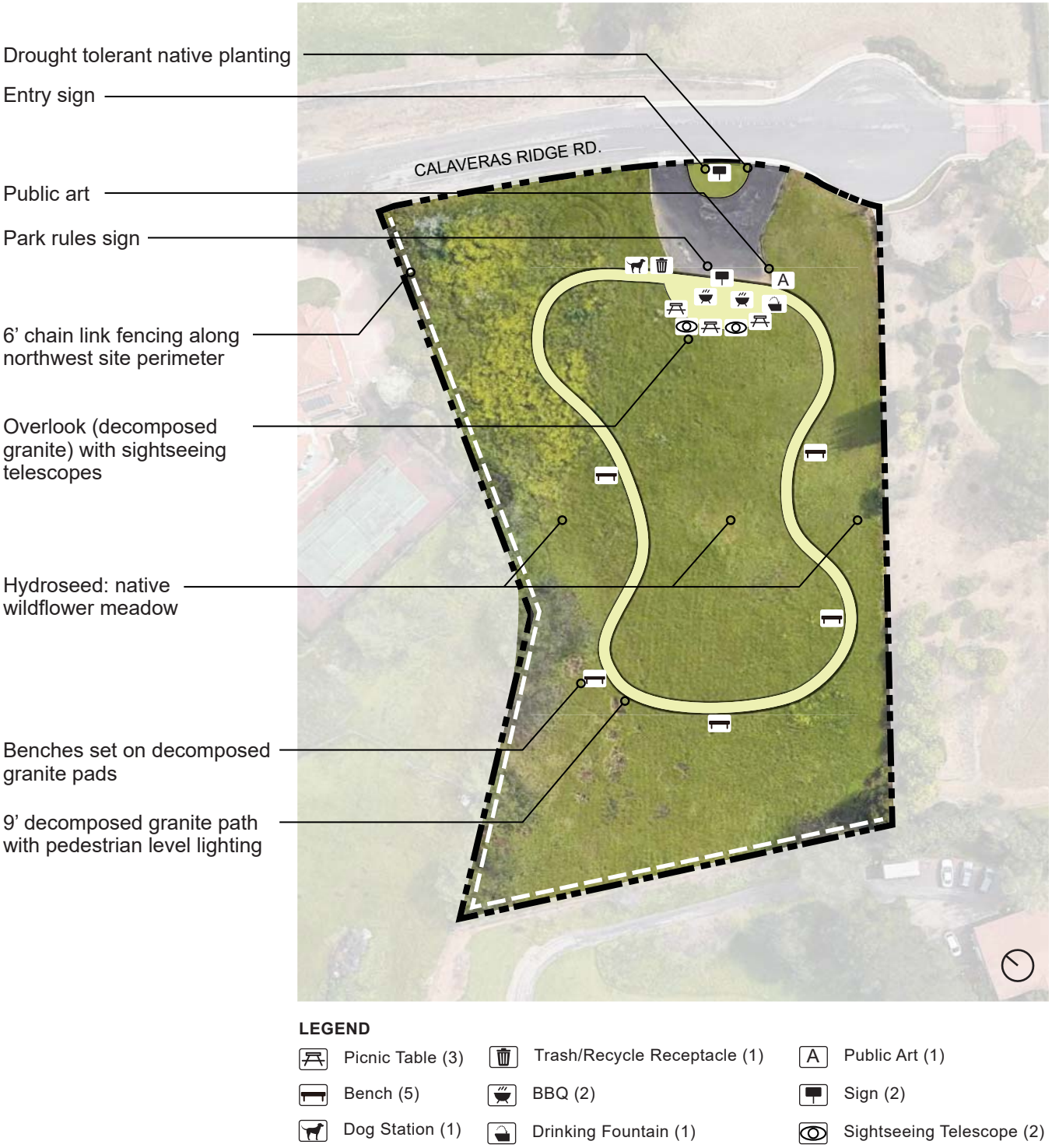
Short Term Improvement

- No short term repairs and upgrades are recommended

Long Term Improvement

- Add 9' decomposed granite path.
- Add pedestrian level lighting that will not interfere with stargazing.
- Add decomposed granite overlook with picnic tables, barbeques and educational astronomy signage.
- Add benches along pathway. Place on decomposed granite pads to ensure accessibility.
- Add telescopes at overlook for observing the planets and the moon.
- Add public art at entrance.
- Slurry seal and stripe parking lot to designate ADA accessible space.
- Add drought tolerant native planting at entrance area and associated irrigation.
- Hydroseed site with native wildflower meadow mix.

CALAVERAS RIDGE PARK
PROPOSED IMPROVEMENT PLAN



IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
	No short term repairs & upgrades proposed				
B.	Long Term Park Improvements				
1	Demolition & Grading	40,000	SF	$5.00	$200,000
2	Drainage	1	LS	$100,000.00	$100,000
3	Resurface & Restripe Exisitng Parking Lot	8,500	SF	$4.50	$38,250
4	Decomposed Granite Paving (3" DG over 6" CL II AB)	8,250	SF	$10.00	$82,500
5	6' HT Chainlink Fence	600	LF	$150.00	$90,000
6	Pedestrian Lighting	1	LS	$150,000.00	$150,000
7	Site Furnishing	1	LS	$100,000.00	$100,000
8	Public Art	1	LS	$100,000.00	$100,000
9	Landscaping & Irrigation	1.00	LS	$100,000.00	$100,000
	SUBTOTAL Long Term Park Improvements				$960,750
	Mobilization - 15%				$144,113
	Design & Construction Contingency - 30%				$288,225
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$288,225
				Long Term Park Improvements TOTAL	$1,681,313
C.	Additional Features Annual Maintenance Cost				
	Weed control (Twice Annually and As Needed)	500	SF	$0.01	$5
	Mechanical weed control (As Needed)	500	SF	$0.05	$25
	Pruning Plants (Twice Annually and As Needed)	500	SF	$0.02	$10
	Empty trash cans (Twice Weekly and As Needed)	78408	SF	$0.04	$3,136
	Remove trash & misc. debris from landscape (2X Weekly)	500	SF	$0.01	$5
	Inspect, adjust and repair irrigation system (Weekly)	500	SF	$0.04	$20
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
	Parking lot cleaning (Weekly)	8500	SF	$0.12	$1,020
	Herbicide application (Seasonally)	500	SF	$0.01	$5
	Clean and repair drinking fountains (As Needed)	1	LS	$5,000.00	$5,000
	General Park Maintenance (As Needed)	78408	SF	$0.01	$784
				Annual Maintenance TOTAL	$17,510

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CALLE ORIENTE PARK

Calle Oriente St. off N. Park Victoria Dr.

Type: Urban Park
Size: 0.35 acres
Construction Date: 1978
Latest Renovation: 2010

PARK OVERVIEW

This pocket park connects Daniel Ct. and Calle Oriente St. The park is well designed, featuring modern amenities and play areas.

The north end has a half sized basketball court and a small lawn area. The south end of the site has a shaded picnic area and shaded play area. The picnic area has good views for supervision into the play area and offers accessible seating. The play area poured in plance surfacing was replaced in 2021. Concrete pathways throughout the site are accessible and up to current code, pedestrian lighting is provided however it was not in operation at the time of this document. ADA paths of travel and accessible benches and tables are provided.

Landscape planting throughout the site is sparse and need replanting. Public Works has identified the irrigation system as unreliable.

EXISTING SITE ASSESSMENT

No planting at park entrance

Half size basketball court in good condition

Sparse vegetation at all perimeter planting areas

Passive use lawn

Decomposed granite surfacing at picnic area

Sparse vegetation at park entrance

Safety surfacing at play equipment is failing. Play structure is in fair condition. Swing set is broken.

Shade structure over play equipment

Sparse vegetation at park entrance

LEGEND

- BBQ (2)
- Bench (5)
- Drinking Fountain (1)
- Picnic Table (3)
- Play Structure (1)
- Entry Sign (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Two composite picnic tables and one ADA accessible table are provided, all in fair condition. Two barbecues are in fair condition. One drinking fountain is provided in fair condition. Shade sails over the picnic area are in fair condition, however the sail material is fading.

1 Five composite benches are in good condition.

2 **Play Equipment:** The play area equipment itself is in fair condition, poured in place surfacing was replaced in 2021. The swing set is broken and requires replacement.

Accessibility

1 **Pathways:** All concrete pathways, ramps and stairs are ADA accessible. Decomposed granite at picnic area is separating from adjacent paving.

2 **Furnishings: One** ADA accessible table is provided. All benches meet current code.

Play Equipment: ADA accessible play elements are provided.

Landscaping & Maintenance

1 **Landscape Planting:** Planting areas are mostly bare. Existing planting needs maintenance and pruning.

2 **Turf:** Turf is in good condition.

Trees: Trees are in good condition and provide adequate shade.

Irrigation: This park is on the City's centralized irrigation system, however the irrigation system is not reliable.

Lighting: Pedestrian lighting was not operating at the time of site inspection.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace shade sail fabric on picnic area shade structures.
- Replace swing set.
- Landscape and Irrigation: Replant all landscaped areas with drought-tolerant California native planting, mulch with 3” layer of recycled wood mulch per Milpitas City standards. Repair irrigation system. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge turf areas weekly.

Long Term Improvement

No long term improvements or additions are proposed at the time of this document.

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Replace Shade Sail Fabric	3	EA	$10,000	$30,000
2	Replace Swing Set	1	LS	$35,000	$35,000
3	Landscaping & Irrigation	11,000	SF	$20	$220,000
	SUBTOTAL Short Term Park Improvements				$285,000
	Soft Costs (Administration, Inspection) - 30%				$85,500
				Short Term Repairs & Upgrades TOTAL	$370,500
B.	Long Term Park Improvements				
	No long term park improvements proposed				
C.	Additional Features Annual Maintenance Cost				

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CARDOZA PARK (TOM)

Kennedy Dr. at N. Park Victoria Dr.

Type: Community Park
Size: 10.15 acres
Construction Date: 1973
Latest Renovations:

- 2009 (Play areas, picnic areas, restroom and parking lot south of baseball field)
- 2020 (Play area)

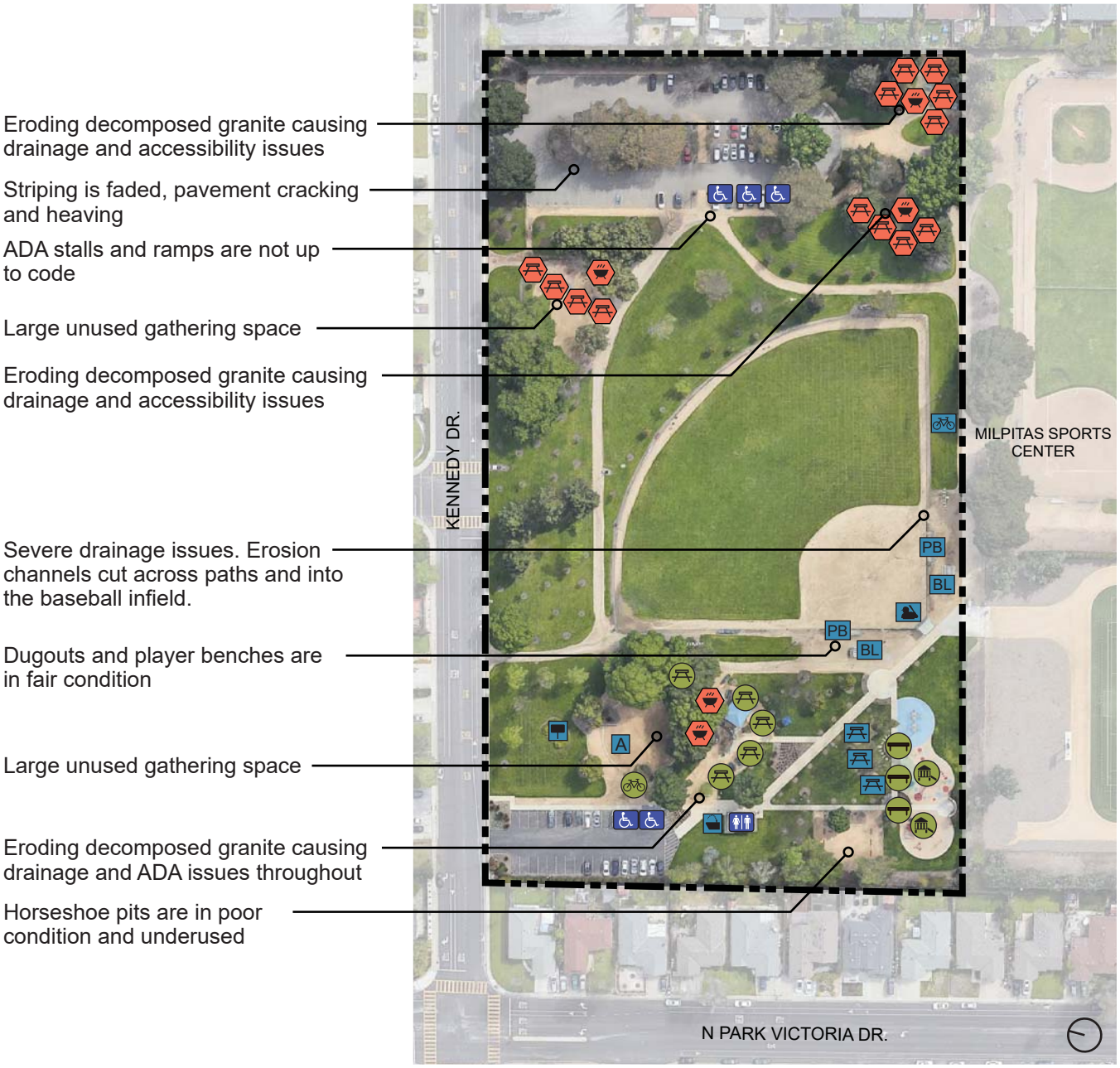
PARK OVERVIEW

Cardoza Park is a large community park adjacent to the Milpitas Sports Center, and centered around a full size lit softball/baseball field. The park's west end was renovated in 2009 with new playgrounds and picnic areas.

The western portion contains two modern play structures with shaded supervision areas. The play areas were updated in 2020 with new playground surfacing and play structure equipment. Adjacent to the playgrounds are several small picnic areas with shade sails. The picnic areas are accessed by a 33-car parking lot with ADA accessible spaces. A large open space features "Kicker Kid," a public art program piece.

The site's east side contains three picnic areas with aging tables and barbeques and a large unused gathering space. Steep slopes and eroding decomposed granite make this area largely ADA inaccessible. This area is slated to be renovated as part of the Milpitas Sports Center Master Plan. The City Council directed staff in February 2021 to create Capital Improvement Project for the construction of new softball fields. The Master Plan shows a feasibility study of 3-field and 4-field option for the City's consideration. The funding for the future improvements remains to be determined.

EXISTING SITE ASSESSMENT



AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

- A Art (1)
- Backstop (2)
- BBQ (5)
- Bench (3)
- PB Player Bench (2)
- BL Bleachers (2)
- Drinking Fountain (1)
- Picnic Table (21)
- Play Structure (2)
- Entry Sign (1)
- ADA Parking Stall (5)
- Restroom (1)

2002

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Eight metal tables and two barbeques in the newly renovated west portion of the park are in fair to good condition. Seven metal benches are in good condition. Shade structures over picnic tables and benches are in good condition. One bike rack is in good condition.

1 Four metal tables in the eastern side of the site are in poor condition. Ten wood picnic tables and four barbeques are in poor condition. Drinking fountains throughout the site were replaced in 2020 and are in good condition.

2 **Play Areas:** Play areas were renovated in 2020. Play equipment is in good condition, set on poured in place surfacing.

Signage: Park entry, informative and regulatory signage is in good condition.

Accessibility

1 **Pathways:** The majority of pathways on the site consist of unstabilized decomposed granite. Significant drainage issues and heavy traffic from maintenance vehicles cause extensive rutting and uneven walking surfaces. Slopes exceed 5% at pathways to the Milpitas Sports Center.

2 **Furnishings:** No ADA-accessible tables are provided. ADA benches are provided only in the western portion of the park.

Accessibility

1 **Play Equipment:** Play equipment meets current safety compliance and ADA requirements. Some lifting at safety surfacing poses a trip hazard.

2 **Parking Lots:** The west parking lot provides 2 ADA-accessible parking spaces and a ramp. The east parking lot has striping for 3 ADA spots, however the striping is faded and the ramps provided are not compliant.

Baseball Field

1 **Fencing and Dugouts:** Fencing and signage is in fair to good condition. The player benches are in fair condition and the dugouts lack shade.

2 **Infield & Outfield:** The infield has extensive runoff channels cutting through the infield mix. Outfield turf is in good condition.

Landscaping & Maintenance

1 **Landscape Planting:** Entry planting areas are in good condition

1 Majority of planting areas are sparsely planted and require maintenance. Mulch is low in all areas, and nonexistent in the non-renovated east portion of the park.

2 **Trees:** Trees are in good condition.

Turf: Turf is in good condition throughout the park.

Irrigation: This park is on the City's centralized irrigation system using potable water.

Restroom: Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED SITE IMPROVEMENTS - THREE FIELDS

Short Term Improvement

- Replace all existing picnic tables and barbeques in the east portion of the site, provide ADA accessible models.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Parking Lot Repairs & ADA Stall Improvements: Resurface and restripe east parking lot. Ensure compliance with current accessibility codes. $50,000 allowance.
- Repair decomposed granite pathways; $50,000 allowance.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Mulch landscape areas annually. Continue weed control, pruning and fertilization quarterly or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement - Phase 1

Field Improvements

- Softball Fields: Three new softball fields sized per plan. Each field shall include backstops, shaded dugouts and bleachers, lighting and perimeter fencing. One double sided and one single scoreboard to be provided.
- Add decomposed granite path to provide access to 200' softball field.
- Add storage container.

Long Term Improvement - Phase 2

Picnic Area & Parking Lot Improvements

- Add Picnic Areas: Concrete picnic areas with ADA accessible tables and one trash/recycle and ash receptacle per picnic area.
- Community Event Space: Community plaza area with perimeter seatwalls, concrete paving and shade structures to be used for city events, farmers markets, food trucks, etc.
- Repave all decomposed granite paths to 9'. Address grading and drainage issues at interface with Milpitas Sports Center.
- Ensure ADA access at all slopes to Milpitas Sports Center Complex property, and add ramps where necessary.
- Resurface and restripe east parking lot. Ensure compliance with current accessibility codes.
- Add entrance sign at east parking lot

1. See Appendix E: Facility Condition Assessment

CARDOZA PARK (TOM)

PROPOSED IMPROVEMENTS SITE PLAN - THREE FIELDS

New picnic areas

Resurface and restripe parking lot, ensure compliance with current accessibility codes

Storage container

Update picnic area

Repave all decomposed granite paths to 9' wide. Address grading and drainage issues at interface with Milpitas Sports Center

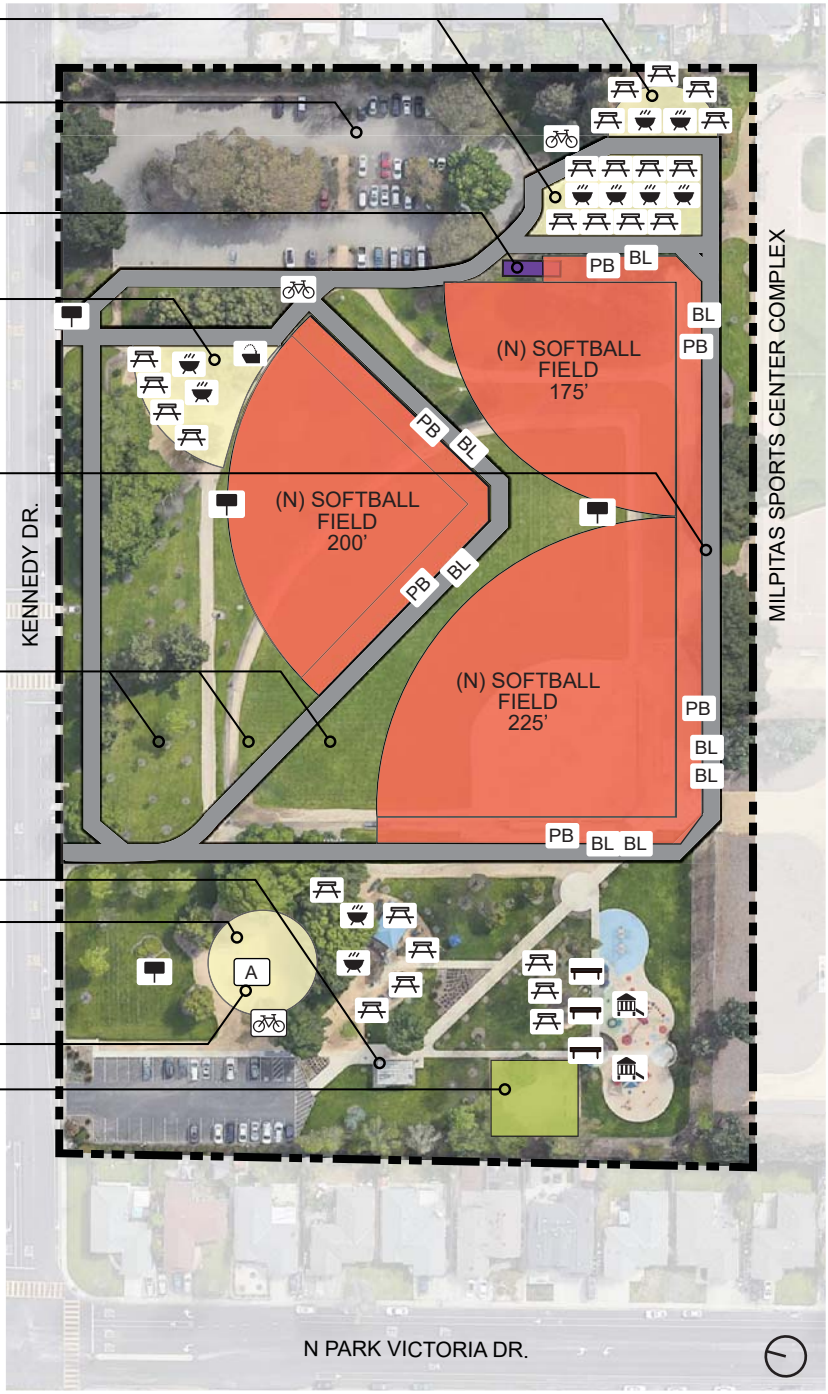
Landscaping/lawn

Refurbish restroom

Community event space

Art to remain

Replace horseshoes with lawn area



LEGEND

Picnic Table (25)	Bleachers (8)
BBQ (10)	Player Bench (6)
Bike Rack (3)	Drinking Fountain (1)
Scoreboard (2)	Bench (3)
Art (1)	Entry Sign (2)
Play Structure (2)	Storage Container(1)

2006

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	5	EA	$5,000.00	$25,000
2	Picnic Table	17	EA	$4,000.00	$68,000
3	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$68,000.00	$68,000
4	Park side Decomposed Granite Pathway Repairs (Allowance)	1	LS	$50,000.00	$50,000
5	Parking Lot Repairs & ADA Stall Improvements (allowance)	1	LS	$50,000.00	$50,000
	SUBTOTAL Short Term Park Improvements				$261,000
	Soft Costs (Administration, Inspection) - 30%				$78,300
				Short Term Repairs & Upgrades TOTAL	$339,300
B.	Long Term Park Improvements				
	Phase 1 - 3 Field Option				
1	Demolition & Grading	160,000	SF	$4.00	$640,000
2	Drainage	160,000	LS	$1.50	$240,000
3	Baseball Field Lawn	130,000	SF	$2.50	$325,000
4	Baseball Field Irrigation	130,000	SF	$3.00	$390,000
5	Infield	20,000	SF	$6.00	$120,000
6	Vehicular Decomposed Granite (4" DG over 6" CL II AB)	40,000	SF	$8.00	$320,000
7	Dugout	6	EA	$35,000.00	$210,000
8	Scoreboard	2	EA	$35,000.00	$70,000
9	Backstop with Hood	3	EA	$150,000.00	$450,000
10	Field Lighting	1	LS	$750,000.00	$750,000
11	Bleachers	8	EA	$24,000.00	$192,000
12	Player Bench	6	EA	$5,000.00	$30,000
13	8' Tall Chain Link Fence	2000	LF	$120.00	$240,000
14	Storage Container	1	EA	$30,000.00	$30,000
	SUBTOTAL Phase 1 - 3 Field Option				$4,007,000
	Mobilization - 10%				$400,700
	Design & Construction Contingency - 20%				$801,400
	Soft Costs (Design, Administration, Inspection, Permitting) - 25%				$1,001,750
				Phase 1 - 3 Field Option Total	$6,210,850
	Phase 2 -Picnic Area and Parking Lot Improvements				
1	Demolition & Grading	80,000	SF	$5.00	$400,000
2	Drainage	1	LS	$100,000.00	$100,000
3	Pave Picnic Areas (Concrete)	15,000	SF	$16.00	$240,000
4	Resurface & Restripe Exisitng Parking Lot	35,000	SF	$4.50	$157,500
5	Pedestrian Decomposed Granite Pathway (4" DG over 4" CL II AB)	20,000	SF	$5.00	$100,000
6	Site Furnishing	1	LS	$200,000.00	$200,000
7	Event Space (4" Concrete over 6" CL II AB)	5,000	SF	$16.00	$80,000
8	Seatwalls	200	LF	$250.00	$50,000
9	Large Shade Structure	2	EA	$130,000.00	$260,000
10	Landscaping & Irrigation	2	Acres	$75,000.00	$150,000
	SUBTOTAL Phase 2- Picnic Area and Parking Lot Improvements				$1,737,500
	Mobilization - 15%				$260,625
	Design & Construction Contingency - 30%				$521,250
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$521,250
				Phase 2 -Picnic Area and Parking Lot Improvements Total	$3,040,625
				IMPROVEMENTS TOTAL	$9,590,775

IMPROVEMENTS COST (CONT.)

C.	Additional Features Annual Maintenance Cost				
	Athletic field maintenance (Daily/Weekly)	95450	SF	$0.25	$23,863
				Annual Maintenance TOTAL	$23,863

PROPOSED SITE IMPROVEMENTS - FOUR FIELDS

Short Term Improvement

- Replace all existing picnic tables and barbeques in the east portion of the site, provide ADA accessible models.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Parking Lot Repairs & ADA Stall Improvements: Resurface and restripe east parking lot. Ensure compliance with current accessibility codes. $50,000 allowance.
- Repair decomposed granite pathways; $50,000 allowance.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Mulch landscape areas annually. Continue weed control, pruning and fertilization quarterly or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement - Phase 1

Field Improvements

- Softball Fields: Four new softball fields sized per plan. Each field shall include backstops, shaded dugouts and bleachers, lighting and perimeter fencing. One scoreboard per field.
- Add decomposed granite path to provide access to 200' softball field.
- Add storage container.

Long Term Improvement - Phase 2

Picnic Area & Parking Lot Improvements

- Add Picnic Areas: Concrete picnic areas with ADA accessible tables and one trash/recycle and ash receptacle per picnic area.
- Community Event Space: Community plaza area with perimeter seatwalls, concrete paving and shade structures to be used for city events, farmers markets, food trucks, etc.
- Repave all decomposed granite paths to 9'. Address grading and drainage issues at interface with Milpitas Sports Center.
- Ensure ADA access at all slopes to Milpitas Sports Center Complex property, and add ramps where necessary.
- Resurface and restripe east parking lot. Ensure compliance with current accessibility codes.

1. See Appendix E: Facility Condition Assessment

CARDOZA PARK (TOM)

PROPOSED SITE IMPROVEMENTS PLAN - FOUR FIELDS

New picnic areas

Resurface and restripe parking lot, ensure compliance with current accessibility codes

Turf

Storage container

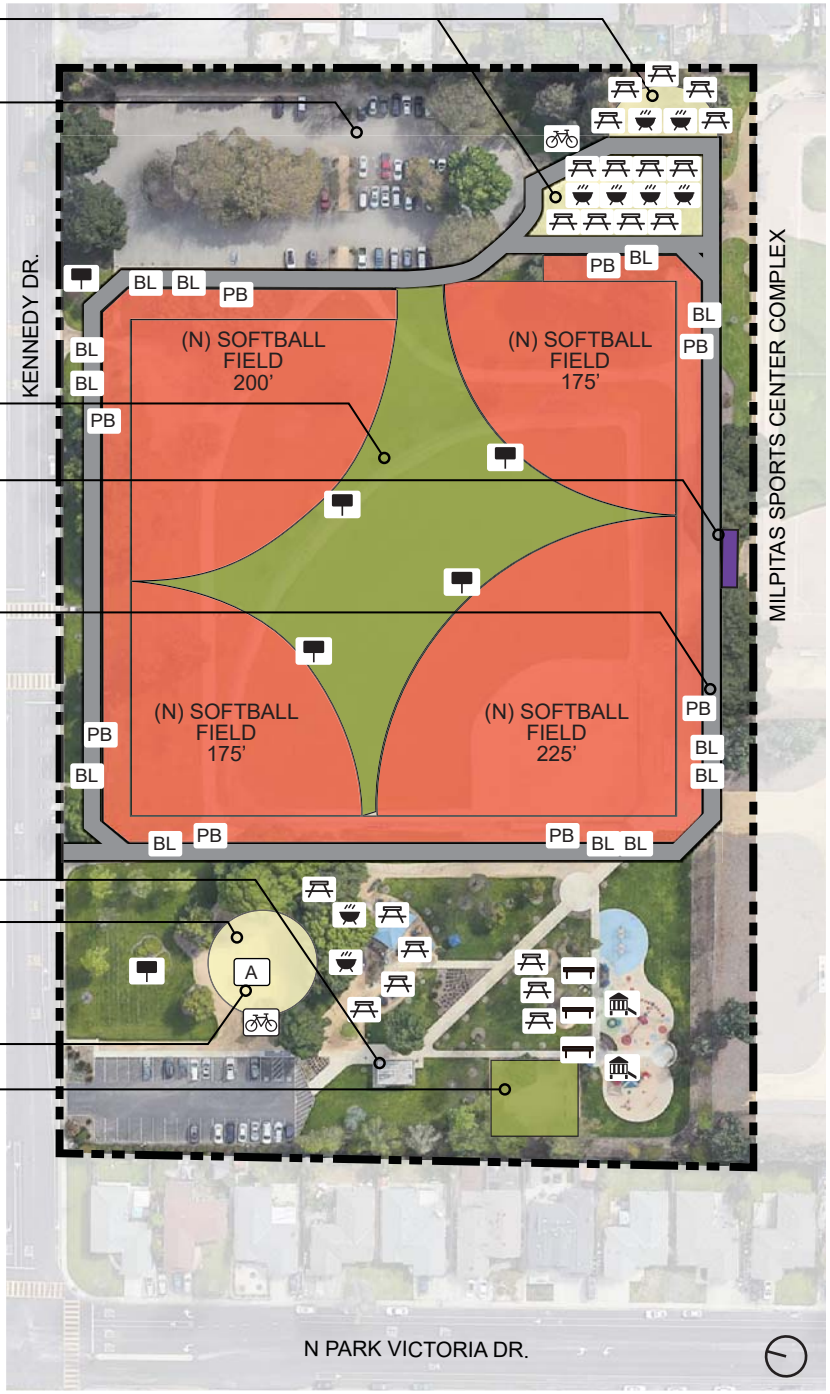
Pave all decomposed granite paths with 9' concrete pathways. Address grading and drainage issues at interface with Milpitas Sports Center

Refurbish restroom

Community event space

Art to remain

Replace horseshoes with lawn area



LEGEND

- Picnic Table (21)
- BBQ (8)
- Bike Rack (3)
- Scoreboard (4)
- Art (1)
- Play Structure (2)
- Bleachers (12)
- Player Bench (8)
- Bench (3)
- Entry Sign (2)
- Storage Container(1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	5	EA	$5,000.00	$25,000
2	Picnic Table	17	EA	$4,000.00	$68,000
3	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$68,000.00	$68,000
4	Park Decomposed Granite Pathway Repairs (Allowance)	1	LS	$50,000.00	$50,000
5	Parking Lot Repairs & ADA Stall Improvements (allowance)	1	LS	$50,000.00	$50,000
	SUBTOTAL Short Term Park Improvements				$261,000
	Soft Costs (Administration, Inspection) - 30%				$78,300
				Short Term Repairs & Upgrades TOTAL	$339,300
B.	Long Term Park Improvements				
	Phase 1 - 4 Field Option				
1	Demolition & Grading	200,000	SF	$4.00	$800,000
2	Drainage	200,000	LS	$1.50	$300,000
3	Baseball Field Lawn	170,000	SF	$2.50	$425,000
4	Baseball Field Irrigation	170,000	SF	$3.00	$510,000
5	Infield	30,000	SF	$6.00	$180,000
6	Vehicular Decomposed Granite (4" DG over 6" CL II AB)	20,000	SF	$8.00	$160,000
7	Dugout	8	EA	$35,000.00	$280,000
8	Scoreboard	4	EA	$35,000.00	$140,000
9	Backstop with Hood	4	EA	$150,000.00	$600,000
10	Field Lighting	1	LS	$750,000.00	$750,000
11	Bleachers	12	EA	$24,000.00	$288,000
12	Player Bench	6	EA	$5,000.00	$30,000
13	8' Tall Chain Link Fence	2800	LF	$120.00	$336,000
14	Storage Container	1	EA	$30,000.00	$30,000
	SUBTOTAL Phase 1 - 3 Field Option				$4,829,000
	Mobilization - 10%				$482,900
	Design & Construction Contingency - 20%				$965,800
	Soft Costs (Design, Administration, Inspection, Permitting) - 25%				$1,207,250
				Phase 1 - 4 Field Option Total	$7,484,950
	Phase 2 -Picnic Area and Parking Lot Improvements				
1	Demolition & Grading	60,000	SF	$5.00	$300,000
2	Drainage	1	LS	$70,000.00	$70,000
3	Pave Picnic Areas (Concrete)	9,000	SF	$16.00	$144,000
4	Resurface & Restripe Exisitng Parking Lot	35,000	SF	$4.50	$157,500
5	Pedestrian Decomposed Granite Pathway (4" DG over 4" CL II AB)	15,000	SF	$5.00	$75,000
6	Site Furnishing	1	LS	$125,000.00	$125,000
7	Event Space (4" Concrete over 6" CL II AB)	5,000	SF	$16.00	$80,000
8	Seatwalls	200	LF	$250.00	$50,000
9	Large Shade Structure	2	EA	$130,000.00	$260,000
10	Landscaping & Irrigation	1	Acres	$75,000.00	$75,000
	SUBTOTAL Phase 2- Picnic Area and Parking Lot Improvements				$1,336,500
	Mobilization - 15%				$200,475
	Design & Construction Contingency - 30%				$400,950
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$400,950
				Phase 2 -Picnic Area and Parking Lot Improvements Total	$2,338,875
				IMPROVEMENTS TOTAL	$10,163,125

IMPROVEMENTS COST (CONT.)

C.	Additional Features Annual Maintenance Cost				
	Athletic field maintenance (Daily/Weekly)	95450	SF	$0.25	$23,863
				Annual Maintenance TOTAL	$23,863

CERANO PARK

Murphy Ranch Rd.

Type: Neighborhood Park
Size: 2.00 acres
Construction Date: 2013

PARK OVERVIEW

Cerano Park is a small neighborhood park located adjacent to the Cerano residential development and multiple tech campuses. The park is primarily used by nearby residents as and by tech workers during lunch breaks.

The park has one tennis court, a half sized basketball court, playground, shaded picnic area with wood pergola and a restroom. The open lawn space is used as an informal volleyball pitch and is showing serious extensive bare spots as a result. A play area with modern equipment and accessible play elements area provided for ages 5-12.

The park provides one ADA accessible parking stall, accessible ramps, accessible paths of travel and pedestrian and tennis court lighting.

The east portion of the site is within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this portion of the park require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

Parking lot in good condition, ADA accessible stall provided

Tennis court in good condition

Half size basketball court in good condition

Concrete picnic tables are covered in graffiti. Overhead trellis is overgrown with vines

Stone barbeques are unused and in disrepair.

Restroom in good condition

Play area in good condition

Turf is bare due to pickup volleyball games

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

- BBQ (2)
- Bench (8)
- Bike Rack (1)
- Drinking Fountain (1)
- Picnic Table (4)
- Entry Sign (1)
- ADA Parking Stall (1)
- Restroom (1)
- Play Structure (2)

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Two stone barbeques are in poor condition. The particular model installed is not user friendly and difficult to maintain.

1 Four stone picnic tables are provided, two ADA accessible and two standard. They are in good condition with some graffiti damage. Eight composite benches are provided along the perimeter path and play area in good condition. One bike rack is provided at the entrance in good condition.

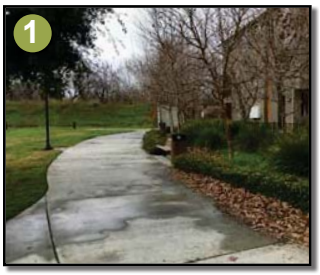
2 **Structures:** Picnic area concrete and wood trellis are in fair condition. Climbing vines need trimming. Some graffiti damage at the base of the columns.

Accessibility

1 **Pathways:** All concrete pathways, ramps and stairs are ADA-accessible.

2 **Furnishings:** ADA-accessible furnishings are provided.

3 **Play Equipment:** Play equipment meets current safety compliance and ADA requirements, minor worn areas on poured in place surfacing.



Sports Courts

1. **Tennis Courts:** Tennis courts are in good condition. Surfacing and striping is clear, fencing and windscreen is in good condition. Court lighting is provided.

2. **Basketball Court:** Basketball court is in good condition. Surfacing and striping is clear. The backboard and hoop are in good condition.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in good condition, however pathways are covered in fallen leaves and plant trimmings. Regular clearing is required.

2. **Turf:** Turf is in poor condition due to daily pick up volleyball games. The existing turf is not designed for sports and is showing extensive bare spots.

3. **Trees:** Trees are well-maintained throughout the park.

- **Irrigation:** This park is on the City's centralized irrigation system using reclaimed water.

- **Lighting:** Pedestrian lighting is provided and is in good condition.

- **Restroom:** Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Update Play Areas: Replace poured in place surfacing, replace net climber and double slide at age 2-5 play structure with new equipment from Kompan.[1]
- Remove and replace existing barbeques with group barbeques similar to Pinewood Park.
- Clean graffiti from trellis columns and stone tables.
- Landscape Maintenance: Prune vines at trellis. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.
- Reseed lawn where necessary.
- Restroom and Snack Shack: Refurbish and conduct ADA study per Facility Condition Assessment.[2]

Long Term Improvement

- Add sand volleyball court and net.

1. See Appendix G: Milpitas Playground Rehabilitation Project
2. See Appendix E: Facility Condition Assessment

CERANO PARK
PROPOSED IMPROVEMENTS SITE PLAN

LEGEND

BBQ (2)	Drinking Fountain (1)	ADA Parking Stall (1)
Bench (8)	Picnic Table (4)	Restroom (1)
Bike Rack (1)	Entry Sign (1)	Play Structure (2)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Reseed Lawn	8,500	SF	$ 2.15	$ 18,275.00
2	Replace Concrete BBQ	2	EA	$ 5,000.00	$ 10,000.00
3	Resurface (Rubber Safety Surfacing)	500	SF	$ 30.00	$ 15,000.00
4	Graffitti Removal	1	LS	$ 5,000.00	$ 5,000.00
5	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$ 63,000.00	$ 63,000.00
6	Playground Equipement & Surface Repairs	1	LS	$75,889.00	$75,889
	SUBTOTAL Short Term Park Improvements				$ 187,164.00
	Soft Costs (Administration, Inspection) - 30%				$ 56,149.20
				Short Term Repairs & Upgrades TOTAL	$ 243,313.20
B.	Long Term Park Improvements				
1	Demolition & Grading	2,500	SF	$ 5.00	$ 12,500.00
2	Sand Volleyball Court	1	LS	$ 50,000.00	$ 50,000.00
	SUBTOTAL Long Term Park Improvements				$ 62,500.00
	Mobilization - 15%				$ 9,375.00
	Design & Construction Contingency - 30%				$ 18,750.00
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$ 18,750.00
				Long Term Park Improvements TOTAL	$ 109,375.00
				IMPROVEMENTS TOTAL	$ 352,688.20
C.	Additional Features Annual Maintenance Cost				
	Sports Courts Cleaning (Weekly)	6700	SF	$ 0.12	$ 804.00
				Annual Maintenance TOTAL	$ 804.00

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CREIGHTON PARK (FREDERICK)

Olympic Dr. west of S. Park Victoria St.

Type: Neighborhood Park
Size: 5.00 acres
Construction Date: 1989
Latest Renovation: 2020

PARK OVERVIEW

Creighton Park is a medium sized neighborhood park recently renovated in 2020. Renovations added new DG and concrete pathways accessing fitness stations, playground areas, shaded group picnic areas, small and large dog play areas and a unisex restroom.

Accessibility improvements include accessible benches and picnic tables, improved site access, and entry points with ADA curb ramps driveways.

No improvements are needed at the time of this document.

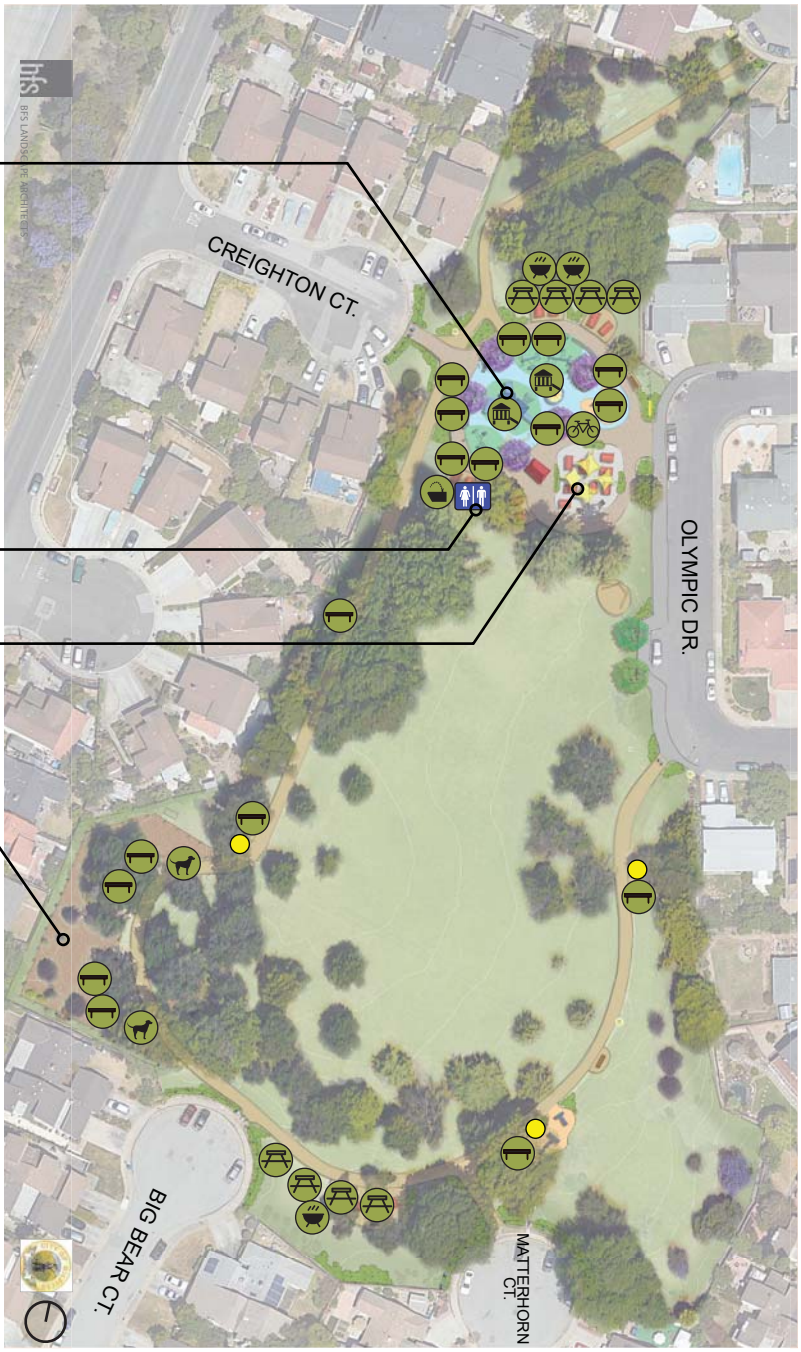
EXISTING SITE ASSESSMENT

Play Area
-2-5 Play Structure
- 5-12 Play Structure

Unisex Restroom Facility

Group picnic area
- Picnic Tables (4)
- ADA Picnic Tables (2)
- Group BBQ's (2)
- Shade Sails (2)

Small and Large Dog
Play Areas



LEGEND

- Play Structure
- Picnic Table
- Bench
- Bike Rack
- BBQ
- Dog Station
- Fitness Equipment
- Restroom

Plan courtesy of BFS Landscape Architects

EXISTING SITE ASSESSMENT

Furnishings

1. **Amenities:** Concrete picnic tables, benches and BBQ's are all in good condition. New drinking fountains, trash receptacles, bike racks and all other furnishing are in good condition.
2. **Play Area:** Play equipment, surfacing and signage are all in good condition.
3. **Workout Equipment:** Fitness stations are all in good condition.
4. Shade Structures: Shade structures at picnic area are in good condition

Accessibility

1. **Pathways:** All concrete pathways are ADA-accessible. Decomposed granite paths are accessible and well-maintained.
2. **Furnishings:** Accessible tables and benches are provided.
3. **Play Equipment:** Play equipment meets current safety compliance and ADA requirements. Accessible equipment is provided.

Landscape Maintenance

1. **Lawn:** Lawn areas are in good condition.
2. **Site Planting:** Site planting is well-maintained. All planting areas are mulched and weed free. New trees are properly staked, and existing trees are well pruned.
3. **Fencing:** Site fencing is in good condition throughout the park.
4. **Irrigation:** The park is on the City's central irrigation system using potable water.
5. **Restroom:** Restroom is in good condition
6. **Lighting:** Pedestrian lighting is in good condition

DIXON LANDING PARK

Milmont Dr. off Dixon Landing Rd.

Type: Community Park
Size: 11.40 acres
Construction Date: 1989
Latest Renovation: 2020 (Play Areas)

PARK OVERVIEW

Dixon Landing Park is bounded by residential development on three sides and railroad tracks on the east. This sports park has two small baseball fields, a full size baseball field, a cricket pitch, three tennis courts and a basketball court. A concessions and restroom facility separate the sports facilities from group picnic areas and a playground. An 84-spot parking lot with accessible spaces and an overhead shade structure provide a strong entry point to the park.

The sports fields are all in good condition. Shaded bleachers give clear views into the fields. Infield surfacing and outfield turf are in excellent condition. No accessible bleachers are provided.

The play area was renovated in 2020, the poured in place surfacing at play structures was replaced the sand surfacing was replaced with engineered wood fiber. Adjacent to the play area are dispersed picnic tables and barbeques, no ADA accessible tables are provided.

EXISTING SITE ASSESSMENT

Concrete paths in good condition

Covered bleachers provide shade

Old leaning trees pose a safety hazard

Decomposed granite paths uneven and eroding

All picnic areas on separated decomposed granite pads. Not ADA-accessible.

Play structure is in good condition

Entry canopy

Basketball court in good condition. Some broken fencing.

Tennis courts in good condition, minor surface wear

LEGEND

- Backstop (4)
- BBQ (3)
- Bench (2)
- Bike Rack (2)
- PB Player Bench (16)
- BL Bleachers (8)
- Drinking Fountain (1)
- Picnic Table (9)
- Play Structure (1)
- Scoreboard (3)
- Entry Sign (1)
- ADA Parking Stall (2)
- Restroom/Snack Shack (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Furnishings

1 **Amenities:** Furnishing are in poor to good condition. Wood picnic tables are in fair condition, with fading paint but otherwise sound. The barbeques provided at the picnic area are in poor condition. Metal benches at the play are in area are in good condition. Drinking fountains were replaced in 2020 and are in good condition.

2 **Play Structure:** Play structures are in good condition, installed in 2003. The safety surfacing and wood fiber surfacing were replaced in 2020.

3 **Sports Fields:** Shaded bleachers are in good condition. Player benches at dugouts are in fair condition, however no shade is provided.

Accessibility

1 **Pathways:** All concrete pathways, ramps and stairs are ADA-accessible. Decomposed granite paths are eroding in some places but are overall accessible.

2 **Furnishings:** Benches are ADA-accessible. No accessible tables are provided. There are no ADA-accessible bleachers at sports fields.

3 **Play Equipment:** Poured in place surfacing and engineered wood fiber was replaced in 2020, improving accessibility, however, few accessible ground level elements are provided.

Sports Facilities

1 **Baseball Fields:** Baseball fields are in overall good condition. Backstops and fencing are in good condition with minimal wear. Infield is in good condition with minor erosion areas. Outfield turf is in excellent condition.

2 **Tennis Courts:** Tennis courts are in good condition with minimal wear to the play surface. Fencing and lighting are in good condition.

3 **Basketball Court:** The basketball court is in fair condition. Striping is somewhat faded and portions of fencing are broken.

LANDSCAPING & MAINTENANCE

- **Landscape Planting:** Landscape planting is in good condition. There is minimal planting throughout the site.
- **Turf:** Turf is in excellent condition.
- **Trees:** Perimeter trees and picnic area trees are in good condition. Trees at sports fields are older and leaning, posing a safety hazard.
- **Irrigation:** This site is on the City's centralized irrigation system using potable water.
- **Restroom/Snack Shack:** Restroom/Snack Shack is in fair condition.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Dixon Landing Park will be the interim home for PAL softball until field upgrades at Cardoza Park are completed.

Short Term Improvement

- Remove hazardous trees at baseball fields.
- Replace drinking fountain
- Restroom and Snack Shack: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

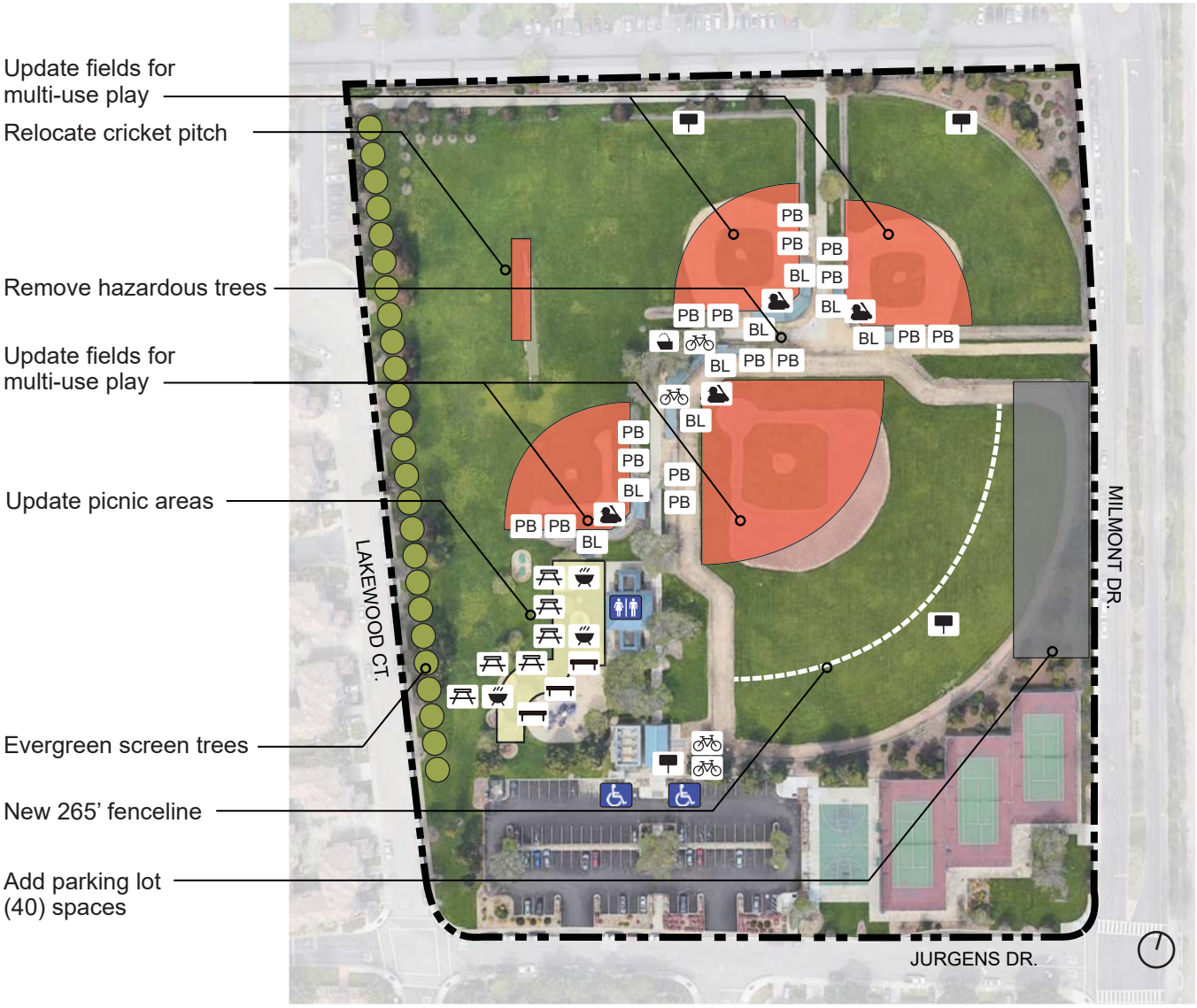
Long Term Improvement

- Update fields for multi-use play: Re-skin infields, remove turf and pitcher's mound at infield. Replace shade fabric at dugouts where necessary.
- Formalize cricket pitch: Reskin cricket pitch and add striping. Adjust location to maximize outfield area.
- Update picnic areas: Replace all picnic tables and barbecues with current Milpitas standard. Pave picnic areas with concrete. Provide three trash/recycle receptacles and three ash receptacles. Add shade structures where existing tree canopies do not provide shade.
- Add benches and companion seating at play areas.
- Adjust fenceline at main softball field to 265'.
- Add 40-space parking lot along Milmont St.
- Add evergreen screening trees along the western edge to buffer noise and light from the nearby residences
- Right of Way Improvement: Install ADA curb ramps at park entrances, accessibility signage, crosswalk striping, and sidewalk, curb and gutter repairs as needed.

1. See Appendix E: Facility Condition Assessment

DIXON LANDING PARK

PROPOSED IMPROVEMENTS SITE PLAN



LEGEND

- Backstop (4)
- BBQ (3)
- Bench (2)
- Bike Rack (4)
- PB Player Bench (16)
- BL Bleachers (8)
- Drinking Fountain (1)
- Picnic Table (9)
- Play Structure (1)
- Scoreboard (3)
- Entry Sign (1)
- ADA Parking Stall (2)
- Restroom/Snack Shack (1)
- Evergreen Screen Tree (TBD)

2030

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Remove Hazardous Trees	1	LS	$25,000.00	$25,000
2	Drink Fountain	1	EA	$10,000.00	$10,000
3	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$257,000	$257,000
	SUBTOTAL Short Term Park Improvements				$292,000
	Soft Costs (Administration, Inspection) - 30%				$87,600
				Short Term Repairs & Upgrades TOTAL	$379,600
B.	Long Term Park Improvements				
1	Demolition & Grading	50,000	SF	$5.00	$250,000
2	Parking Lot (3.5" AC over 14.5" CL II AB)	18,000	SF	$12.50	$225,000
3	Drainage	1	LS	$140,000.00	$140,000
4	Formalize Cricket Pitch	1	LS	$250,000.00	$250,000
5	Update Fields for Multi-use (Softball + baseball)	4	EA	$175,000.00	$700,000
6	48" HT Chain Link Fence	265	LF	$125.00	$33,125
7	Pave Pincinc Areas (Concrete)	10,000	SF	$16.00	$160,000
8	Site Furnishing	1	LS	$150,000.00	$150,000
9	Landscape and Irrigation	2	Acres	$75,000.00	$150,000
10	Right of Way Improvement	1	LS	$50,000	$50,000
	SUBTOTAL Long Term Park Improvements				$2,108,125
	Mobilization - 15%				$316,219
	Design & Construction Contingency - 30%				$632,438
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$632,438
				Long Term Park Improvements TOTAL	$3,689,219
				IMPROVEMENTS TOTAL	$4,068,819
C.	Additional Features Annual Maintenance Cost				
	Parking lot cleaning (Weekly)	18000	SF	$0.12	$2,160
				Annual Maintenance TOTAL	$2,160

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FOOTHILL PARK

Roswell Dr. at Roswell Ct.

Type: Community Park
Size: 3.98 acres
Construction Date: 1967
Latest Renovation: 2020 (Play Area)

PARK OVERVIEW

Foothill Park is a passive use community park adjacent to Alexander Rose Elementary School. It is surrounded on three sides by residences with many connection points to the neighborhood.

The main entry is located on the western side of the park with a large unpaved picnic area and play area. There is no entry element or sense of arrival at the entrance. A large unpaved picnic area provides non-ADA-accessible tables and barbeques. The play area was renovated in 2020, the 5-12 and 2-5 play structure equipment was replaced, sand surfacing was replaced with wood fiber and poured in place surfacing was added. The asphalt access road was slurry sealed.

The east side of the park consists of a large passive use field and a grove of redwoods with a small, intimate seating area. A restroom is provided, in fair condition.

The park requires signifigant renovation due to lack of ADA accessible seating, aging infrastructre and erosion issues at the decomposed granite paths. Pedestrian lighting is provided, however it was non operational at the time of this document.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Furnishings

1. **Amenities:** Five wood picnic tables and two barbeques are in poor condition. Two wood benches at the play area are in poor condition. One bike rack is in poor condition. One dog station without a trash receptacle is provided at Lomar Way, in poor condition.

2. **Play Areas:** Play equipment and safety surfacing were replaced in 2020 and are in good condition.

Accessibility

1. **Pathways:** The site has primarily gravel pathways with one area of asphalt around the play area. There are significant drainage and erosion issues throughout the path system, exacerbated by maintenance vehicle access.

2. **Furnishings:** No ADA-accessible furnishings are provided.

3. **Play Equipment:** Accessible equipment and poured in place surfacing is provided.

Landscaping & Maintenance

- **Landscape Planting:** Planting areas are bare throughout the park.
- **Turf:** Turf is in good condition. There is some damage from maintenance vehicles near paths.
- **Trees:** The park's rees are well-maintained.
- **Irrigation:** This park is on the City's centralized irrigation system, it uses reclaimed water.
- **Restroom:** Restroom is in fair condition, see Facility Condition Assessment for further information.[1]

Landscaping & Maintenance

- **Lighting:** The pedestrian lighting was non-operational at the time of the site inspection.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

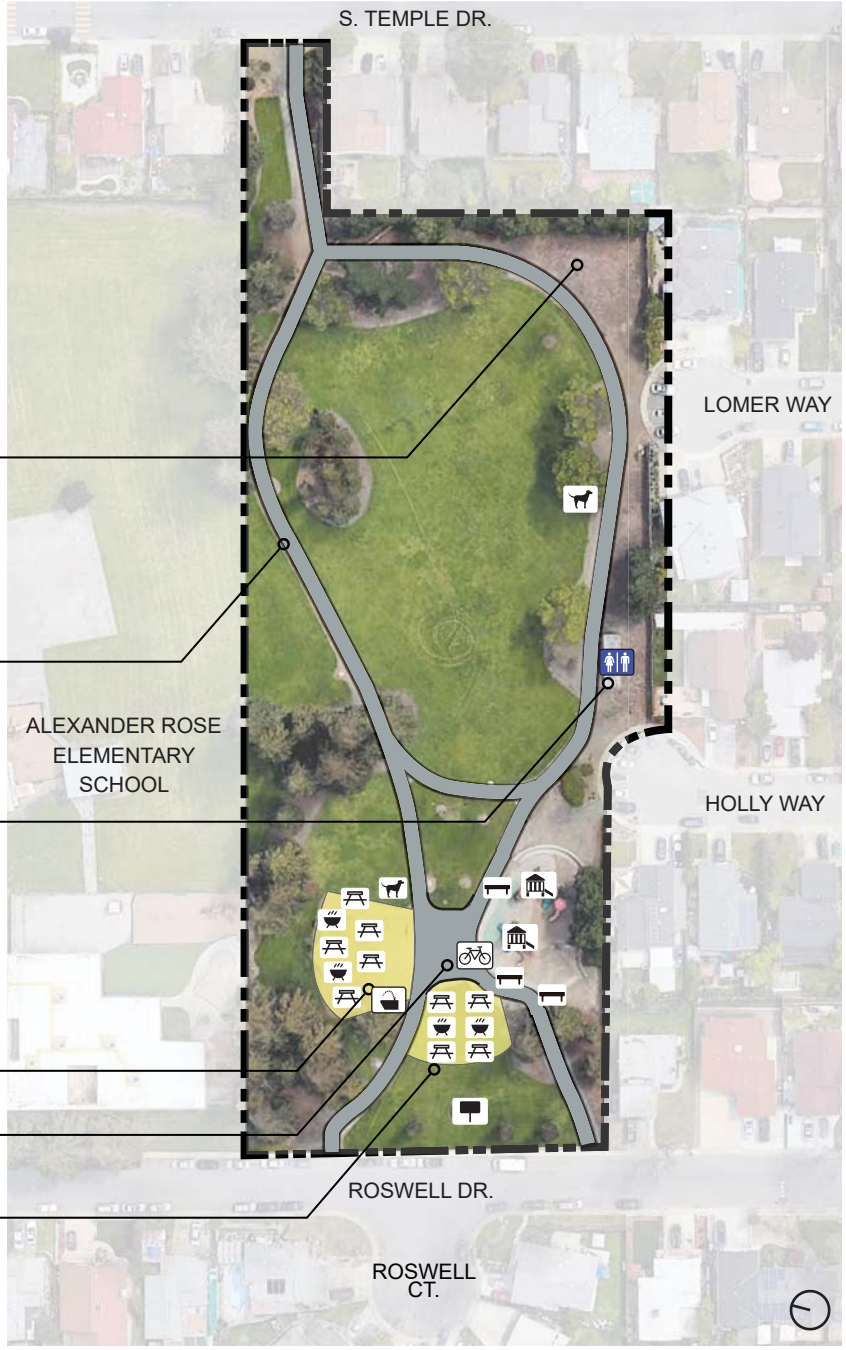
- Replace all existing picnic tables and barbecues with current Milpitas standard, provide ADA accessible models. Add ash receptacles at picnic area.
- Replace all benches with current Milpitas standard, placed on concrete pads to ensure accessibility.
- Add dog waste station
- Refurbish Restroom Building: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Mulch bare planting areas. Weed, prune and fertilize all planted areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Pave existing picnic area with concrete, add ADA accessible drinking fountain and trash receptacle.
- New picnic area: New concrete picnic area with shade structure. Provide one trash/recycle receptacle and one ash receptacle.
- Pave central area between picnic and playground to be used as community event space. Add shade structure.
- Replace gravel path with 9' wide concrete path. Address drainage issues at path.
- Pedestrian lighting replacement.
- Landscape Replant bare landscape areas with drought tolerant California natives, repair or replace irrigation system as necessary. Replace irrigation controller.
- Right of Way Improvement: Install ADA curb ramps at park entrances, accessibility signage, driveway approaches with bollards, crosswalk striping, and sidewalk, curb and gutter repairs as needed.

1. See Appendix E: Facility Condition Assessment

FOOTHILL PARK
PROPOSED SITE IMPROVEMENTS PLAN



Replant bare landscape areas, typ.

New 9' concrete paths, add pedestrian lighting

Refurbish restroom

Update picnic area

Pave central plaza, add shade structure

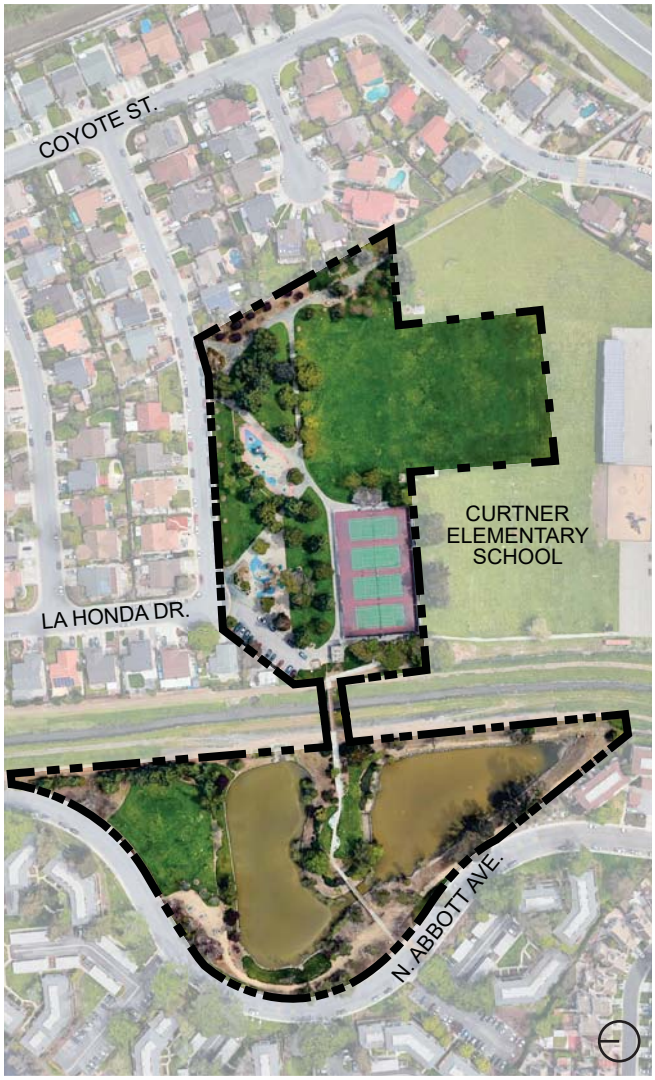
New concrete picnic area with shade structure

LEGEND

- Picnic Table (9)
- BBQ (4)
- Drinking Fountain (1)
- Dog Station (1)
- Bench (3)
- Restroom
- Entry Sign (1)
- Play Structure (2)
- Bike Rack (1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	2	EA	$5,000.00	$10,000
2	Bench	2	EA	$3,000.00	$6,000
3	Picnic Table	5	EA	$4,000.00	$20,000
4	Dog Waste Station	1	EA	$1,500.00	$1,500
5	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$115,000	$115,000
	SUBTOTAL Short Term Park Improvements				$152,500
	Soft Costs (Administration, Inspection) - 30%				$45,750
				Short Term Repairs & Upgrades TOTAL	$198,250
B.	Long Term Park Improvements				
1	Demolition & Grading	30,000	SF	$5.00	$150,000
2	Pave Walking Path (9' Wide, 4" Concrete over 6" CL II AB)	14,500	SF	$16.00	$232,000
3	Drainage	1	LS	$100,000.00	$100,000
4	Pedestrian Lighting Replacement	1	LS	$150,000.00	$150,000
5	Large Shade Structure	2	EA	$130,000.00	$260,000
6	Irrigation and Landscape	4	Acre	$75,000.00	$300,000
7	Site Furnishing	1	LS	$200,000.00	$200,000
8	Right-of-Way Concrete Improvement	1	LS	$75,000.00	$75,000
9	Pave Pincinc Areas (Concrete)	5,000	SF	$16.00	$80,000
	SUBTOTAL Long Term Park Improvements				$1,547,000
	Mobilization - 15%				$232,050
	Design & Construction Contingency - 30%				$464,100
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$464,100
				Long Term Park Improvements TOTAL	$2,707,250
				IMPROVEMENTS TOTAL	$2,905,500
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				



HALL MEMORIAL PARK

La Honda Dr. and Coyote St.

Type: Neighborhood Park
Size: 9.91 acres
Construction Date: 1979
Latest Renovation: 2007 (Pathway Improvements)

PARK OVERVIEW

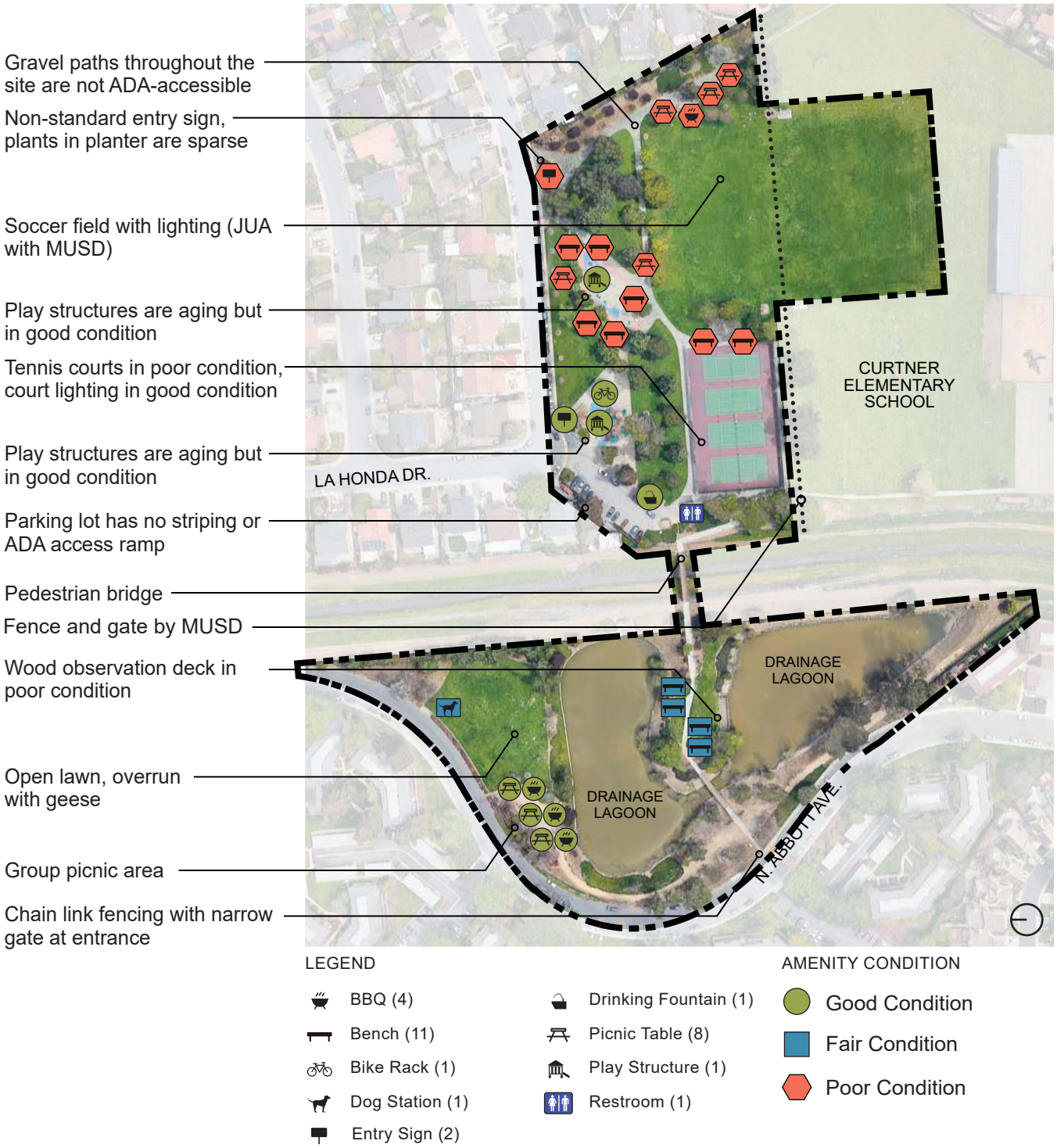
Hall Memorial Park is divided into two distinct sections separated by the Lower Penitencia Creek Channel.

The eastern side of the site contains two playgrounds installed in 2004, four tennis courts with a backboard, picnic areas, and a restroom. A soccer field shared with the Curtner Elementary School as part of a Joint Usea agreement is popular for tournaments. All furnishings and infrastructure are aging and need renovation. Pedestrian and tennis court and soccer field lighting is provided, however the pedestrian lighting was not operating at the time of this document. The parking lot provides approximately 20 spaces, however there is no striping and no ADA parking spaces or ramp.

The west side of the site is accessed via pedestrian bridge over the Lower Penitencia Creek Channel or from N. Abbott Ave. The main pathway accessing this side of the site was updated in 2007 with new paving and amenities. This area is an open space park consisting of two drainage lagoons ringed by trails. Picnic tables, benches and a deck over the southern lagoon provide opportunities for viewing wildlife. This area attracts migratory birds and has potential for enhancements that will create a rich wildlife environment.

The park is largely ADA non-compliant due to poor gravel pathways, no accessible parking, and no ADA accessible benches or tables provided.

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** All tables and benches in the eastern section of the park are in poor condition. Tables and benches in the western section are newer composite furnishings in poor to fair condition.

2 **Playgrounds:** The playground equipment is aging but well-maintained. Safety surfacing is in good condition and provides access to equipment and sand play areas. The two playgrounds are well designed and provide a strong sense of entry into the park

Accessibility

1 **Pathways:** The east side of the site consists of gravel pathways that are not ADA-accessible.

1 Pathways: The central pathway between lagoons on the west side of the site is concrete and accessible

2 **Furnishings:** No ADA-accessible furnishings are provided on the east side of the site, only two ADA accessible tables are located in the west side of the site

3 **Play Equipment:** Play equipment is accessible via safety surfacing, however there are limited accessible paths of travel to the play areas.

4 **Parking:** There are no designated ADA spaces or accessible ramps. Sand used for emergency flood control sandbags is stored at the rear of the parking lot.

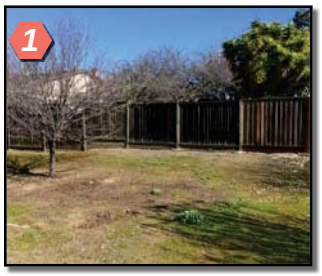
5 **Pedestrian Bridge:** Structural analysis of the two pedestrian bridges is needed to identify any repairs or replacement for ADA accessibility or structural work.

Sports Facilities

1 **Soccer Field:** The soccer field is in poor condition. Turf is bare in many areas due to heavy use.

2 **Tennis Courts:** The tennis courts need resurfacing and repainting. The windscreen netting is in poor condition and missing in areas. The wooden ball wall needs replacement.

Landscaping & Maintenance



1 **Landscape Planting:** There is minimal planting on the east side of the site, and planters and planting areas are largely bare. The west side of the site has areas of California natives that are moderately maintained. The slopes of the drainage lagoons are stabilized by non-native iceplant.

2 **Fencing:** Chain link fencing at play areas is broken and inconsistent. On the west side of the park a 9' chain link perimeter fence runs along N. Abbott Ave. A 4' pedestrian gate and 12' sliding vehicular gate provide access to the park. This chain link fencing does not provide a clear entry point for visitors.

3 **Turf:** Due to heavy use and a lack of maintenance, turf is in poor condition throughout the site.

Trees: Trees are well-maintained throughout the park.

Irrigation: This site is on the City's centralized irrigation system using potable water.

Restroom: Restroom is in fair condition, see Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace all benches with current Milpitas standard, place on concrete pads to ensure accessibility.
- Replace all picnic tables and barbecues with current Milpitas standard, provide ADA accessible models. Provide ash receptacles.
- Replace existing wood observation deck, add interpretive signage and ensure ADA accessibility from adjacent paths.
- Resurface tennis courts and replace windscreen fabric.
- Refurbish Restroom Building: Interior floor refinish and repaint. Fix electrical issues and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Expand east picnic area: Replace all picnic tables and barbecues with current Milpitas standard and pave picnic areas with concrete. Provide eight picnic tables (at least two accessible), four barbeques, two trash/recycle receptacles and two ash receptacles.
- Update parking lot: Grind and overlay, bring parking lot up to current accessibility codes.
- Replace play structure and sand surfacing with new equipment, poured in place surfacing and engineered wood fiber. Replace chain link fencing at playgrounds with 42” high black vinyl-coated chain link fencing.
- Replace bleachers, goals and player benches at soccer field
- Replace ball-wall.
- Replace east entry sign with City of Milpitas standard.
- Paint pickleball court lines on existing tennis courts.
- Replace gravel paths with 9’ wide concrete path. Ensure proper drainage.
- Repave asphalt paths adjacent to tennis courts with concrete paths.
- Add shade structures over benches at lagoon.
- Replace pedestrian lighting.
- Add wood observation deck with interpretive signage at north lagoon.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS (CONT.)

Long Term Improvement (Cont.)

- Replant entry areas with California Native drought tolerant planting. Adjust or repair irrigation as needed. Mulch with 3” layer of recycled wood mulch per Milpitas City standards.
- Replant banks of the lagoon with California Native drought tolerant planting. Plant with the intention of bank stabilization and erosion control. Repair/ replace irrigation system as needed.
- Reseed turf area by lagoon.
- Right of Way Improvement: Including but not limited to: installation of ADA curb ramps, accessibility signage, driveway approaches with bollards, crosswalk striping, sidewalk and curb and gutter repairs, sidewalk expansion, etc.

HALL MEMORIAL PARK
PROPOSED SITE IMPROVEMENTS PLAN

Expand picnic area
- Picnic tables (8)
- Barbecues (4)
- Trash/recycle (2)
- Ash receptacle (2)

Replant entry planter

Replace entry sign

Replace chain link fence

New 9' concrete paths

Replant entry planter

Replace play structures

Update parking lot

Resurface courts

Refurbish restroom

Replace ball-wall

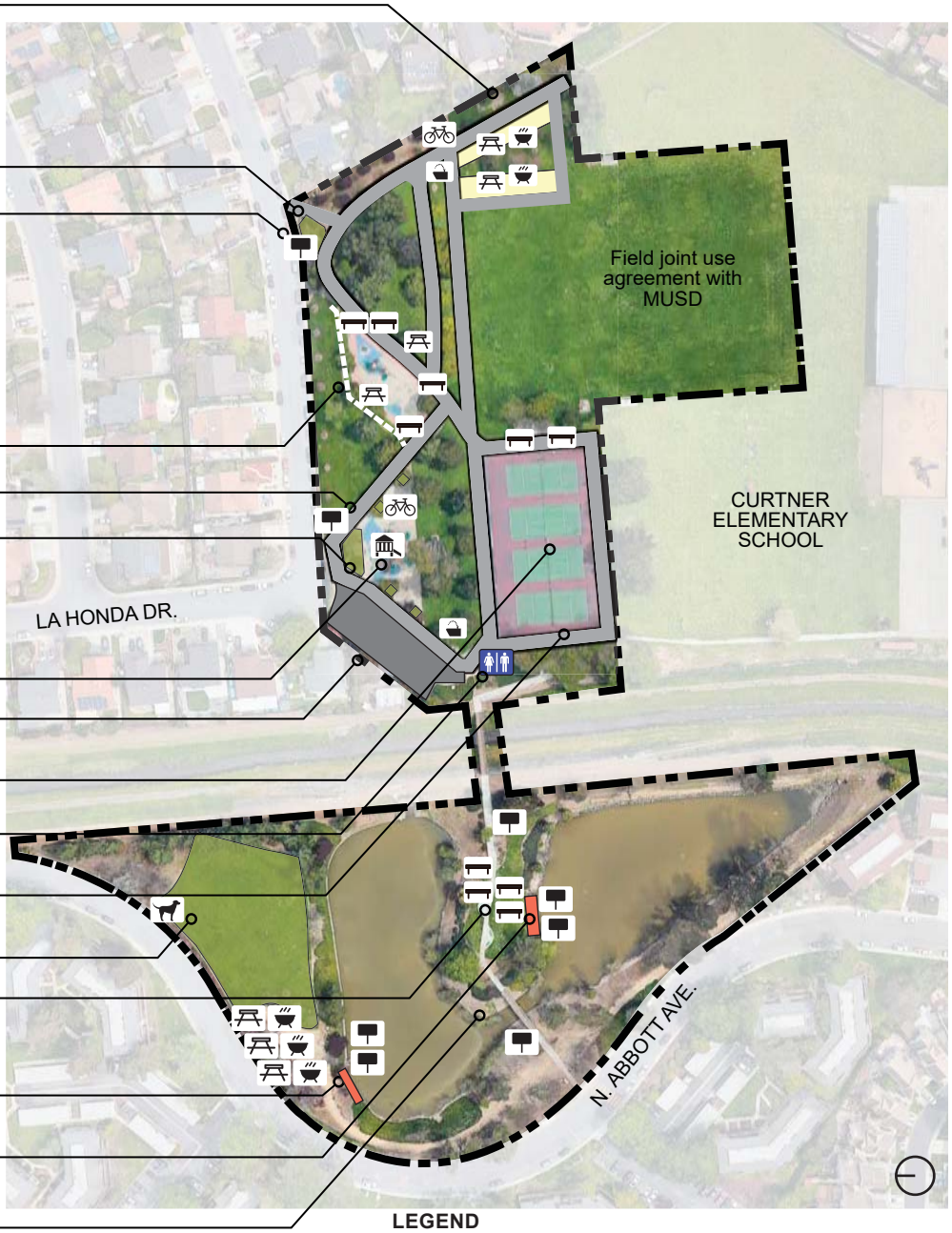
Reseed lawn

Add shade structures over benches

Add observation deck w/ interpretive signage

Replace observation deck, add interpretive signage

Replant banks of lagoon



LEGEND

- Picnic Table (13)
- BBQ (7)
- Bike Rack (2)
- Play Structure (1)
- Entry Sign (2)
- Bench (10)
- Dog Station (1)
- Drinking Fountain (2)
- Interpretive Signage (6)
- Restroom (1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	1	EA	$5,000.00	$5,000
2	Bench	7	EA	$3,000.00	$21,000
3	Picnic Table	5	EA	$4,000.00	$20,000
4	Tennis Court - Reseal & Restripe	4	EA	$6,500.00	$26,000
5	Reseed Lawn	25,000	SF	$2.15	$53,750
6	Repair Tennis Court Fencing	1	LS	50,000	50,000
7	Replacement fo Observation Deck	1	LS	100,000	100,000
8	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	66,000	66,000
	SUBTOTAL Short Term Park Improvements				$341,750
	Soft Costs (Administration, Inspection) - 30%				$102,525
				Short Term Repairs & Upgrades TOTAL	$444,275
B.	Long Term Park Improvements				
1	Demolition & Grading	80,000	SF	$5.00	$400,000
2	Pave walking path (9' Wide, 4" Concrete over 6" CL II AB)	14,000	SF	$16.00	$224,000
3	Resurface & Restripe Exisitng Parking Lot	7,500	SF	$4.50	$33,750
4	Drainage	1	LS	$125,000.00	$125,000
5	Pedestrian Lighting Replacement	1	LS	$200,000.00	$200,000
6	Pickleball Court Striping @ Tennis Courts	1	LS	$50,000.00	$50,000
7	Landscape and irrigation	3.00	Acre	$75,000.00	$225,000
8	Rigth of Way Improvement	1.00	LS	$50,000.00	$50,000
9	Replacement of playground equipment	2	EA	$300,000.00	$600,000
10	Pave Picnic Area	5,000	SF	$16.00	$80,000
11	Bleachers	8	EA	$24,000.00	$192,000
12	Soccer Goal	2	EA	$12,000.00	$24,000
13	Player Bench	8	EA	$5,000.00	$40,000
14	42" H Chain Link fence	200	LF	$125.00	$25,000
15	Ball Wall 18'	1	EA	$25,000.00	$25,000
16	Site furnishing	1	LS	$150,000.00	$150,000
17	Replace entry sign	1	EA	$5,000.00	$5,000
18	Interpretive Signage	6	EA	$5,000.00	$30,000
19	New Observation Deck	1	EA	$100,000.00	$100,000
20	Shade Sails	2	EA	$25,000.00	$50,000
	SUBTOTAL Long Term Park Improvements				$2,628,750
	Mobilization - 15%				$394,313
	Design & Construction Contingency - 30%				$788,625
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$788,625
				Long Term Park Improvements TOTAL	$4,600,313
				IMPROVEMENTS TOTAL	$5,044,588
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

HIDDEN LAKE PARK

N Milpitas Blvd. off Escuela Pkwy.

Type: Neighborhood Park
Size: 6.57 acres
Construction Date: 1984
Latest Renovation: 1987

PARK OVERVIEW

Hidden Lake Park is based around a large stormwater retention basin encircled by a perimeter asphalt path connecting to the Berryessa Creek Trail. This manmade lake captures stormwater from the surrounding area before slowly releasing it into Berryessa Creek. Picnic areas and seating are spaced around the perimeter path, offering views over the lagoon to the Milpitas hills. A boat dock is provided, in poor condition and in need of replacement.

The lake attracts turtles, ducks and other water fowl. It is very popular with the surrounding communities, and is highly used as a walking and running loop. Strategic enhancements could be made to increase the user experience of this park such as improving access points, overlooks and picnic areas.

The park currently needs renovation due to lack of ADA complaint amenities, the aging furnishings and infrastructure, eroding asphalt pathway, and an unsafe boat dock. The parking lot is non-ADA compliant and has many potholes and drainage issues. The asphalt pedestrian path has ADA compliance issues due to cracked and heaving pavement.

EXISTING SITE ASSESSMENT

Drainage issues

Eroding bank

Overlook

Boat dock

Shade structures over picnic tables

Stairs to Berryessa Creek Trail, in good condition. Closed to the public at the time of this document

Pump house tagged with graffiti

Stairs to Berryessa Creek Trail, in good condition

LEGEND

- BBQ (1)
- Bench (1)
- Picnic Table (9)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Picnic tables, barbecue and benches are in poor condition.

1 Shade structure is provided at the north corner of the site, which is in fair condition.

Accessibility

1 **Pathways:** Asphalt paths are in fair condition with some areas of cracked and heaving pavement.

1 Stairs to the overlook are not up to current code.

2 **Furnishings:** No ADA-accessible tables or benches are provided.

3 **Parking:** No ADA-accessible parking space, ramp, or path of travel is provided. Asphalt is in poor condition, with large potholes and drainage issues.

Landscaping & Maintenance

1 **Landscape Planting:** Most original planting is gone, there is no mulch in planting areas. Iceplant covers the banks of the lagoon.

2 **Fencing:** Ornamental metal fencing is in poor condition, rusted and covered in bird droppings.

3 **Trees:** Newly planted trees are in good condition. Mature trees on site may pose safety risks in the future.

Irrigation: This site is on the City's centralized irrigation system using potable water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Repair parking lot: Grind and overlay parking lot, restripe and add ADA accessible stalls, signage and curb ramps.
- Repair asphalt path: Patch and repair accessibility trip hazards and drainage issues. Repair riprap where necessary.
- Replace all picnic tables and barbecues with current Milpitas standard, provide ADA accessible models. Provide ash receptacles.
- Replace all benches with current Milpitas standard.
- Replace current fishing pier and explore boat activity programming, i.e. paddle boats, kayaks, canoes.
- Replace stairs at overlook, bring up to current code
- Repaint ornamental metal fence
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.
- Conduct tree survey to identify potentially hazardous trees.

Long Term Improvement

- Repave asphalt path
- Update picnic areas: Pave picnic area, provide one trash/recycle and one ash receptacle at entrance picnic area.
- Add restroom at entrance of park.
- Add benches, interpretive signage and wooden shade trellis at overlook.
- Add interactive exhibits and educational signage providing information on local ecology and storm water management.
- Add pedestrian lighting along path.
- Add distance markers for joggers.
- Bring stairs at overlook up to current code.
- Add trees along walking path.
- Replant planting areas at entrance to park.

HIDDEN LAKE PARK
PROPOSED SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Replace Boat Deck	1	LS	$100,000.00	$100,000
2	Parking Lot (Resurface & Restripe)	7,000	SF	$4.50	$31,500
3	BBQ & Ash Receptacle	1	EA	$5,000.00	$5,000
4	Bench	1	EA	$3,000.00	$3,000
5	Picnic Table	9	EA	$4,000.00	$36,000
6	Repaint Ornamental Metal Fence	1	LS	$5,000.00	$5,000
8	AC Path Spot Repair	1	LS	$30,000.00	$30,000
9	Replace Overlook Stairs	1	LS	$25,000.00	$25,000
10	Tree survey	1	LS	$5,000.00	$5,000
11	Landscape Maintenance	1	LS	$5,000.00	$5,000
	SUBTOTAL Short Term Park Improvements				$245,500
	Soft Costs (Administration, Inspection) - 30%				$73,650
				Short Term Repairs & Upgrades TOTAL	$319,150
B.	Long Term Park Improvements				
1	Demolition & Grading	25,000	SF	$5.00	$125,000
2	Repair Asphalt Paving (9' Wide, 3.5" AC over 14.5" CL II AB)	14,000	SF	$12.50	$175,000
3	Pedestrian Lighting	1	LS	$250,000.00	$250,000
4	Prefabricated Restroom (Single Stall)	1	LS	$200,000.00	$200,000
5	Utilities for New Restroom (Water, Sewer, Electrical)	1	LS	$100,000.00	$100,000
6	Interpretive Signage	5	EA	$10,000.00	$50,000
7	Rigth of Way Improvement	1	LS	$25,000.00	$25,000
8	Site Furnishing	1	LS	$75,000.00	$75,000
9	Small Shade Structure	2	LS	$75,000.00	$150,000
10	Landscape and irrigation	1	LS	$250,000.00	$250,000
11	Fitness Stations	6	EA	$10,000.00	$60,000
12	Pave Picnic Area (Concrete)	4,500	SF	$16.00	$72,000
	SUBTOTAL Long Term Park Improvements				$1,532,000
	Mobilization - 15%				$229,800
	Design & Construction Contingency - 30%				$459,600
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$459,600
				Long Term Park Improvements TOTAL	$2,681,000
				IMPROVEMENTS TOTAL	$3,000,150
C.	Additional Features Annual Maintenance Cost				
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
				Annual Maintenance TOTAL	$7,500

HILLCREST PARK

Fieldcrest Dr. off Crescent Terrace

Type: Neighborhood Park
Size: 5.08 acres
Construction Date: 1989
Latest Renovation: 2020 (Playground)

PARK OVERVIEW

Hillcrest Park is a mid-size park located in a quiet neighborhood. This park is intended for passive recreation with a large looped walking path and large open lawns, lit with pedestrian lighting. The main entrances at the center of the park meet at a small play area and group picnic area. The play area was renovated in 2020 with new play equipment and the sand surfacing was replaced with engineered wood fiber.

The north and south ends of the site have two picnic tables and barbeques each, however no ADA accessible tables or benches are provided. An art piece is located adjacent to the central picnic area. This park is overall in good condition overall, with the need to update the site furnishings for accessibility.

EXISTING SITE ASSESSMENT

Walking loop path in good condition

Play area, renovated in 2020

Walking loop path in good condition

LEGEND

- BBQ (9)
- Bench (5)
- Picnic Table (9)
- Play Structure (1)
- A Art (1)
- Drinking Fountain

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Nine picnic tables and barbeques are in poor condition.

2 **Play Area:** Play equipment and poured in place safety surfacing replaced in 2020, are in good condition.

Accessibility

1 **Pathways:** Asphalt pathways are in good condition.

2 **Furnishings:** No ADA-accessible tables or benches are provided. All furnishings are set on decomposed granite paths detached from the path of travel.

3 **Play Areas:** Accessible poured in place surfacing and equipment is provided.

Landscaping & Maintenance

1 **Landscape Planting:** Landscape planting is simple and well-maintained.

2 **Turf:** Turf is well-maintained, free of bare spots or gopher holes.

2 **Trees:** Trees are well-maintained.

Irrigation: This site is on the City's centralized irrigation system using potable water.

Lighting: Pedestrian lighting is provided, in good condition.

3 **Signage:** Park entry sign is missing hours panel

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace all picnic tables and barbecues with current Milpitas standard, provide ADA accessible models. Provide ash receptacles.
- Replace bench to the east of the play area, protect in place south benches
- Replace missing park hours sign
- Replace drinking fountain
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Pave picnic areas with concrete, add trash/recycle receptacles. Add shade structures where existing tree canopies do not provide shade.
- Add additional benches along the walking path
- Replace pedestrian lighting
- Add eight fitness stations along main walking path loop.
- Add chess/checkers picnic game tables at central picnic areas.
- Hangout space: Add concrete seating area with overhead shade structure, concrete ping pong tables and seating with integrated power/charging stations.
- Add restroom.
- Add dog stations
- Replace landscape planting, repair and replace irrigation as needed, replace irrigation controller
- Right of Way Improvements: Install ADA curb ramps with bollards at all entries of the park

HILLCREST PARK
PROPOSED IMPROVEMENT SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	5	EA	$5,000.00	$25,000
2	Picnic Table	7	EA	$4,000.00	$28,000
3	Drinking Fountain	1	EA	$10,000.00	$10,000
4	Bench	1	EA	$3,000.00	$3,000
5	Replace Entry Sign Hours Panel	1	EA	$1,000.00	$1,000
	SUBTOTAL Short Term Park Improvements				$67,000
	Soft Costs (Administration, Inspection) - 30%				$20,100
				Short Term Repairs & Upgrades TOTAL	$87,100
B.	Long Term Park Improvements				
1	Demolition & Grading	20,000	SF	$5.00	$100,000
2	Fitness Stations (Including Surfacing & Curb)	8	EA	$10,000.00	$80,000
3	Prefabricated Restroom (Single Stall)	1	LS	$200,000.00	$200,000
4	Utilities for New Restroom (Water, Sewer, Electrical)	1	LS	$100,000.00	$100,000
5	Drainage	1	LS	$50,000.00	$50,000
6	Concrete Paving (4" DG over 6" CL II AB)	2,500	SF	$16.00	$40,000
7	Pedestrian Lighting Replacement	1	LS	$150,000.00	$150,000
8	Site Furnishing	1	LS	$200,000.00	$200,000
9	Landsacpe and Irrigation	4	Arces	$75,000.00	$300,000
10	Right-of-Way Improvement	1	LS	$100,000.00	$100,000
11	Small Shade structure	2	EA	$50,000.00	$100,000
12	Pave Picnic Area Concrete (4" DG over 6" CL II AB)	2,000	SF	$16.00	$32,000
	SUBTOTAL Long Term Park Improvements				$1,452,000
	Mobilization - 15%				$217,800
	Design & Construction Contingency - 30%				$435,600
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$435,600
				Long Term Park Improvements TOTAL	$2,541,000
				IMPROVEMENTS TOTAL	$2,628,100
C.	Additional Features Annual Maintenance Cost				
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
				Annual Maintenance TOTAL	$7,500

JOHN MCDERMOTT PARK

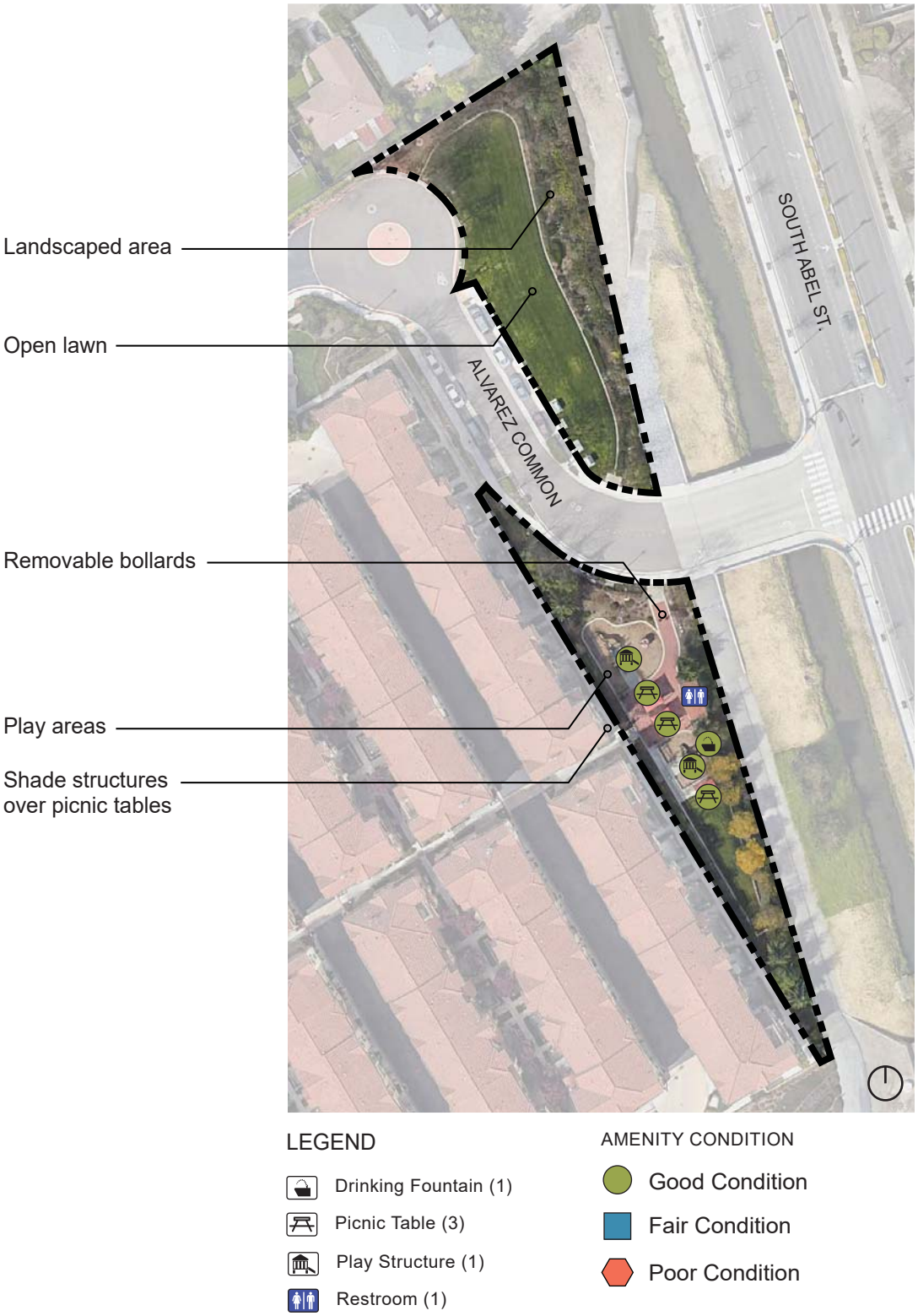
Alvarez Common

Type: Urban Park
Size: .94 acres
Construction Date: 2007

PARK OVERVIEW

John McDermott Park was constructed in 2007 as part of the Terra Serana development. This small park primarily serves local residents of the immediate neighborhood. It features a an informal lawn area, children's play areas offering a 2-5 year old and 5-12 year old play structures, shaded picnic tables and a restroom. No ADA accessible structures or tables are provided currently. Accessible models need to be added to provide for all users.

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Three metal tables are in good condition. One drinking fountain is in fair condition.
2. **Structures:** Picnic area shade sails are in good condition

Accessibility

1. **Pathways:** All paved areas are up to current code.
- **Furnishings: No** ADA-accessible tables or benches are provided.
- **Play Areas:** No accessible play equipment is provided. Fiber surfacing is low.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is simple and well-maintained.
2. **Turf:** Turf is well-maintained, free of bare spots or gopher holes.
3. **Accessibility:** Removable bollards at the entrance to the park are difficult to remove for maintenance vehicle access.

- **Trees:** Trees are well-maintained.
- **Irrigation:** This site is on the City's centralized irrigation system using recycled water.
- Restroom: Restroom is in good condition.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

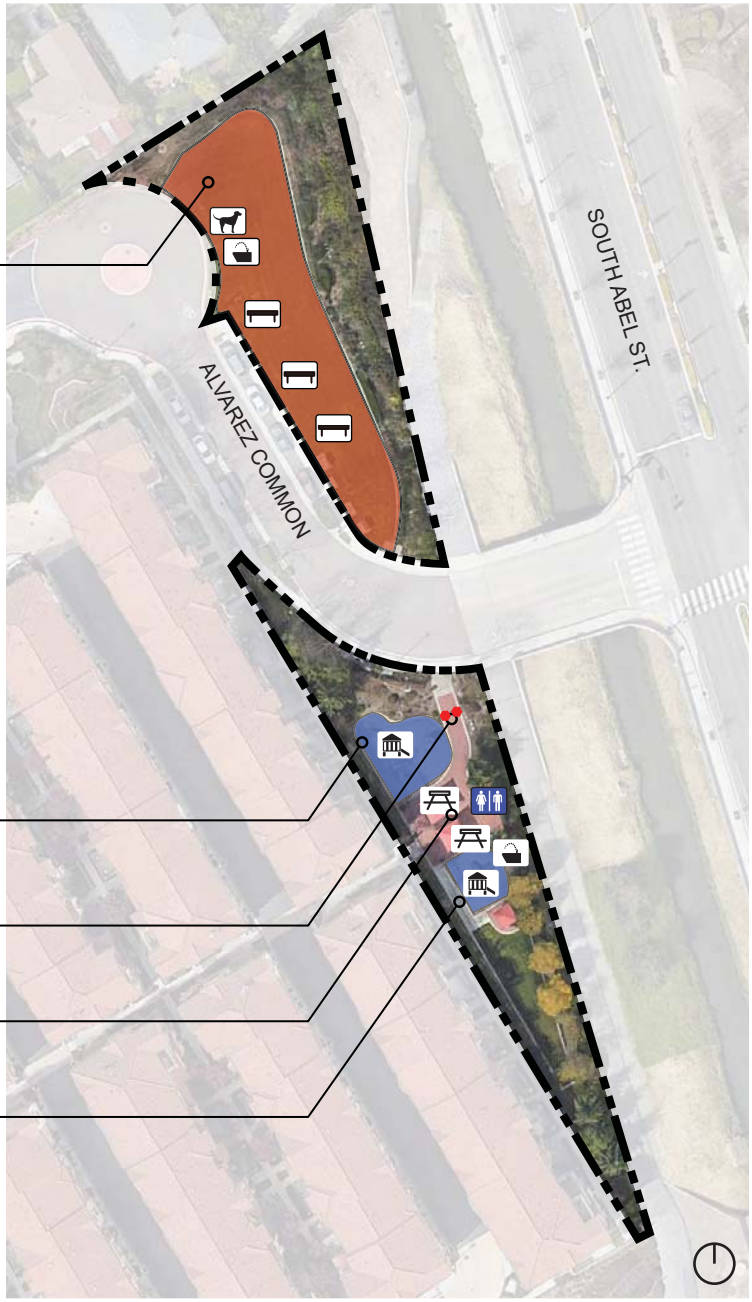
- Update play areas: Replace play slide in kind, replace safety surfacing and engineered wood fiber. [1]
- Replace one existing picnic table with an ADA accessible model.
- Remove bollards at entry and replace with Milpitas City standards.
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Add fenced, off-leash dog area with fenced dog entry area, signage, drinking fountain with pet bowl and a dog station. Repair surrounding planting and irrigation as needed.
- Landscape and Irrigation: Replant all landscape areas with drought tolerant California natives and mulch with 3” of landscape mulch. Repair and replace irrigation system as needed, replace irrigation controllers.

1. See Appendix G: Milpitas Playground Rehabilitation Project

JOHN MCDERMOTT PARK
PROPOSED SITE IMPROVEMENTS PLAN



Fenced dog area

Update playground

Remove/replace bollards

Add ADA-accessible table

Replace play equipment and surfacing, provide ADA accessible elements

LEGEND

- Picnic Table (2)
- Bench (3)
- Drinking Fountain (2)
- Play Structure (2)
- Dog Station (1)
- Removable bollard (2)
- Restroom (1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Accessible Picnic Table	1	EA	$4,000.00	$4,000
2	Replace Bollard with City Standard	2	EA	$2,000.00	$4,000
3	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$48,000.00	$48,000
4	Playground Equipement & Surface Repairs	1	LS	$40,205.00	$40,205
	SUBTOTAL Short Term Park Improvements				$96,205
	Soft Costs (Administration, Inspection) - 30%				$28,862
				Short Term Repairs & Upgrades TOTAL	$125,067
B.	Long Term Park Improvements				
1	Demolition and Grading	11,000	LS	$5.00	$55,000
2	Drainage	1	LS	$25,000.00	$25,000
3	Dog Park (.25 acre) (Includes 42" HT Chain Link Fencing, 3 benches, dog station and drinking fountian)	1	LS	$100,000.00	$100,000
4	Landscape and Irrigation	1	LS	$50,000.00	$50,000
5	Site Furnishing	1	LS	$25,000.00	$25,000
	SUBTOTAL Long Term Park Improvements				$255,000
	Mobilization - 15%				$38,250
	Design & Construction Contingency - 30%				$76,500
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$76,500
				Long Term Park Improvements TOTAL	$446,250
				IMPROVEMENTS TOTAL	$571,317
C.	Annual Maintenance Cost				
	Dog park (Twice Weekly)	10,890	SF	$0.12	$1,307
				Annual Maintenance TOTAL	$1,307

JOSE HIGUERA ADOBE PARK

Wessex Pl., off N. Park Victoria Dr.

Type: Neighborhood Park
Size: 4.80 acres
Construction Date: 1980
Latest Renovation: 2017

PARK OVERVIEW

This neighborhood park is built around the historic Jose Higuera Adobe building, originally constructed in the 1830's. The building seen today is a facade built in 1960 to preserve the ruins of the old Adobe. Historical exhibits are displayed in the building and around the park for visitors to learn about the history of the site. The Adobe and adjoining picnic area can be rented for private events and parties.

Jose Higuera Adobe Park is separate from the Adobe building. Newly renovated in 2017, the park includes picnic areas along the edge of Calera Creek, group barbeques and picnic areas, and a play area at the west end of the park. The renovation work included upgrading the group picnic area to the east of the Adobe building. New stone tables, barbeques and shade structures create an inviting outdoor gathering space.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Furnishings

1. All site furnishings are in good condition.

Accessibility

1. **Pathways:** All pathways, ramps and stairs are up to current code.
2. **Furnishings:** ADA-accessible tables and benches are provided.
3. **Parking:** Two ADA parking stalls and accessible ramps are provided.

Landscaping & Maintenance

1. **Landscape Planting:** Planting is well-maintained with adequate levels of mulch.
2. **Fencing:** All ornamental and wood fencing is well-maintained.
3. **Erosion:** Decomposed granite paths are in good condition, however erosion will be an issue if maintenance is not regular.
4. **Trees:** Newly planted trees are in good condition. Mature trees on site may pose safety risks in the future.

- **Irrigation:** This site is on the City's centralized irrigation system using potable water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Add 4' chainlink fence and gates at reservable picnic areas
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- No long term improvements are recommended at the time of this document.

PROPOSED IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	4' HT Chainlink Fence	130	LF	$150.00	$19,500
2	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$79,000.00	$79,000
	SUBTOTAL Short Term Park Improvements				$98,500
	Soft Costs (Administration, Inspection) - 30%				$29,550
				Short Term Repairs & Upgrades TOTAL	$128,050
B.	Long Term Park Improvements				
	No long term park improvements proposed				

PARK CONCEPT RENDERS

MCCANDLESS PARK

McCandless Dr. off Montague Expy.

Type: Neighborhood Park
Size: 4.00 acres
Construction Date: 2022

PARK OVERVIEW

At the time of this document, McCandless Park is a proposed 4-acre public park adjacent to the newly constructed Mabel Mattos Elementary School.

The park will include lit sports fields, play areas, a butterfly garden, a community garden, fitness stations, shaded picnic areas, and a barn play area. Joint Use areas between the City and the Milpitas Unified School District include the sports field, play areas, and butterfly garden. Parking is shared between the MUSD and City under that Joint Use Agreement. All park areas will be lit with pedestrian lighting.

McCandless Park will also include a new pedestrian bridge over the East Penitencia Creek Channel and a potable water well required to meet the increase in water demands due to growth in the TASP and Midtown areas. There is a 50' PG&E Gas pipeline easement along the northern property line, restricting development in that area.

The two all-inclusive play areas are to be funded by a joint grant awarded to the City of Milpitas and the MUSD by the County of Santa Clara's All-Inclusive Playground Grant program. These playgrounds will serve people of all ages and abilities.

PROPOSED CONCEPT PLAN

PROPOSED IMPROVEMENTS

This park is currently under development per the above plan. No improvements are proposed at the time of this document.

ADDITIONAL FEATURES ANNUAL MAINTENANCE COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
	No short term repairs and upgrades proposed				
B.	Long Term Park Improvements				
	No long term park improvements proposed				
C.	Additional Features Annual Maintenance Cost				
	Mowing and edging (Weekly)	60000	SF	$0.04	$2,400
	Weed control (Twice Annually and As Needed)	100000	SF	$0.01	$1,000
	Mechanical weed control (As Needed)	40000	SF	$0.05	$2,000
	Pruning Plants (Twice Annually and As Needed)	40000	SF	$0.02	$800
	Fertilizing and Aeration (Two to Four Times Annualy)	60000	SF	$0.04	$2,400
	Empty trash cans (Twice Weekly and As Needed)	205365	SF	$0.04	$8,215
	Remove trash & misc. debris from landscape (2X Weekly)	40000	SF	$0.01	$400
	Inspect, adjust and repair irrigation system (Weekly)	100000	SF	$0.04	$4,000
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
	Playground inspection reports (Monthly)	2	EA	$6,500.00	$13,000
	Playground inspection (Monthly)	2	EA	$4,500.00	$9,000
	Parking lot cleaning (Weekly)	19500	SF	$0.12	$2,340
	Athletic field maintenance (Daily/Weekly)	60000	SF	$0.25	$15,000
	Herbicide application (Seasonally)	100000	SF	$0.01	$1,000
	Clean and repair drinking fountains (As Needed)	1	LS	$5,000.00	$5,000
	General Park Maintenance (As Needed)	205365	SF	$0.01	$2,054
	Dog park (Twice Weekly)	8,500	SF	$0.12	$1,020
				Annual Maintenance TOTAL	$77,128

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MILPITAS DOG PARK

Ed Levin County Park

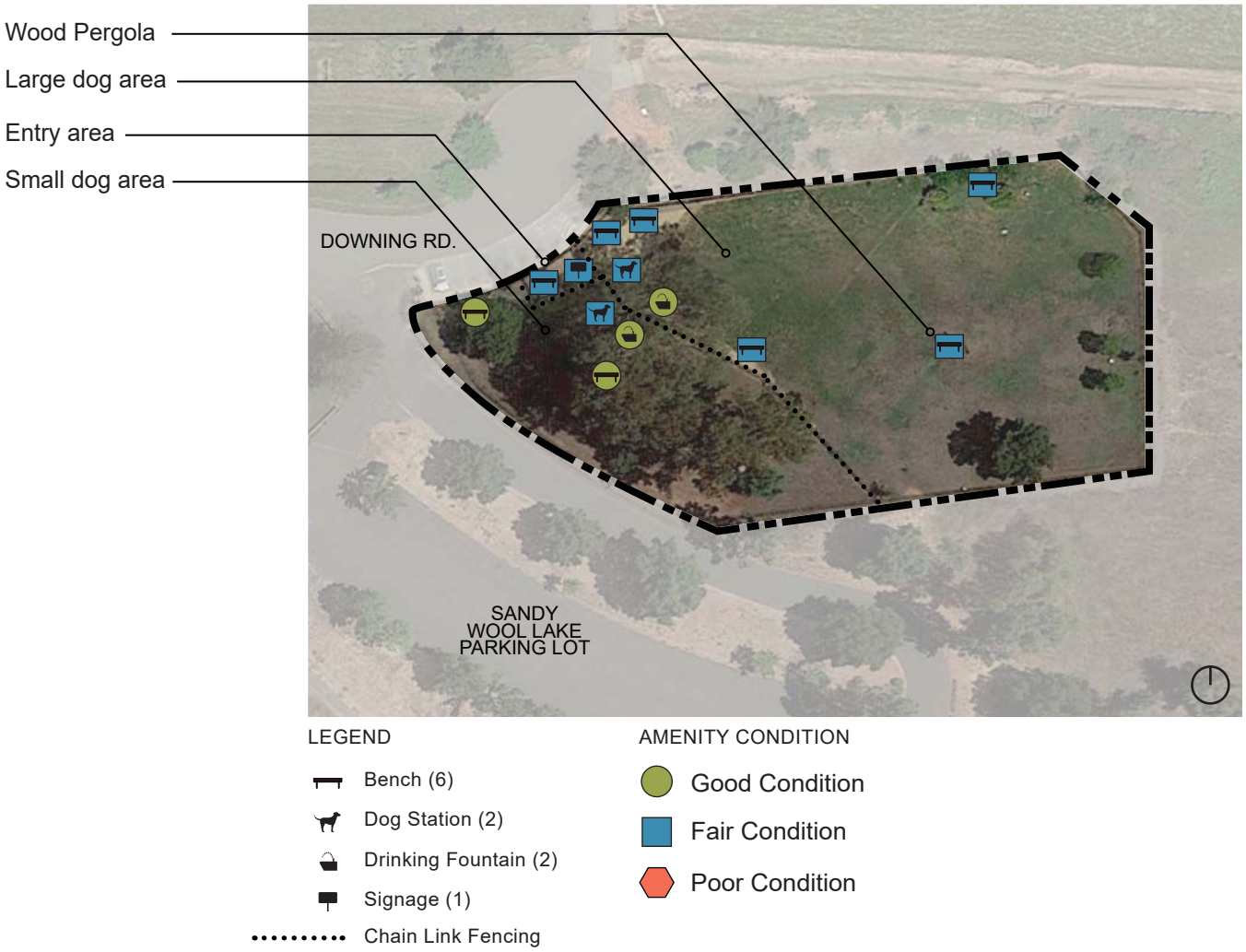
Type: Special Use Park
Size: 1.57 acres
Construction Date: 2004

PARK OVERVIEW

The Milpitas Dog Park is an off-leash dog exercise area situated at Ed Levin County Park. This park is part of a joint use agreement with the Santa Clara County Parks Department. The City maintains the park itself, while the County maintains the parking lot.

The dog park is divided into a large dog area, a small dog area and a fenced in entrance area. The park has six benches within the dog areas, two water fountains with dog bowls, three dog bag dispensers, and a wood shade structure in the large dog area. The dog exercise areas consist of turf and boundary fencing. No dog exercise equipment is provided.

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Benches are older models in fair condition, benches along the fences are in the path of travel of the dog run. Signage, dog stations and benches are older models in fair condition.

1 Water fountains with dog bowls are in good condition.

Accessibility

1 **Parking:** Accessible parking spots are provided, however cross-slopes exceed code.

Paths: This site is not accessible. All slopes and cross-slopes exceed code. Site location is not conducive to renovating for ADA access.

Landscaping & Maintenance

Turf: Turf is in fair condition. Maintenance is user led with shovels and equipment located on site.

Fencing: Chain link fencing is in good condition. Snake fencing along the bottom of chain link needs continued maintenance and patching.

Irrigation: This site is not on the City's centralized irrigation system.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace all park entry, informational and rules signage at entry. Ensure rules signage is updated to the current ordinance at time of replacement.
- Update ADA Parking stall: Ensure ADA stall meets all ADA codes as is feasible given site slope constraints. Ensure striping is clear and dimensioned correctly, ensure all applicable signage is provided and is legible.

Long Term Improvement

- No long term improvements are recommended at the time of this document.

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Replace Park Signage	1	LS	$10,000	$10,000
2	Update ADA parking stall	1	LS	$20,000	$20,000
	SUBTOTAL Short Term Park Improvements				$30,000
	Soft Costs (Administration, Inspection) - 30%				$9,000
				Short Term Repairs & Upgrades TOTAL	$39,000
B.	Long Term Park Improvements				
	No long term park improvements proposed				
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

MILPITAS SPORTS CENTER COMPLEX

1325 E. Calaveras Blvd.

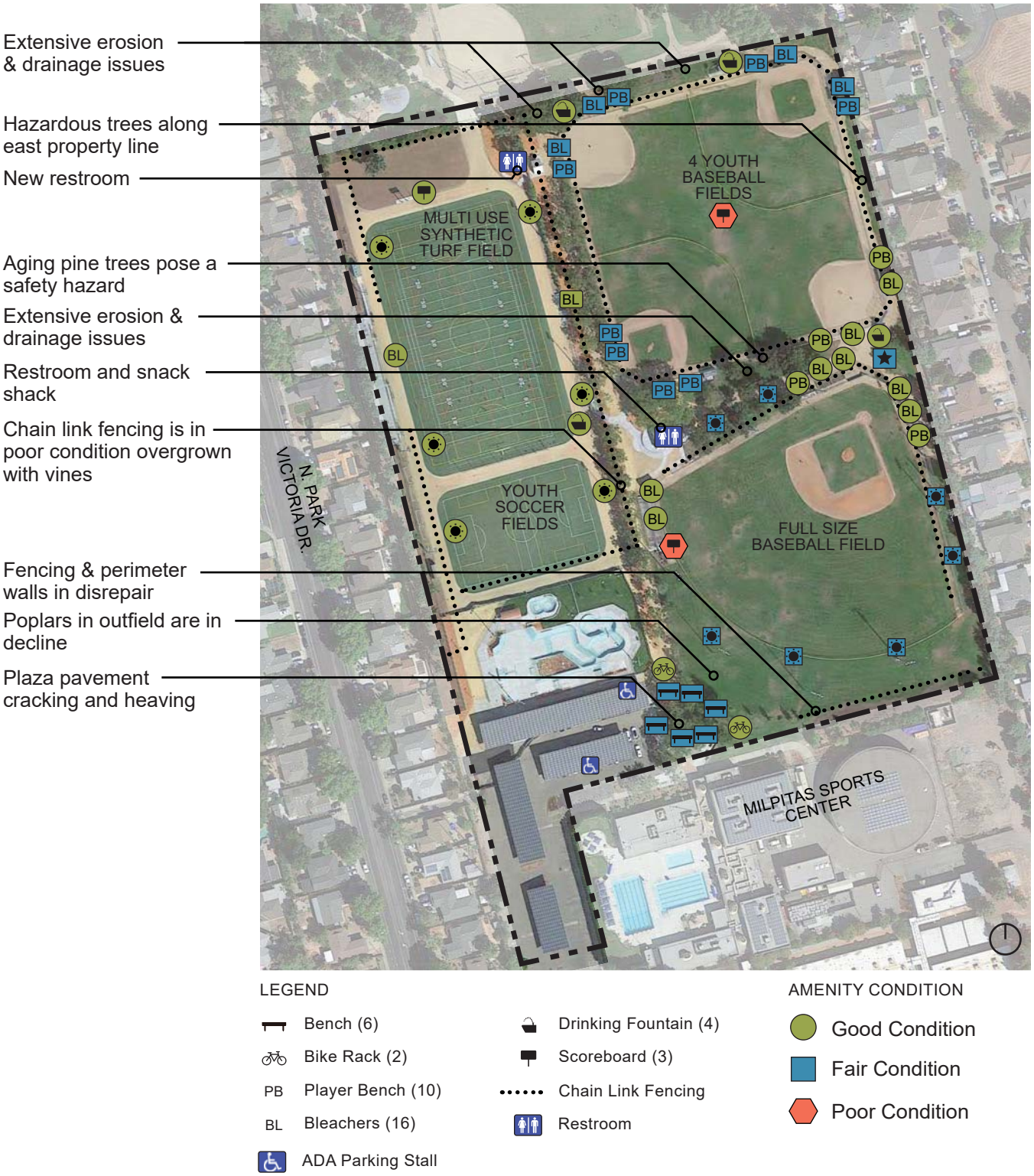
Type: Sports Complex
Size: 20.33 acres
Construction Date: ------
Latest Renovation: 2020 (Restroom & Snack Shack)

PARK OVERVIEW

The Milpitas Sports Center Complex includes one full size baseball field, four practice fields, a newly built full size soccer/football field, a practice soccer field, and the new Milpitas Skatepark. All fields are lit for evening play and include dugouts, bleachers and electronic scoreboards. A Snack Shack located between the baseball fields was constructed in 2020 and includes restrooms, concessions and storage. A 2 stall restroom was installed at the north end of the football field in 2020.

The Sports Center Complex is located adjacent to the Milpitas Sports Center and Cardoza Park. Parking is shared with the Sports Center.

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1. **Accessibility:** Site furnishings including water fountains, benches and bleachers are not ADA compliant, and are located in non-accessible areas.
2. **Benches & Bleachers:** Benches and bleachers are in fair condition. Many have faded or peeling paint, mild rusting and faded wood.
3. **Scoreboards:** With the exception of the scoreboard at the new multi-use synthetic turf fields, all scoreboards are aging and showing considerable wear.

Accessibility

1. **Pathways:** The majority of pathways on the site consist of unstabilized decomposed granite. Significant drainage issues and heavy traffic from maintenance vehicles cause extensive rutting and uneven walking surfaces. Plaza paving at the Sports Center entrance is cracked and heaving.
2. **Slopes:** Running slopes exceed 5% at multiple locations and cross-slopes greater than 2% are present at many areas. In heavily sloped areas runoff has created deep erosion channels.
3. **Stairs:** Stairs are not ADA compliant.

Sports Fields

1. **Dugouts:** Dugout player benches are outdated but in fair condition. Dugouts lack shade screening.
2. **Backstops and Fencing:** Backstops and fencing are generally in good condition. Gaps in fencing are minimal and the backstops are intact and painted.

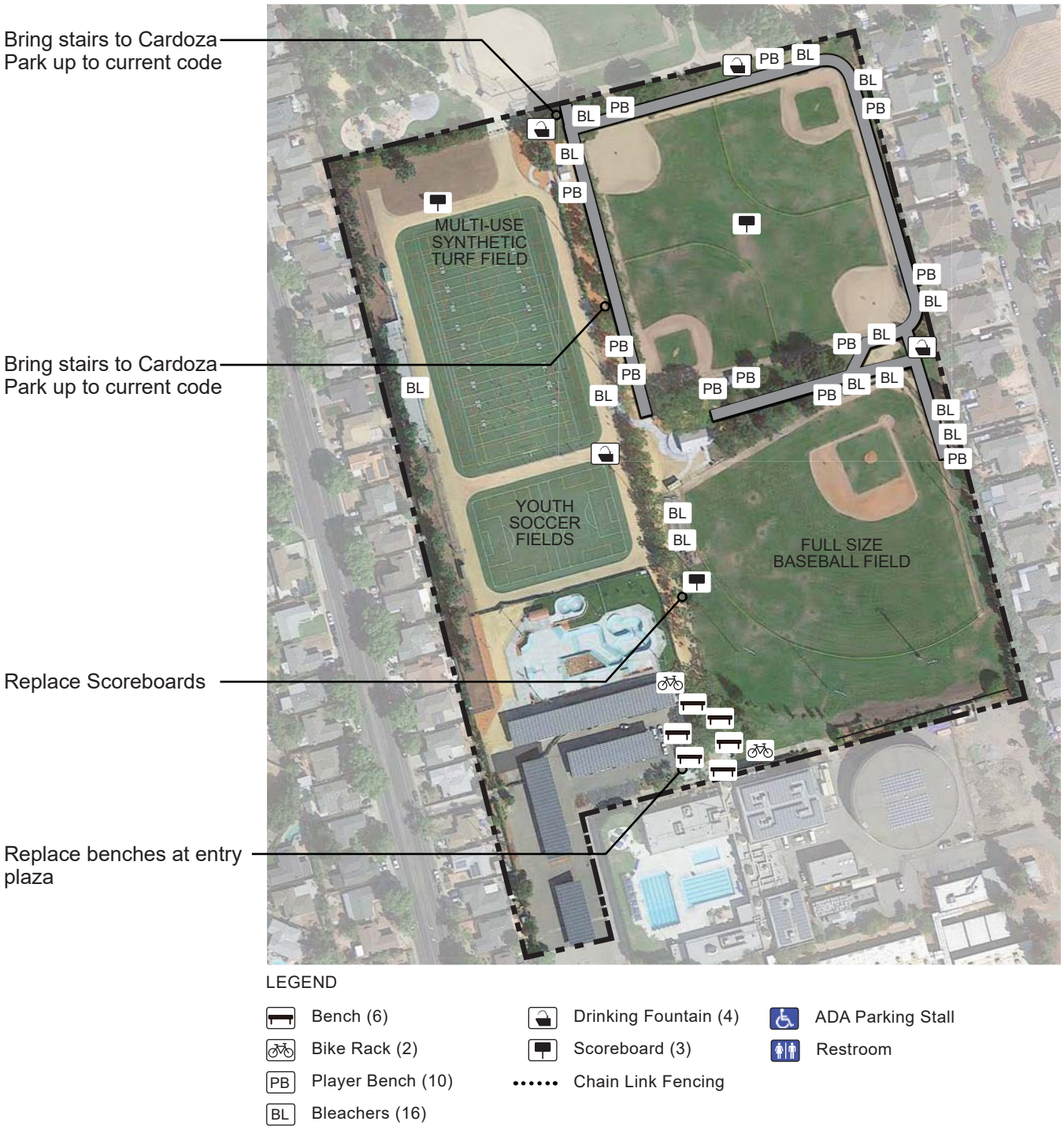
Landscape & Maintenance

1. **Landscape Planting:** Landscape planting is almost non-existent within the sports fields complex proper. Perimeter planting is unmaintained along fence-lines.
2. **Trees:** Poplar trees at the south field are in decline. Pine trees at the sports fields are also aging.
3. **Fencing & Walls:** Numerous portions of perimeter chain link fencing are in disrepair. Perimeter walls are overgrown with ivy and covered with graffiti. Interior fencing along sports fields is in good condition.
4. **Turf:** Turf is in fair condition with some gopher issues. Sports field turf is well-maintained.

- **Irrigation:** This site is on the City's centralized irrigation system using potable water.

MILPITAS SPORTS CENTER COMPLEX

SITE PLAN



SITE IMPROVEMENTS

Short Term Improvement

- Replace access stairs to Cardoza park with concrete steps and an ADA accessible ramp. Connect to new concrete paths.
- Remove and replace all hazardous trees along eastern residential property line.
- Improvement pathway and ramps for accessibility.
- Repair perimeter fencing and walls.

Long Term Improvement

- Pave all existing decomposed granite paths with 9' concrete paths
- Address drainage issues by installing new storm drain system
- Refurbish player benches. Repaint and remove rust, replace boards where necessary.
- Replace benches at entry plaza
- Replace aging bleachers.
- Replace all site furnishing
- Replace chainlink fencing between Multi-Use Synthetic and Baseball Fields
- Replace all scoreboards.
- Landscape maintenance and improvements: Replant all landscape areas with drought tolerant California natives and mulch with 3" of landscape mulch. Repair and replace irrigation system as needed, replace irrigation controllers.

A comprehensive site improvement plan will be part of a future Sports Center Master Plan done by others.

IMPROVEMENTS COST

	Item	Quantity		Unit Cost
A.	Short Term Repairs & Upgrades			
1	Replace Concrete Stairs at Cardoza Park	1	LS	$50,000.00
2	Remove and replacement of hazardous trees along eastern property line	1	LS	$150,000.00
3	ADA pathway & accessible improvements	1	LS	$100,000.00
4	Perimeter Fencing & Wall repairs	2	LS	$100,000.00
	SUBTOTAL Short Term Park Improvements			
	Mobilization - 15%			
	Design & Construction Contingency - 30%			
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%			
				Short Term Park Improvements TOTAL
B.	Long Term Park Improvements			
1	Demolition & Grading	30,000	SF	$4.00
2	Asphalt pathway (9' Wide, 4" Asphalt over 8" CL II AB)	18,000	SF	$12.50
3	Decomposed Granite path (4" Concrete over 4" CL II AB)	12,000	SF	$8.00
4	Drainage Improvement	1	LS	$200,000.00
5	Player Bench	9	EA	$2,000.00
6	Site Furnishings	1	LS	$75,000.00
7	Bleachers	4	EA	$24,000.00
8	Shade Fabric at Dugout	1	LS	$25,000.00
9	Landscape maintenance and improvements	1	LS	$125,000.00
10	Fencing Replacement Between Multi-Use Synthetic and Baseball Fi	700	LF	$100.00
11	Replace Scoreboard	3	EA	$35,000.00
	SUBTOTAL Short Term Park Improvements			
	Mobilization - 15%			
	Design & Construction Contingency - 30%			
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%			
				Short Term Park Improvements TOTAL
				IMPROVEMENTS TOTAL
C.	Additional Features Annual Maintenance Cost			
	No additional features are proposed for this site			

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MURPHY PARK

Yellowstone Ave. off S. Park Victoria Dr.

Type: Neighborhood Park
Size: 8.30 acres
Construction Date: 1969
Latest Renovation: 2017/2018 (Ashalt paths and parking lot resurface)

PARK OVERVIEW

Murphy Park is a large neighborhood park sharing its northern border with Merryhill Elementary School, part of the Milpitas Unified School District. The park is surrounded on all sides by residential neighborhoods and is accessed via cul-de-sacs and an 18 spot parking lot, resurfaced in 2018.

It has several well-designed nodes including picnic and play areas. The play area and picnic areas have a defined sense of enclosure through the use of mature trees and landscape berms. The park currently hosts events, and open areas provide the opportunity for an outdoor community event space/amphitheater.

The north side of the site is an open turf field used for soccer and other active recreation, this field is shared with the MUSD as part of a joint use agreement. There is a popular asphalt bike trail running along the eastern edge of the park that connects to the school and to several other parks. The bike trail integrates into a the park circulation system, all asphalt paths were resurfaced in 2017. Fitness stations are provided at regular intervals along the trail.

This park requres renovation due to a lack of ADA accessible amenities, outdated play areas, aging furnishings and infrastructure, drainage issues and landscaping. Possibilities for redesign include adding community event spaces and new picnic areas.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Furnishings

1. **Amenities:** All standard benches and picnic tables are in poor condition. Two memorial benches are in good condition.
2. **Play Areas:** Play equipment is in fair condition, however it is not up to current accessibility or safety codes. Sand surfacing is spilling onto surrounding pathways.
3. **Workout Stations:** Seven workout stations circle the park along the perimeter trail and connect to the workout station course in Robert E. Browne Park. All workout stations are outdated wood and metal equipment. Most are rotting, rusted and non-operational.
4. **Signage:** Non-standard entry sign is in poor condition..

Accessibility

1. **Pathways:** Asphalt pathways are in good condition. All slopes conform to current code.
2. **Furnishings:** No ADA-accessible furnishings are provided. All picnic tables are set outside of accessible paths of travel.
3. **Play Area:** Play equipment has some accessible elements, however the sand surfacing is not accessible.
4. **Parking:** The site has a small surface parking lot with standard parking stalls, however, there are no accessible stalls. A ramp is provided to the adjacent pathways, but is not up to code.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Landscape Planting:** Landscape planting is minimal. Original planting is mostly gone and has been replaced with ivy.

2 **Drainage:** There are significant drainage issues at the restroom. Water is ponding at low points of the path and surrounding planting areas. There is some ponding at the ADA ramp in the parking lot. The soccer field is at a low point and collects water.

3 **Trees:** Trees at the north lawn area are crowded and are of varying species. Many mature trees on site pose potential safety hazards.

4 **Restroom:** Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

Irrigation: This site is on the City's centralized irrigation system using potable water.

Lighting: Pedestrian lighting was not operating at the time of site inspection.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Update picnic areas: Replace all picnic tables and barbeques with current Milpitas standard, and provide two ash receptacles.
- Replace all existing benches other than memorial benches with current Milpitas standard, place on concrete pads to ensure accessibility.
- Replace all workout equipment, place on poured in place pads.
- Replace dog waste station at turf field.
- Replace existing entry sign with current Milpitas standard sign.
- Repave asphalt at restroom to address drainage issues.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]

1. See Appendix E: Facility Condition Assessment

Long Term Improvement

- Pave picnic areas with decomposed granite paving and provide two trash/recycle receptacles.
- Community event space: Paved plaza area with perimeter seating and overhead shade structure. Use adjacent lawn as overflow seating and event space.
- Remove and replace play area: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Include integrated shade structures.
- Update and expand parking lot: Resurface and re-stripe existing lot, bring parking lot up to current accessibility codes. Expand lot to the north, add an additional 18 stalls and tie into new pathways.
- Add additional picnic area adjacent to expanded parking lot with ADA accessible tables barbeques, ash receptacles and new circulation to tie into existing park paths.
- Replace pedestrian lighting.
- Replace park entry sign.
- Improve drainage and irrigation at soccer field, replace turf as necessary.
- Landscape and Irrigation: Replant all landscape areas with drought tolerant California natives and mulch with 3” of landscape mulch. Repair and replace irrigation system as needed, replace irrigation controllers.
- Right of Way Improvement: Including but not limited to: installation of ADA curb ramps, accessibility signage, driveway approaches with bollards, crosswalk striping, sidewalk and curb and gutter repairs, sidewalk expansion, etc.

MURPHY PARK

PROPOSED IMPROVEMENTS SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	3	EA	$5,000.00	$15,000
2	Bench	9	EA	$3,000.00	$27,000
3	Picnic Table	6	EA	$4,000.00	$24,000
5	Entry Sign (City Standard)	1	EA	$5,000.00	$5,000
6	Repair drainage and AC issue near restroom	1	LS	$35,000.00	$35,000
7	Fitness Stations (Including Surfacing & Curb)	6	EA	$10,000.00	$60,000
8	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$64,000.00	$64,000
	SUBTOTAL Short Term Park Improvements				$230,000
	Soft Costs (Administration, Inspection) - 30%				$69,000
				Short Term Repairs & Upgrades TOTAL	$299,000
B.	Long Term Park Improvements				
1	Demolition & Grading	65,000	SF	$5.00	$325,000
2	Drainage at turf field	1	LS	$100,000.00	$100,000
3	Parking Lot (3.5" AC over 14.5" CL II AB)	5,000	SF	$12.50	$62,500
4	Pedestrian path (9' Wide, 4" Concrete over 6" CL II AB)	3,000	SF	$16.00	$48,000
5	Pedestrian Lighting Replacement	1	LS	$200,000.00	$200,000
6	Event Space (4" Concrete over 6" CL II AB)	15,000	SF	$16.00	$240,000
7	Large Shade Structure	1	LS	$130,000.00	$130,000
8	All Abilities Playground	10,000	EA	$70.00	$700,000
9	Site Furnishing	1	LS	$150,000.00	$150,000
10	Irrigation and Landscape	4.0	Acres	$75,000.00	$300,000
11	Right-of-Way Improvement	1.0	LS	$100,000.00	$100,000
12	Rubberized Safety Surfacing	10,000	SF	$30.00	$300,000
13	Pave Picnic Areas (Decomposed Granite)	12,000	SF	$10.00	$120,000
	SUBTOTAL Long Term Park Improvements				$2,775,500
	Mobilization - 15%				$416,325
	Design & Construction Contingency - 30%				$832,650
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$832,650
				Long Term Park Improvements TOTAL	$4,857,125
				IMPROVEMENTS TOTAL	$5,156,125
C.	Additional Features Annual Maintenance Cost				
	Parking lot cleaning (Weekly)	24000	SF	$0.12	$2,880
				Annual Maintenance TOTAL	$2,880

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OLIVER W. JONES MEMORIAL PARK

Jacklin Rd. off N. Hillview Dr.

Type: Neighborhood Park
Size: 4.93 acres
Construction Date: 1973
Latest Renovation: 2020 (Play Area)

PARK OVERVIEW

Oliver W. Jones Memorial Park is a medium-sized passive use neighborhood park. A greenbelt and linear park pathway connects to Sandalwood Park to the north and Peter Gill Memorial Park to the south. The park is flanked on all sides by residential neighborhoods.

The park consists primarily of open lawn areas and walking paths. There are two play areas, one for ages 2-5 and one for ages 5-12. Both areas were renovated in 2020, sand surfacing was replaced with engineered wood fiber and all play structure equipment was replaced. A small group picnic area with tables and barbeques is located at the north end of the site.

The park requires renovation due to lack of ADA compliant amenities, aging furnishings and infrastructure and drainage and erosion issues. There is pedestrian lighting, however it was not operating at the time of the site inspection. No restroom is provided.

The east side of the site is within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this park require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Four picnic tables, two barbeques and three benches are in poor condition. The bike rack and drinking fountain are in good condition.
2. **Play Area:** Play equipment, poured in place safety surfacing and fiber surfacing replaced in 2020, are in good condition.
3. **Signage:** Park signage is in good condition.

Accessibility

1. **Pathways:** The gravel paths throughout the site are in poor condition with drainage issues and not in compliance with current code.

1. Concrete pathways at the play area are in fair condition. There is some cracking but they are in compliance with current codes.

2. **Play Area:** Accessible surfacing and equipment is provided.
3. **Furnishings:** No ADA-compliant furnishings are provided.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in good condition. Planters are well-maintained and shrubs are pruned well. No original mulch remains.
2. **Trees:** Trees are well-maintained.
3. **Turf:** Turf is well-maintained.

- **Irrigation:** This site is on the City's centralized irrigation system using recycled water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Update picnic areas: Replace all picnic tables and barbeques with current Milpitas standard, and provide two ash receptacles.
- Replace all existing benches with current Milpitas standard, place on concrete pads to ensure accessibility.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Add picnic area: Replace all picnic tables and barbeques with current Milpitas standard, and provide trash/recycle and ash receptacles. Add overhead shade structures and pave picnic areas with concrete.
- Add a single stall restroom
- Add Hangout Space: Concrete seating area with overhead shade structure, concrete ping pong tables and seating with integrated power/charging stations.
- Add bouldering wall: Prefabricated bouldering wall with safety surfacing and safety/regulatory signage.
- Pave all gravel and decomposed granite paths with concrete.
- Replace pedestrian lighting.
- Landscape and Irrigation: Replant all landscape areas with drought tolerant California natives and mulch with 3” of landscape mulch. Repair and replace irrigation system as needed.
- Right of Way Improvement: Install ADA curb ramp at east side of park.

OLIVER W. JONES MEMORIAL PARK
PROPOSED IMPROVEMENTS SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	2	EA	$5,000.00	$10,000
2	Bench	2	EA	$3,000.00	$6,000
3	Picnic Table	3	EA	$4,000.00	$12,000
	SUBTOTAL Short Term Park Improvements				$28,000
	Soft Costs (Administration, Inspection) - 30%				$8,400
				Short Term Repairs & Upgrades TOTAL	$36,400
B.	Long Term Park Improvements				
1	Demolition & Grading	15,000	SF	$5.00	$75,000
2	Drainage	1	LS	$35,000.00	$35,000
3	Pave Walking Path (9' Wide, 4" Concrete over 6" AB)	7,500	SF	$16.00	$120,000
4	Pedestrian Lighting Replacement	1	LS	$100,000.00	$100,000
5	New Picnic Area (Concrete)	3,500	SF	$16.00	$56,000
6	Restroom (single Stall)	1	LS	$200,000.00	$200,000
7	Utilities (water, sewer and electrical)	1	LS	$100,000.00	$100,000
8	Site Furnishing	1	LS	$75,000.00	$75,000
9	Landscape and Irrigation	2.50	Acres	$75,000.00	$187,500
10	Right-of-Way Improvement	1	LS	$50,000.00	$50,000
11	Bouldering Wall	1	EA	$50,000.00	$50,000
12	Teen Hangout Space (Concrete)	2,500	SF	$16.00	$40,000
13	Small Shade Structure	1	EA	$50,000.00	$50,000
	SUBTOTAL Long Term Park Improvements				$1,138,500
	Mobilization - 15%				$170,775
	Design & Construction Contingency - 30%				$341,550
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$341,550
				Long Term Park Improvements TOTAL	$1,992,375
				IMPROVEMENTS TOTAL	$2,028,775
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

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O'TOOLE ELMS PARK (JOHN)

Between South Abel and South Main St.

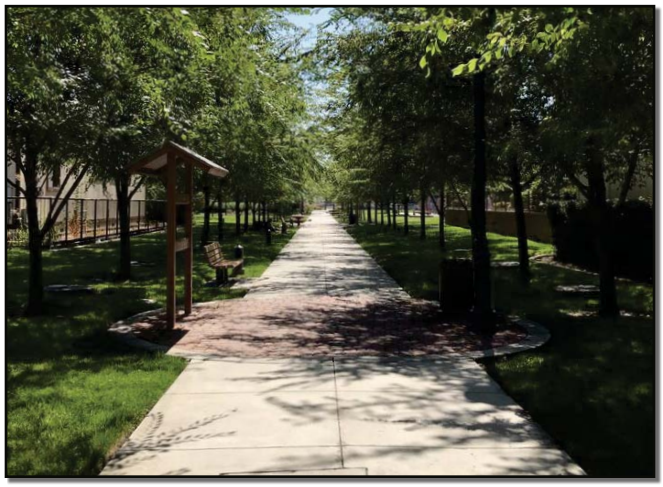
Type: Neighborhood Park
Size: 1.63 acres
Construction Date: 2007
Latest Renovation: 2009

PARK OVERVIEW

O'Toole Elms Park is a well-designed neighborhood park adjacent to the Milpitas Fire Department, located off South Abel St. and multi-family residential. The park is designed along a tree-lined central walking path. The west side contains play areas for 2-5 and 5-12 age groups, a central picnic area, and a kiosk and information booth. There is pedestrian lighting in good condition. No restroom is provided

The central walking path connects South Abel St. and South Main St. Picnic tables and benches provide seating along the path shaded by a corridor of mature trees. A secondary path provides a connection to adjacent residential housing.

The City does not have a joint use agreement for the adjacent parking lot.



EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** All benches and picnic tables are in good condition.
2. **Play Areas:** Play equipment is in good condition, however it does not meet current accessibility or safety codes. Poured in place surfacing is in fair condition.
3. **Signage:** Message kiosks are in poor condition.

Accessibility

1. **Pathways:** Main concrete pathways are in good condition.
2. Concrete path connection to residential neighborhoods is cracked and buckling. Pedestrian pavers throughout park are settling and buckling.

2. **Play Area:** Play equipment has minimal accessible elements. The poured in place play surfacing is accessible and in fair condition.

- **Parking:** The adjacent parking lot has no accessible stalls, ramp or path of travel. The City currently has no joint use agreement with the parking lot, and it is not a part of the park.

- **Furnishings:** ADA benches and tables are provided.

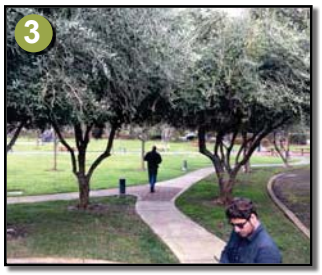
EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Landscape Planting:** Landscape planting is in fair condition. The original planting is gone in some areas, but the remaining planting is pruned fairly well. No original mulch remains in planting areas.

2 **Trees:** Trees are well-pruned.

Irrigation: This site is on the City's centralized irrigation system using recycled water.



PROPOSED IMPROVEMENTS

Short Term Improvement

- Playground equipment and surface repairs: Replace poured in place surfacing.[1]
- Replace message kiosks.
- Replace pedestrian pavers with paver patterned stamped concrete.
- Update parking lot: Bring parking lot up to current accessibility codes. Add ADA stall and provide accessible ramps.
- Landscape Maintenance: Mulch Landscape Areas. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

No long term improvements are recommended at the time of this document.

1. See Appendix G: Milpitas Playground Rehabilitation Project

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Replace Message Kiosk	2	EA	$7,500.00	$15,000
2	Replace Pedestrian Pavers w/ Stamped Concrete	2,000	SF	$24.00	$48,000
3	Retrofit Existing Parking Lot for Accessibility	1	LS	$100,000.00	$100,000
4	Playground Equipement & Surface Repairs	1	LS	$11,858.00	$11,858
	SUBTOTAL Short Term Park Improvements				$174,858
	Soft Costs (Administration, Inspection) - 30%				$52,457
				Short Term Repairs & Upgrades TOTAL	$227,315
B.	Long Term Park Improvements				
1	No long term park improvements proposed				
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

PARC METRO CENTRAL

Metropolitan Dr. and Comet Dr.

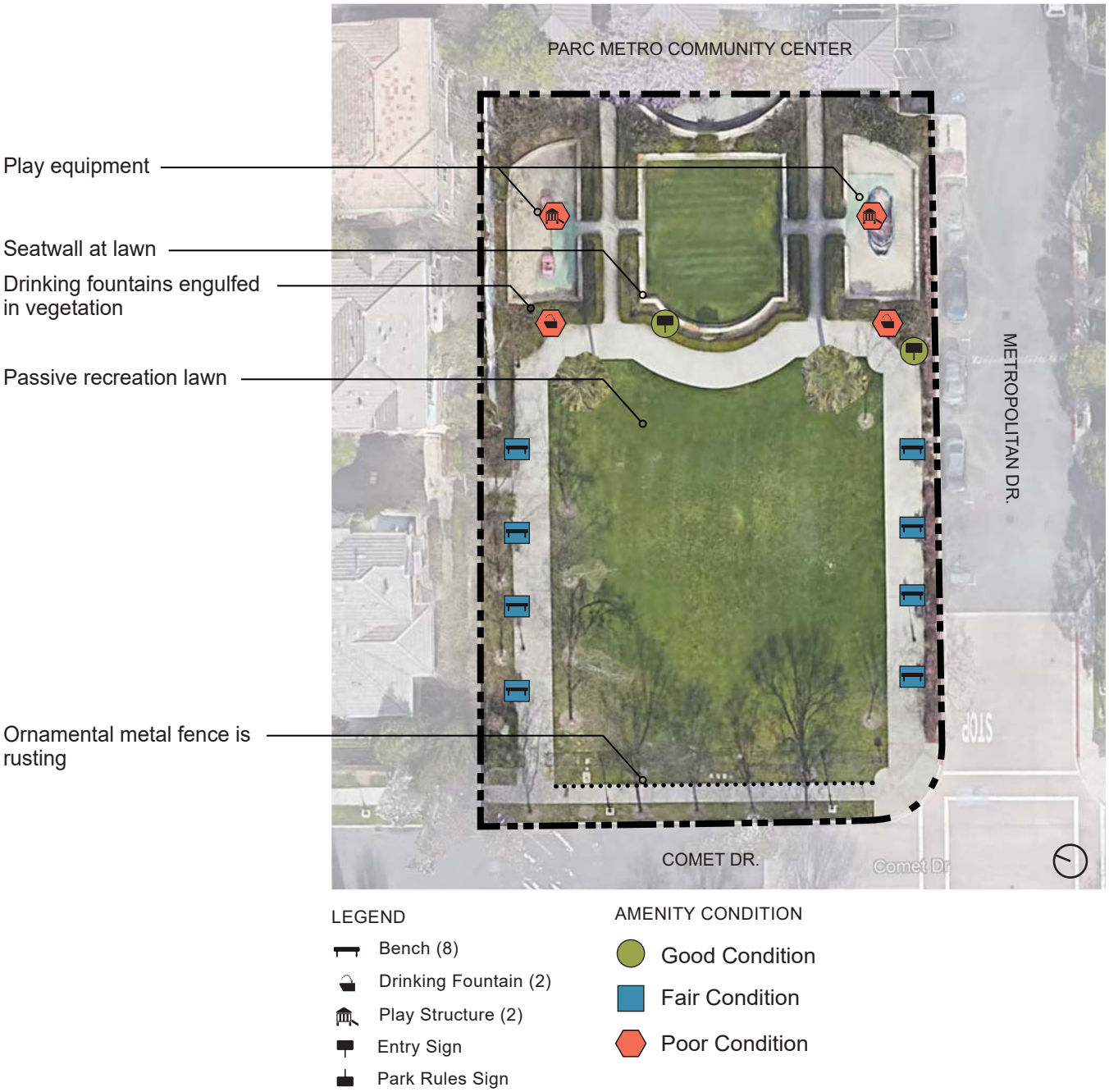
Type: Urban Park
Size: .58 acres
Construction Date: 2003

PARK OVERVIEW

Parc Metro Central was constructed in 2003 along with Parc Metro East and West as part of the residential development included in the Midtown Redevelopment area known as Parc Metro. This park is located adjacent to the parc Community Center and Pool.

This is a passive use park with a large open lawn area, sitting areas, and two play areas for ages 2-5 and 5-12. There are no accessible furnishings provided, and no ADA access into the play areas. There is existing pedestrian lighting that is in good condition.

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1 **Benches:** Eight benches are non Milpitas standard wood park benches with metal frames. These higher quality benches are only used at the three Parc Metro sites and the Milpitas Sports Center. They are in fair condition.

2 **Drinking Fountains:** The drinking fountains are in poor condition and overgrown with vegetation.

3 **Fencing:** The ornamental metal fencing along Comet Drive is in poor condition, with peeling paint and rust spots.

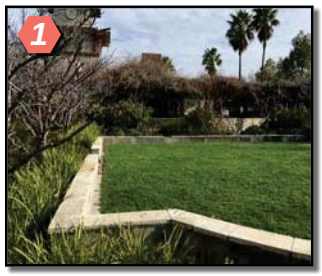
Accessibility

1 **Pathways:** Concrete pathways are in good condition with some cracking.

2 **Play Area:** Play equipment is inaccessible and in disrepair. Sand surfacing is low.

Furnishings: No ADA accessible furnishings are provided.

Landscaping & Maintenance



1 **Landscape Planting:** Landscape planting is well trimmed and maintained in some areas and very overgrown in others. Maintenance practices are inconsistent throughout the park. Vines on trellis are overgrown.

2 **Trees:** Trees are well-maintained.

1 **Turf:** Turf is well-maintained with some drainage issues in low areas.

Irrigation: This site is on the City's centralized irrigation system using recycled water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace both drinking fountains with current Milpitas standard.
- Repaint ornamental metal fencing.
- Landscape Maintenance: Weed and prune all overgrown landscaped areas, remove all dead or dying vegetation and ensure planting does not encroach on pathways. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Hangout space: Concrete seating area with overhead shade structure, concrete ping pong tables and seating with integrated power/charging stations.
- Replace all benches with current Milpitas standard.
- Remove and replace Play Areas: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing. Include integrated shade structures.
- Landscape and Irrigation: Replant all landscape areas with drought tolerant California natives and mulch with 3” of landscape mulch. Repair and replace irrigation system as needed. Replace irrigation controller

PROPOSED IMPROVEMENTS SITE PLAN

LEGEND

- Bench (8)
- Drinking Fountain (2)
- Play Structure (2)
- Entry Sign (1)
- Park Rules Sign (1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Drinking Fountain	2	EA	$10,000	$20,000
2	Paint Ornamental Metal Fence	1	LS	$2,500	$2,500
	SUBTOTAL Short Term Park Improvements				$22,500
	Soft Costs (Administration, Inspection) - 30%				$6,750
				Short Term Repairs & Upgrades TOTAL	$29,250
B.	Long Term Park Improvements				
1	Demolition & Grading	3,200	SF	$5.00	$16,000
2	Teen Hangout Space (Concrete)	1,600	SF	$16.00	$25,600
3	Small Shade Structure	1	EA	$50,000.00	$50,000
4	Site furnishing at hangout space	1	LS	$20,000.00	$20,000
5	Bench	8	EA	$3,000	$24,000
6	Landsacpe and irrigation	0.50	Acres	$75,000.00	$37,500
7	Play Structures	1,600	SF	$70.00	$112,000
8	Rubberized Safety Surfacing	1,600	SF	$30.00	$48,000
	SUBTOTAL Long Term Park Improvements				$333,100
	Mobilization - 15%				$49,965
	Design & Construction Contingency - 30%				$99,930
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$99,930
				Long Term Park Improvements TOTAL	$582,925
				IMPROVEMENTS TOTAL	$612,175
C.	Additional Features Annual Maintenance Cost				

PARC METRO EAST

E. Curtis Ave.

Type: Urban Park
Size: 2.06 acres
Construction Date: 2003

PARK OVERVIEW

Parc Metro East was constructed in 2007 along with Parc Metro Central and West as part of the residential development included in the Midtown Redevelopment area known as Parc Metro. These parks feature a formal design style unique within the Milpitas parks system.

This park is located at the end of a cul-de-sac flanked by industrial buildings, railroad tracks, and residential housing. The park is designed around a passive use lawn and perimeter walking trail. The entrance of the park features a large wooden pergola over seating, a small play area, and a modern restroom. Pedestrian lighting is provided in good condition.

The rear of the park has a small picnic area adjacent to the Curtis Well Site. This area of the park is secluded and suffers extensive vandalism and litter. It lacks a meaningful connection to the rest of the park.

EXISTING SITE ASSESSMENT

Secluded picnic area. Extensive vandalism and litter.

Curtis Well Site

Picnic nooks

Passive use lawn

Concrete lifting and buckling throughout pathway

Play area in very poor condition

LEGEND

- Bench (8)
- Bike Rack (1)
- Picnic Table (6)
- Play Structure (1)
- Entry Sign (1)
- Park Rules Sign (1)
- Restroom (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Furnishings

1 **Amenities:** Most picnic tables and benches are in fair condition and need only a coat of fresh paint.

1 Picnic tables and barbeques at the rear of the park are in poor condition.

2 **Play Areas:** Play equipment is in very poor condition. Safety surfacing and sand is overgrown with grass and weeds.

Signage: Park signage is in good condition.

Accessibility

1 **Pathways:** Concrete pathways are mostly accessible with lifting and buckling at a few areas. Main paths of travel are minimally impeded.

2 **Play Area:** Play equipment is inaccessible and in disrepair. Sand surfacing is low.

3 **Furnishings:** ADA picnic tables are provided, however, they are in poor condition, and no accessible benches are provided.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Landscape Planting:** Landscape planting is in poor condition. Raised planters are overgrown with weeds. Planting areas are either sparsely planted or heavily overgrown.

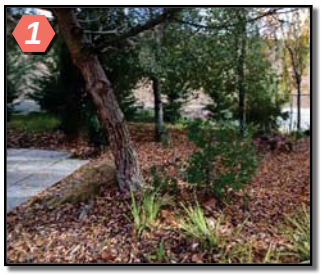
2 **Pergola:** Wood pergola is in good condition, however it is overgrown with trumpet vine which requires regular pruning.

3 **Turf:** Turf is lush and in fair condition. There are signifigant drainage issues adjacent to paths, exacerbated by maintenance vehicles.

4 **Trees:** Trees along the perimeter of the park are crowded. Some aging trees pose safety risks.

Restroom: Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

Irrigation: This site is on the City's centralized irrigation system using recycled water.



1. See Appendix E: Facility Condition Assessment

PROPOSED SITE IMPROVEMENTS

Short Term Improvement

- Replace all picnic tables and barbeques, provide ADA accessible models. Provide ash receptacles.
- Replace all benches with current Milpitas standard.
- Spot repair concrete path: Grind areas that pose trip hazards.
- Repair drainage issues at lawn.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed and prune all overgrown landscaped areas, remove all dead or dying vegetation and ensure planting does not encroach on pathways. Prune vines on pergola annually. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.
- Conduct tree survey to identify hazardous trees.

Long Term Improvement

- Remove and Replace Play Areas: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing. Include integrated shade structures.
- Landscape and Irrigation: Replant planting areas with California Native drought tolerant planting and mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS SITE PLAN

LEGEND

- Bench (8)
- Bike Rack (1)
- Picnic Table (6)
- Play Structure (1)
- Entry Sign (1)
- Park Rules Sign (1)
- Restroom (1)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	3	EA	$5,000.00	$15,000
2	Bench	4	EA	$3,000.00	$12,000
3	Picnic Table	3	EA	$4,000.00	$12,000
4	Spot repair concrete walkway	1,000	SF	$16.00	$16,000
5	Repair Drainage Issue at Lawn	1	LS	$25,000.00	$25,000
6	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$72,000.00	$72,000
7	Tree Survey	1	LS	$5,000.00	$5,000
	SUBTOTAL Short Term Park Improvements				$157,000
	Soft Costs (Administration, Inspection) - 30%				$47,100
				Short Term Repairs & Upgrades TOTAL	$204,100
B.	Long Term Park Improvements				
1	Demolition & Grading	8,000	SF	$5.00	$40,000
2	Site Furnishing	1	LS	$50,000.00	$50,000
3	Right of Way Improvement	1	LS	$10,000.00	$10,000
4	Irrigation and Landscape	2.00	Acres	$75,000.00	$150,000
5	Play Structure	800	SF	$100.00	$80,000
6	Rubberized Safety Surfacing	800	SF	$50.00	$40,000
	SUBTOTAL Long Term Park Improvements				$370,000
	Mobilization - 15%				$55,500
	Design & Construction Contingency - 30%				$111,000
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$111,000
				Long Term Park Improvements TOTAL	$647,500
				IMPROVEMENTS TOTAL	$851,600
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

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PARC METRO WEST

E. Curtis Ave. & Comet Dr.

Type: Urban Park
Size: .98 acres
Construction Date: 2003

PARK OVERVIEW

Parc Metro West was constructed in 2007 along with Parc Metro Central and East as part of the residential development included in the Midtown Redevelopment area known as Parc Metro. These parks feature a formal design style unique within the Milpitas parks system.

This passive use park is located across the street from Parc Metro Central. Three arbors, two trellises and formal pathways and planting give this park a strong design character. Benches are provided under the arbors and chess tables run along the rear pathway. No accessible furnishings are provided. Three open lawn spaces sit between formal raised planters. There is a large play area with play equipment for ages 2-5 and 5-12, it is in poor condition with sand surfacing. There is no ADA access into the play area.

This park is well-designed, however lack of maintenance, extremely overgrown vegetation, and drainage issues hinder use. The lack of any accessible furnishings or play elements necessitates replacement of all amenities on site. Pedestrian lighting is provided in good condition.

EXISTING SITE ASSESSMENT

Arbor

Chess tables

Arbor

Drainage issues at lawn

Ornamental metal fence

Arbor

Play area

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

- Bench (21)
- Bike Rack (1)
- Drinking Fountain (2)
- Entry Sign (1)
- Park Rules Sign (1)
- Picnic Table (4)
- Play Structure (1)
- Ornamental Metal Fencing

EXISTING SITE ASSESSMENT

Furnishings

1. **Amenities:** All benches, tables, and drinking fountains are in poor condition. Paint is peeling on most furnishings, and furnishings in the shade are covered in moss.
2. **Play Areas:** Play equipment is in very poor condition. Safety surfacing and sand is overgrown with grass and weeds.

- **Signage:** Park signage is in good condition with the exception of the park rules signage.

Accessibility

- **Pathways:** Concrete pathways are accessible.
- **Play Area:** Play equipment offers minimal accessible elements. Sand surfacing is not ADA accessible.
- **Furnishings:** No ADA accessible furnishings are provided.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in poor condition. Raised planters are overgrown and crowded with plants. Planting areas along walkways are not pruned and spill onto paths. The arbors are overgrown with vines.
2. **Turf:** Turf areas have severe drainage issues exacerbated by maintenance vehicles. It is difficult for mowers to get between posts of arbors.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Trees:** Landscape trees are crowded in planters. Palm trees are difficult to maintain and drop excessive palm fronds.

2 **Fencing:** Perimeter ornamental metal fence has peeling paint and rust spots.

Irrigation: This site is on the City's centralized irrigation system using recycled water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace all picnic tables, provide ADA accessible models.
- Replace all benches with current Milpitas standard.
- Replace drinking fountains
- Replace bike rack
- Replace park rules signs
- Repair drainage issues at lawn
- Repaint ornamental metal fencing.
- Play Areas: Repair defunct or broken play equipment.
- Landscape Maintenance: Weed and prune all overgrown landscaped areas, remove all dead or dying vegetation and ensure planting does not encroach on pathways. Prune vines on pergola annually. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

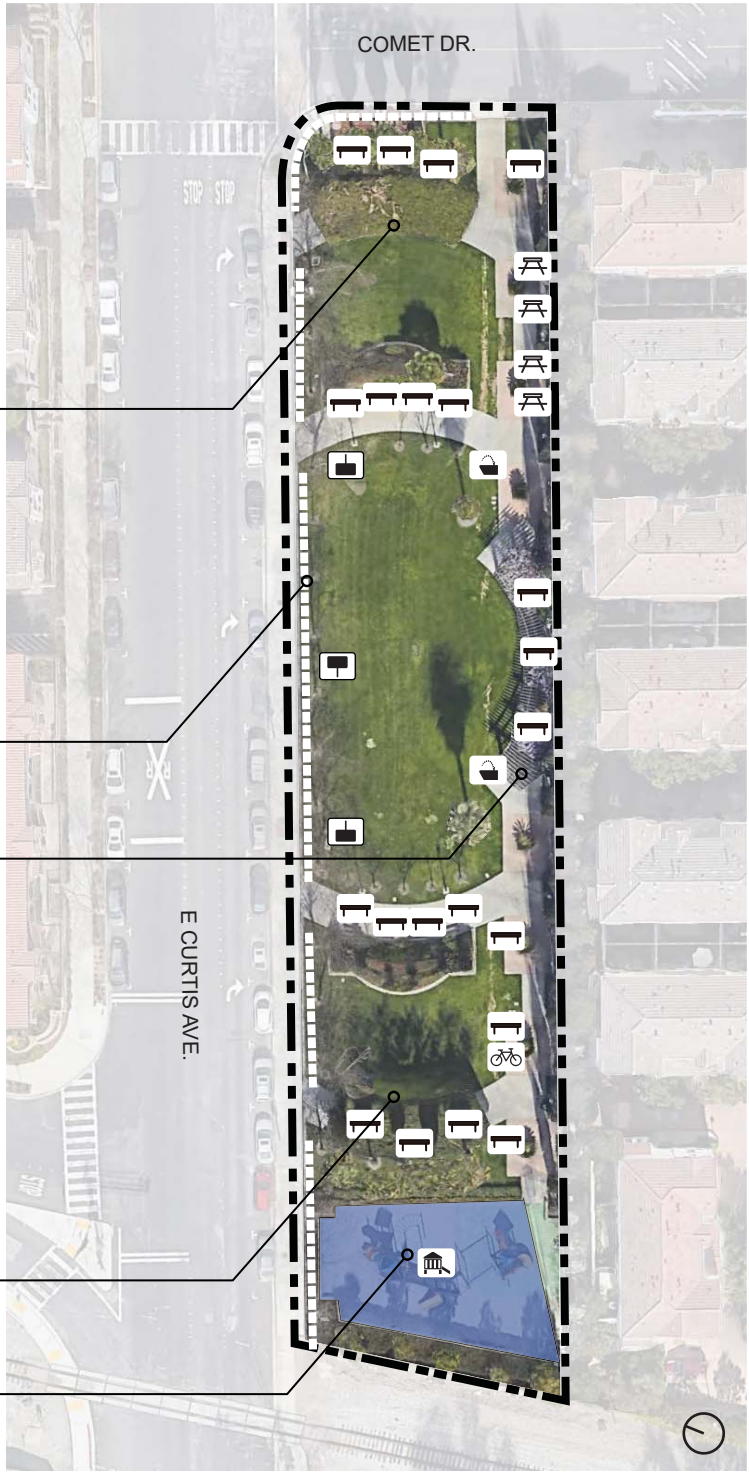
Long Term Improvement

- Remove and Replace Play Areas: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing. Include integrated shade structures.
- Landscape and Irrigation: Replant planting areas with California Native drought tolerant planting and mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.

PROPOSED SITE IMPROVEMENTS PLAN

LEGEND

- Bench (21)
- Bike Rack (1)
- Drinking Fountain (2)
- Play Structure (1)
- Picnic Table (4)
- Entry Sign (1)
- Park Rules Sign (2)



Prune vines

Repaint ornamental metal fencing

Prune vines

Prune vines

Remove and replace play area

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Drinking Fountain	2	EA	$10,000.00	$20,000
2	Bench	21	EA	$3,000.00	$63,000
3	Picnic Table	4	EA	$4,000.00	$16,000
4	Repaint Ornamental Metal Fence	1	LS	$5,000.00	$5,000
5	Park rules sinages repair	1	LS	$1,000.00	$1,000
6	Bike Rack	1	EA	$2,500.00	$2,500
7	Repair Drainage Issue at Lawn	1	LS	$25,000.00	$25,000
8	Repair defunct playground equipment	1	LS	$50,000.00	$50,000
	SUBTOTAL Short Term Park Improvements				$182,500
	Soft Costs (Administration, Inspection) - 30%				$54,750
				Short Term Repairs & Upgrades TOTAL	$237,250
B.	Long Term Park Improvements				
1	Demolition & Grading	4,000	SF	$5.00	$20,000
2	Site Furnishing	1	LS	$15,000.00	$15,000
3	Right of Way Imrpovement	1	LS	$10,000.00	$10,000
4	Irrigation and Landscape	1.00	Acres	$100,000.00	$100,000
5	Play Structure	4,000	SF	$70.00	$280,000
6	Rubberized Safety Surfacing	4,000	SF	$30.00	$120,000
	SUBTOTAL Long Term Park Improvements				$545,000
	Mobilization - 15%				$81,750
	Design & Construction Contingency - 30%				$163,500
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$163,500
				Long Term Park Improvements TOTAL	$953,750
				IMPROVEMENTS TOTAL	$1,191,000
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

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PECOT PARK (BOB)

Dixon Rd. and Conway St.

Type: Neighborhood Park
Size: 3.00 acres
Construction Date: 1997

PARK OVERVIEW

Pecot Park is a linear park located directly north of Joseph Weller Elementary School. The park consists of a linear asphalt walking path, turf, and landscaping along the edges of the park. The south end has gravel parking lot meant for the San Francisco Public Utilities commission, however it is used by residents. With the exception of one bench along the path there are no amenities provided.

The entirety of the park lies within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this park require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

Walking path

Park rules sign

Asphalt walking path

Gravel parking lot (SFPUC use)

LEGEND

- Bench (1)
- Entry Sign (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** One bench is provided along the walking path in poor condition.

Accessibility

1 **Pathways:** The site consists of a single ashpalt pathway traveling north/south. The trail has some cracking and heaving along the edges, but the main path of travel complies with current codes.

2 **Parking:** The gravel parking lot at the south end of the site has no accessible features.

Furnishings: No ADA-accessible furnishings are provided.

Landscaping & Maintenance

1 **Landscape Planting:** Perimeter landscape planting is in fair condition. All areas need mulch replenished.

2 **Turf:** Turf is in fair to poor condition throughout the site. Weeds and bare patches are prevalent.

Trees: Trees are well-maintained throughout the park.

Irrigation: This site is on the City's centralized irrigation system using potable water

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace existing bench with Milpitas standard.
- Slurry seal asphalt path
- Reseed turf areas where necessary
- Landscape Maintenance: Weed and prune all overgrown landscaped areas, remove all dead or dying vegetation and ensure planting does not encroach on pathways. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Add benches and trash/recycling receptacles along path.
- Landscape and Irrigation: Replant planting areas with California Native drought tolerant planting and mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.
- Right of way improvement: ADA curb ramps to be removed and replaced to current City standards on Dixon Road and Manfred St. Restripe crosswalks and install bollards to current city standards.

PROPOSED IMPROVEMENTS SITE PLAN

Right of way improvements

Add trash/recycle receptacles

Reseed turf

Slurry seal asphalt path

Right of way improvements

LEGEND

Bench (10)

Trash/Recycle Receptacles (4)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Asphalt Path (Resurface)	7,500	SF	$4.50	$33,750
2	Bench	1	EA	$3,000.00	$3,000
3	Reseed Lawn	1	LS	$5,000.00	$5,000
	SUBTOTAL Short Term Park Improvements				$41,750
	Soft Costs (Administration, Inspection) - 30%				$12,525
				Short Term Repairs & Upgrades TOTAL	$54,275
B.	Long Term Park Improvements				
1	Site Furnishing	1	LS	$50,000.00	$50,000
2	Landscape and Irrigation Upgrade	3	Acres	$75,000.00	$225,000
3	Right of Way Improvement	1	LS	$50,000.00	$50,000
	SUBTOTAL Long Term Park Improvements				$325,000
	Mobilization - 15%				$48,750
	Design & Construction Contingency - 30%				$97,500
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$97,500
				Long Term Park Improvements TOTAL	$568,750
				IMPROVEMENTS TOTAL	$571,750
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

PETER GILL MEMORIAL PARK

Santa Rita Dr. and Paseo Refugio Rd.

Type: Community Park
Size: 8.16 acres
Construction Date: 1978
Latest Renovation: 1987

PARK OVERVIEW

Peter Gill Memorial Park is located at the south end of a green belt connecting to Oliver Jones Memorial Park. The south end of the park terminates at the Berryessa Creek Trail. The park is surrounded on both sides by residential neighborhood, access is provided via pedestrian connections and a parking lot.

This is a large park primarily intended for active recreation and large gatherings. It provides a full size baseball field, three tennis courts, a basketball court, a handball court, workout equipment and a restroom. Two shaded group picnic areas and a third uncovered picnic area provide spaces for large gatherings. Two play areas provide play equipment for all ages. Pedestrian, tennis court and sports field lighting is provided in good condition.

The park requires renovation due to a lack of ADA complaint amenities and play area, aging furnishings and infrastructure, non-ADA concrete pathways, and sparse landscaping.

The eastern portion of the park lies within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this area require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

Connection to neighborhoods

Greenbelt connection to Oliver W. Jones Memorial Park

Play area is in disrepair with broken fencing and outdated equipment

Tennis courts in poor condition

Group picnic areas
- Shade structures (2)
- Picnic tables (7)
- Barbeques (3)

Exercise equipment court on decomposed granite

Handball court

Basketball court

ADA striping, however no accessible ramps to sidewalk are provided

Play area

Group picnic area, no ADA access

Baseball field is used as dog run

Access to shopping center via bridge over crossing

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

	Backstop (1)	PB	Player Bench (2)		Picnic Table
	BBQ (5)	BL	Bleachers (2)		Play Structure
	Bench (9)		Dedication (1)		ADA Parking Stall
	Bike Rack (1)		Drinking Fountain (2)		Restroom

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** All tables, benches, bike racks and workout stations are outdated and in poor condition.
2. **Playgrounds:** All playground equipment is in poor condition. Many play elements are broken, and all are rusted with peeling and chipped paint.

Accessibility

1. **Pathways:** The site consists of concrete pathways throughout. At the transitions to the surrounding sidewalk, slopes and cross-slopes do not meet accessibility requirements. The eastern shaded picnic area has no accessible access to surrounding hardscape, only concrete pavers set in grass. The southern group picnic area consists of concrete islands with no connection to surrounding paths.
2. **Furnishings:** No ADA-accessible furnishings are provided.
3. **Play Equipment:** No accessible play equipment is provided. Sand surfacing is low and there are no accessible ramps into play areas.
4. **Parking:** ADA striping and spaces are provided, however there is no accessible ramp to adjacent paving areas.

Sports Facilities

1 **Baseball Field:** The baseball infield, outfield and perimeter fencing are in good condition. The backstop needs replacement boards and the fencing is bowed outwards.

1 The player benches and bleachers are in poor to fair condition.

2 **Tennis Courts:** The tennis courts are in fair condition. Surfacing is slightly cracked and fading, and the windscreen is missing from significant portions of the fencing.

3 **Basketball Court:** The basketball court is in good condition. The basketball court is located directly at the edge of the parking lot with no fence, posing a safety risk.

4 **Handball Court:** The handball court is in good condition. Surfacing is lifting slightly from the adjacent paving.

Landscaping & Maintenance

1 **Landscape Planting:** There is minimal landscape planting on site, what exists is in good condition.

2 **Fencing:** Fencing at play areas is in poor condition. Chain link fencing and gates at the northern play area are broken. Wood rail fencing at the southern play area is weathering and missing rails.

Turf: Turf is in good condition, with some damage from maintenance vehicles at the edges of paths.

Trees: Trees are well-maintained throughout the park.

Irrigation: This site is on the City's centralized irrigation system using reclaimed water.

Restroom: Restroom is in fair condition, see Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

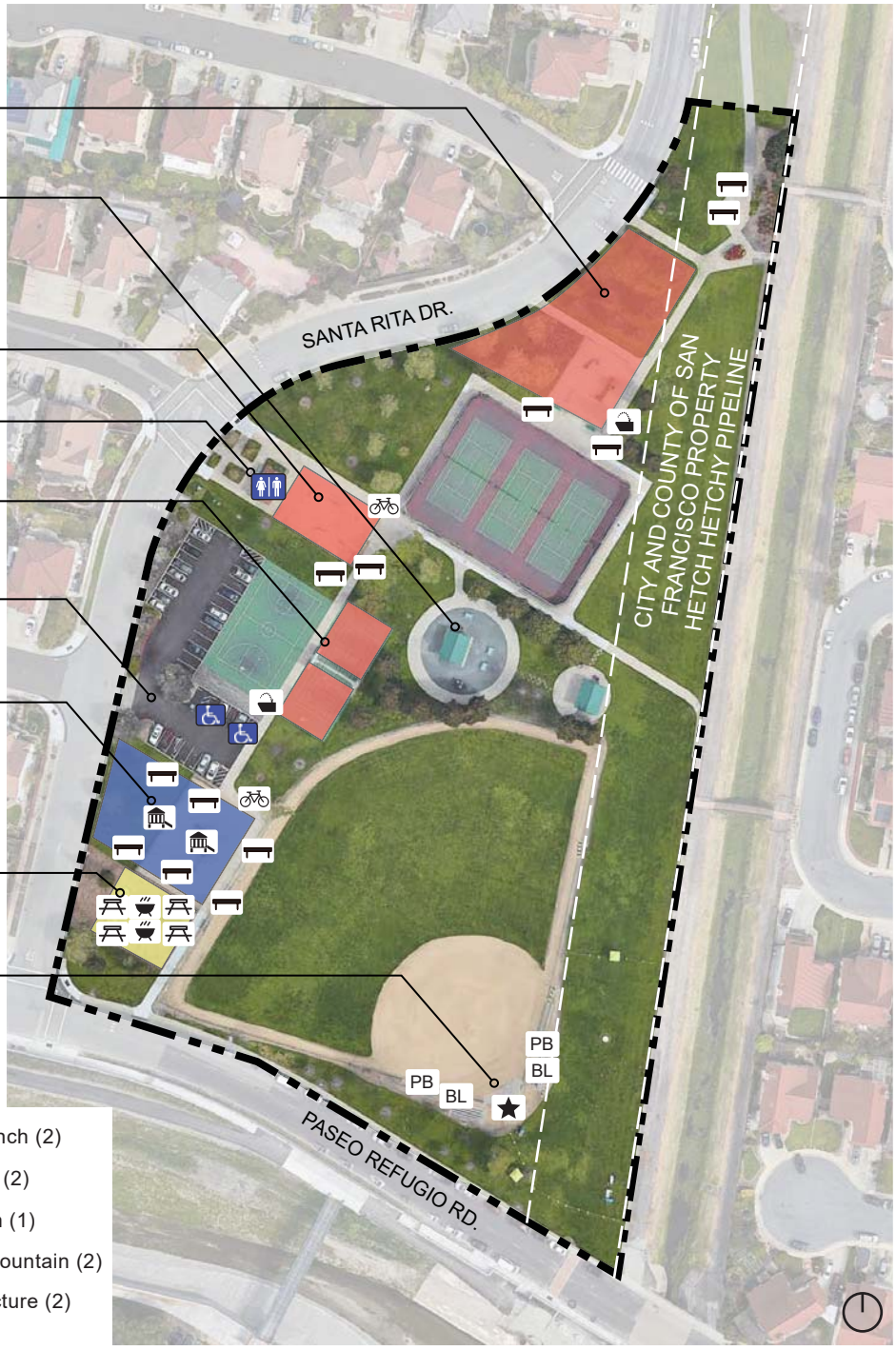
- Replace existing benches with Milpitas standard.
- Replace all existing picnic tables and barbeques with current Milpitas standard, provide ADA compliant models. Provide ash receptacles.
- Replace bike rack
- Resurface handball court
- Repair signage
- Play Areas: Replace chainlink fencing at north play area, repair existing equipment at both north and south play areas.
- Update parking lot: Add accessible ramp from parking lot to adjacent sidewalk.
- Many paths do not meet accessibility requirements. Assess and regrade where feasible.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvement

- Update softball field. Repair backstop, dugouts, lighting, fencing and bleachers.
- Remove and Replace Play Areas: Remove north play area and expand southern area. Replace structures with both age 2-5 and 5-12 equipment and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Replace fencing where necessary. Include integrated shade structures.
- Dog area: Add fenced off-leash dog area with fibar surfacing, small and large dog areas, and a fenced in entrance area. This will require a permit from the SFPUC to build on the Hetch Hetchy pipeline property.
- Update picnic area: Replace picnic tables and barbeques with current Milpitas standard. Provide two trash/recycle and two ash receptacles. Pave picnic areas with concrete and add overhead shade structure.
- Replace fitness equipment: Add new fitness court with poured in place surfacing.
- Right-of-Way Improvement: Install ADA curb ramps to current Milpitas standards. Include crosswalk striping, sidewalk and curb and gutter repairs and sidewalk expansion as needed.
- Landscape and Irrigation: with California Native drought tolerant planting, mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS SITE PLAN



Fenced dog area

Group picnic areas to remain
- Shade structures (2)
- Picnic tables (7)
- Barbeques (3)

Replace fitness equipment

Refurbish restroom

Remove handball court, replace with 2 pickleball courts

Update parking lot

Remove and replace play area, add age 2-5 & 5-12 equipment and overhead shade structures

Update picnic area

Update softball field, memorial dugout to remain

LEGEND

- BBQ (5)
- Bench (12)
- Bike Rack (2)
- Picnic Table (11)
- ADA Parking Stall
- Restroom
- PB Player Bench (2)
- BL Bleachers (2)
- Dedication (1)
- Drinking Fountain (2)
- Play Structure (2)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	2	EA	$5,000.00	$10,000
2	Bench	8	EA	$3,000.00	$24,000
3	Picnic Table	4	EA	$4,000.00	$16,000
4	Bike Rack	1	EA	$2,000.00	$2,000
5	Resurface Handball Court	1	EA	$7,500.00	$7,500
6	Parking Lot Accessible Curb Ramp	1	EA	$10,000.00	$10,000
7	Repair Play Equipment	1	LS	$50,000.00	$50,000
8	42" HT Chainlink Fence at playground	220	LF	$125.00	$27,500
9	Repair Signages	1	LS	$2,000.00	$2,000
10	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$119,000.00	$119,000
11	Regarde Concrete Pathway	1	LS	$100,000.00	$100,000
	SUBTOTAL Short Term Park Improvements				$368,000
	Soft Costs (Administration, Inspection) - 30%				$110,400
				Short Term Repairs & Upgrades TOTAL	$478,400
B.	Long Term Park Improvements				
1	Demolition & Grading	25,000	SF	$5.00	$125,000
2	Drainage	1	LS	$75,000.00	$75,000
3	Fitness Stations (Including Surfacing & Curb)	10	EA	$10,000.00	$100,000
4	Play Structures	8,500	SF	$70.00	$595,000
5	Rubberized Safety Surfacing	8,500	SF	$30.00	$255,000
6	Right of Way Improvement	1	LS	$50,000.00	$50,000
9	Site Furnishing	1	LS	$100,000.00	$100,000
10	Landscape and irrigation	4.00	Acres	$75,000.00	$300,000
11	Dog Park 0.25 acre (including 42" HT chain link fencing)	1	LS	$150,000.00	$150,000
12	Softball Backstop & Dugout	1	LS	$100,000.00	$100,000
13	Pave Picnic Area 4" Concrete over 6" CL II AB)	4,500	SF	$16.00	$72,000
14	Small Shade Structure	1	LS	$50,000.00	$50,000
	SUBTOTAL Long Term Park Improvements				$1,972,000
	Mobilization - 15%				$295,800
	Design & Construction Contingency - 30%				$591,600
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$591,600
				Long Term Park Improvements TOTAL	$3,451,000
				IMPROVEMENTS TOTAL	$3,929,400
C.	Additional Features Annual Maintenance Cost				
	Dog park (Twice Weekly)	10,890	SF	$0.12	$1,307
				Annual Maintenance TOTAL	$1,307

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PINEWOOD PARK

Lonetree Ct. and Starlite Dr.

Type: Neighborhood Park
Size: 9.88 acres
Construction Date: 1966
Latest Renovation: 2019 (Tennis Courts)
2004 (Playgrounds)
2005 (Sports Court)
2015 (Picnic Areas and ADA improvements)
2019 (Tennis Court Resurfacing)

PARK OVERVIEW

Pinewood Park is a large neighborhood park offering both passive and active recreation opportunities. It is adjacent to the Pearl Zanker Elementary School and flanked by residential neighborhoods.

The east side of the park has two large playgrounds, installed in 2004. They provide play elements for all ages and benches for parent supervision. A lighted basketball court and four tennis courts were rebuilt in 2005. Dog bags with waste receptacles are located at intervals along the asphalt paths around the sports courts which were renovated in 2019. A large turf lawn in the center of the park provides passive recreation used for pickup soccer and frisbee. A public restroom is provided at the entrance of the park.

The western half of the site has a small play area, a pump station and well, and an open gathering space and two shaded group picnic areas containing concrete picnic tables, food prep tables, group barbeques and large recycling and waste receptacles. These play areas were installed in 2015 along with parkwide ADA improvements, upgrades to play areas, and new pedestrian lighting.

This park is ADA compliant with modern amenities, play equipment, lighting and public art peices.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Eight metal park benches are provided at playgrounds, in good condition. Twenty six concrete picnic tables, three barbeques, and three concrete prep tables are provided at group picnic areas. They are in good condition, with some fading and stains. One drinking fountain is provided at the restroom in fair condition, and one at the sports courts in poor condition. Two dog bag dispensers are provided at sports courts, in fair condition. Three bike racks are in good condition.

2. **Play Areas:** There are three all-age play areas. Two in the western portion of the park have multiple structures on poured in place and fiber surfacing. The play area on the east side has a single low structure on poured in place surfacing. All are in good condition.

- **Signage:** Park signage is in good condition.

Accessibility

- **Pathways:** All concrete and asphalt pathways are accessible. There are minor gaps between expansion joints at the play areas.
- **Play Area:** Play equipment offers some accessible elements. Poured in place safety surfacing provides access to swingsets and play equipment.
- **Furnishings:** One ADA-accessible table is provided in each group picnic area. Park benches are compliant with current code.
- **Parking:** Two ADA-accessible parking spots and ramp are provided on Lonetree Ct.

EXISTING SITE ASSESSMENT

Sports Courts

1 **Tennis Courts:** Four lighted tennis courts are in good condition, resurfaced in 2019. No player benches provided.

2 **Basketball Court:** One lighted basketball court in good condition, rebuilt in 2005, no player benches provided. Hoop and net needs replacement.

Landscaping & Maintenance

1 **Landscape Planting:** Landscape planting is in fair condition. Original planting, where it remains, is well-maintained, if sparse. Mulch is spread through most planting areas. Iceplant has colonized large planted areas and provides a low maintenance groundcover. There is a large area bare of planting at the entrance to the park.

2 **Turf:** Turf is in fair condition, with some worn areas due to heavy use.

3 **Trees:** Most park trees are in good condition, however several aging eucalyptus trees pose a hazard.

Restroom: Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

Irrigation: This site is on the City's centralized irrigation system using potable water.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Playground equipment and surface repairs: Replace existing poured in place surfacing and engineered wood fiber with new. Replace the existing age 5-12 play structures.[1]
- Replace basketball backboards hoops and nets
- Conduct tree survey to identify hazardous eucalyptus trees.
- Landscape Maintenance: Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.
- Refurbish Restroom: Refurbish per Facility Condition Assessment.[2]

Long Term Improvement

No long term improvements are proposed at the time of this document.

1. See Appendix G: Milpitas Playground Rehabilitation Project
2. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$123,000.00	$123,000
2	Replace Basketball Hoops & Nets	1	LS	$10,000.00	$10,000
3	Playground Equipement & Surface Repairs	1	LS	$197,109.00	$197,109
4	Tree Survey	1	LS	$5,000.00	$5,000
	SUBTOTAL Short Term Park Improvements				$335,109
	Soft Costs (Administration, Inspection) - 30%				$100,533
				Short Term Repairs & Upgrades TOTAL	$435,642
B.	Long Term Park Improvements				
	No major improvement is proposed				
C.	Additional Features Annual Maintenance Cost				
	No additional features are proposed for this site				

ROBERT E. BROWNE PARK

Yellowstone Ave. at S. Park Victoria Dr.

Type: Neighborhood Park
Size: 4.93 acres
Construction Date: 1965
Latest Renovation: 2019 (Tennis Courts Surfacing)

PARK OVERVIEW

Robert E. Browne Park is centrally located between Rancho Milpitas Middle School, John Sinnott Elementary School, Murphy Park and Sinnott Park, with a popular biking trail connecting the sites.

Four lit tennis courts rebuilt in 2004 form the center of this park, with small seating areas and a large passive use lawn to the west. A walking trail with workout stations runs around the perimeter of the park and connects to the biking trail. There is no pedestrian lighting or restroom.

Multiple diffuse pedestrian connections and a lack of a central entry point create poor connection to surrounding parks. Poor circulation and lack of amenities within the site leaves the passive use lawn underutilized. The park requires renovation due to a lack of ADA complaint amenities, aging furnishings and infrastructure, eroding asphalt pathways lack of lighting.

EXISTING SITE ASSESSMENT

Connection to Murphy Park

Tennis courts in good condition, court lighting is in good condition

Asphalt is eroding, creating accessibility issues

Gravel path

Asphalt is heaving, creating accessibility issues

Underutilized lawn

Asphalt is heaving, creating accessibility issues

Fitness stations not operational

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

- Bench (11)
- Bike Rack (1)
- Drinking Fountain (1)
- Fitness Station (4)
- Picnic Table (1)
- Sign (1)

EXISTING SITE ASSESSMENT

Site Furnishings

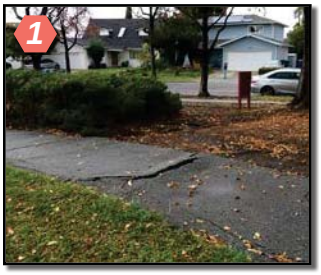
1 **Amenities:** Nine benches at the tennis courts are in poor condition. The frames are collapsing and boards are missing. One bench at the connection to Murphy Park and one bench at S. Park Victoria Drive are likewise in poor condition. Two picnic tables at the connection to Murphy Park are in poor condition. Five workout stations along the perimeter trail are in poor condition and pose safety risks.

2 **Signage:** One park entry sign at S. Park Victoria Drive is in good condition. One park rules sign south of Murphy Park is in good condition. Neither sign is at a main entry point, and serve no purpose at their current locations.

Accessibility

1 **Pathways:** Gravel paths at the entrance are not up to code. Asphalt and concrete paths throughout the site are cracking and heaving from tree roots. Running slopes exceed 5% in many areas and cross-slopes exceed 2%. Uneven surface is causing ponding at ball wall and around tennis courts.

1 **Furnishings:** No ADA-accessible furnishings are provided.



EXISTING SITE ASSESSMENT

Tennis Courts

1 **Surfacing:** Renovated in 2020, court surfacing is in good condition. There are minimal cracks and court markings are clear.

1 **Fencing:** Fencing is in fair condition, however the windscreen fabric is ripped or missing in most areas.

Lighting: Lighting is functional and in good condition

Landscaping & Maintenance

1 **Landscape Planting:** Most areas are bare of planting, and there is no landscape mulch. The juniper and ivy that remain are well-trimmed.

2 **Turf:** Turf is in good condition.

3 **Trees:** Aging trees pose a safety hazard. Tree limbs hang over and in walkways.

Graffiti: Graffiti is a prevalent issue throughout the park.

Lighting: Tennis courts are lit, there is no pedestrian lighting throughout the rest of the park

Irrigation: This site is on the City's centralized irrigation system using potable water.

PROPOSED IMPROVEMENTS

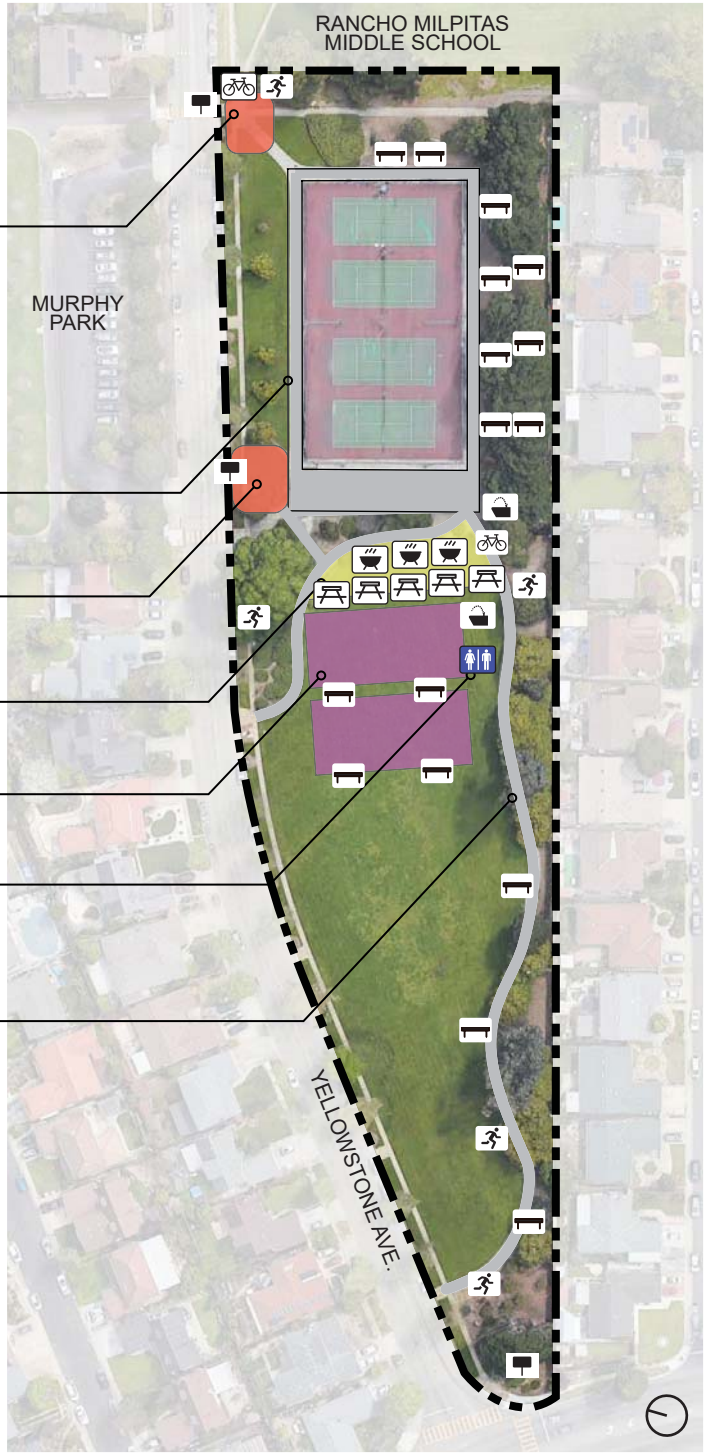
Short Term Improvement

- Replace all benches with current Milpitas standard, placed on concrete pads to ensure accessibility.
- Replace drinking fountain
- Replace picnic table
- Replace bike rack
- Replace fitness stations
- Repair signage
- Repair tennis court fencing and netting
- Conduct tree study to identify hazardous trees.
- Spot repair asphalt path where cracking and heaving.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly. Remove graffiti throughout the park.

Long Term Improvement

- Replace all asphalt paths with concrete.
- Add pedestrian lighting at.
- Add single stall restroom.
- Add additional benches and fitness stations along path.
- Add picnic area: Add concrete picnic area with Milpitas standard tables, barbeques, trash/recycle receptacles and ash receptacles. Provide overhead shade structure.
- Add two full size basketball courts with lighting
- Entrance node: Add small entrance plaza with seating, bike racks and wayfinding signage directing visitors to the nearby Murphy and Sinnott parks.
- Right of way improvements: Redesign west entrance to the park for accessibility. Provide ADA-accessible curb ramp, stairs, and landscaped areas. Re-stripe crosswalk to Murphy Park and add wayfinding signage and bollards. This work includes sidewalk and curb and gutter repairs and sidewalk expansion as needed.
- Landscape and Irrigation with California Native drought tolerant planting, mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.

PROPOSED IMPROVEMENTS SITE PLAN



Entrance node

New 9' concrete paths

Right of way improvements

Add picnic area

Two full size basketball courts

Restroom (single stall)

Replace asphalt path with concrete

LEGEND

- Bench (16)
- Bike Rack (2)
- BBQ (3)
- Drinking Fountain (2)
- Fitness Equipment (5)
- Picnic Table (5)
- Entry Sign (3)
- Restroom

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Drinking Fountain	1	EA	$10,000.00	$10,000
2	Bench	11	EA	$3,000.00	$33,000
3	Picnic Table	1	EA	$4,000.00	$4,000
4	Bike Rack	1	EA	$2,000.00	$2,000
5	Tennis Court fencing Repair	1	LS	$10,000.00	$10,000
6	Repair Signage	1	LS	$2,000.00	$2,000
7	Fitness Stations (Including Surfacing & Curb)	4	EA	$10,000.00	$40,000
8	Asphalt path, Spot Repair	1	LS	$50,000.00	$50,000
9	Hazardous tree study	1	LS	$5,000.00	$5,000
	SUBTOTAL Short Term Park Improvements				$156,000
	Soft Costs (Administration, Inspection) - 30%				$46,800
				Short Term Repairs & Upgrades TOTAL	$202,800
B.	Long Term Park Improvements				
1	Demolition & Grading	35,000	SF	$5.00	$175,000
2	Drainage	1	LS	$100,000.00	$100,000
3	Pedestrian path (9' Wide, 4" Concrete over 6" CL II AB)	20,000	SF	$16.00	$320,000
4	Pedestrian Lighting	1	LS	$150,000.00	$150,000
5	Pedestrian Concrete Paving (4" Concrete over 6" CL II AB)	2,500	SF	$16.00	$40,000
6	Restroom Installtion (Single stall)	1	EA	$200,000.00	$200,000
7	Utilities (Water, Sewer, Eletrical)	1	LS	$100,000.00	$100,000
8	Site Furnishing	1	LS	$50,000.00	$50,000
9	Small Shade Structure	2	LS	$50,000.00	$100,000
10	Landscape and Irrigation	4	Acres	$75,000.00	$262,500
11	Right of Way Improvements, inc. Stairs and Ramp up to Tennis Courts	1	LS	$250,000.00	$250,000
12	Basketball Courts w/ Lighting	2	EA	$180,000.00	$360,000
	SUBTOTAL Long Term Park Improvements				$2,107,500
	Mobilization - 15%				$316,125
	Design & Construction Contingency - 30%				$632,250
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$632,250
				Long Term Park Improvements TOTAL	$3,688,125
				IMPROVEMENTS TOTAL	$3,890,925
C.	Additional Features Annual Maintenance Cost				
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
	Basketball Court Maintenance	7700	SF	$0.12	$924
				Annual Maintenance TOTAL	$8,424

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CURRENT SITE

SANDALWOOD PARK

Escuela Pkwy. and Russell Ln.

Type: Neighborhood Park
Size: 3.88 acres
Construction Date: 1977

PARK OVERVIEW

Sandalwood Park is a large, primarily turf park with a variety of mature trees, outdated play equipment, picnic areas, horseshoe pits and seating. Currently the park requires renovation due to a lack of ADA compliant furnishings and play equipment, aging amenities and infrastructure and eroding pathways. The City hired Gates + Associates in 2019 to redesign the park.

The proposed renovation is to install an all-inclusive playground area and fitness stations, large picnic area with shade structures, new restroom, previous concrete pathways, convert the existing horseshoes pit into a basketball court, update small picnic areas, and add pedestrian lighting.

The central portion of the park lies within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this area require a permit from the SFPUC.

EXISTING SITE ASESSMENT

LEGEND

- BBQ (3)
- Bike Rack (1)
- Bench (4)
- Entry Sign (1)
- Drinking Fountain (2)
- Picnic Table (3)
- Play Structure (1)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** All existing picnic tables and benches are in poor condition. Two concrete drinking fountains are in poor condition. One bike rack is in fair condition.
2. **Play Equipment:** Play equipment is in fair condition, however it is outdated and does not meet current safety codes. Sand surfacing is low.
3. **Horseshoe pits:** Horseshoe pits are in poor condition. Backstops are failings and sand surfacing is low.
4. **Signage:** Entry sign is in good condition

Accessibility

1. **Pathways:** Gravel pathways are in fair condition, however there are 2”+ transitions to surrounding hardscape areas. There are no accessible paths of travel to picnic tables or barbeques.
2. **Furnishings:** No ADA accessible benches, drinking fountains or tables are provided.
3. **Play Equipment:** No accessible play elements are provided, sand surfacing has no ramp to surrounding paving

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is sparse, however planting that remains is well maintained and planting areas are kept weed free.
2. **Turf:** Turf is in good condition with minor gopher issues.
3. **Trees:** Trees are in good condition.

Lighting: Lighting was not operating at the time of the site visit.

Irrigation: Unknown

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace all benches with current Milpitas standard, placed on concrete pads to ensure accessibility.
- Replace drinking fountains
- Replace picnic tables
- Replace bike racks
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Replace dead or dying plants with drought-tolerant California natives. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly. Remove graffiti throughout the park.

Long Term Improvements

The proposed improvement plans include an all-inclusive playground area and fitness stations, large picnic area with shade structures, new restroom, asphalt pathways, converting the existing horseshoes pit into a basketball court, updating small picnic areas, and adding pedestrian lighting.

PROPOSED IMPROVEMENTS SITE PLAN

Image courtesy of Gates + Associates Landscape Architecture

PROPOSED IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Bench	4	EA	$3,000.00	$12,000
2	picnic table	3	EA	$4,000.00	$12,000
3	BBQ & Ash Receptacle	3	EA	$5,000.00	$15,000
4	Drinking Fountains	2	EA	$10,000.00	$20,000
5	Trees removal and landscape maintenance	1	LS	$10,000.00	$10,000
	SUBTOTAL Short Term Park Improvements				$69,000
	Soft Costs (Administration, Inspection) - 30%				$20,700
				Short Term Repairs & Upgrades TOTAL	$89,700
B.	Long Term Park Improvements				
1	100% PS&E Estimate [1]	1	LS	$1,800,000.00	$1,763,174
	SUBTOTAL Long Term Park Improvements				$2,011,574
	Construction Contingency - 15%				$301,736
	Soft Costs (Design, Administration, Inspection, Permitting) - 15%				$301,736
				Long Term Park Improvements TOTAL	$2,615,046
				IMPROVEMENTS TOTAL	$2,704,746
C.	Annual Maintenance Cost				
	Restroom service - Cleaning and Restocking (Daily)	1	LS	$7,500.00	$7,500
	Sports Courts Cleaning (Weekly)	1000	SF	$0.12	$120
				Annual Maintenance TOTAL	$7,620

1. Refer to 100% PS&E Estimate by Gates + Associates. See appendix X-XX

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SELWYN PARK

Selwyn Dr. and Dempsy St.

Type: Urban Park
Size: 0.23 acres
Construction Date: 1968
Latest Renovation: 2003

PARK OVERVIEW

Selwyn Park is a small urban park tucked into a residential neighborhood. It offers a small picnic area, playground, and a half basketball court.

This park was renovated in 2003 with modern furnishings and playground, however it has since fallen into disrepair. Most site furnishings and play equipment are damaged, and graffiti is a persistent problem. Despite lack of maintenance, it remains very popular with the local community and sees high use.

EXISTING SITE ASSESSMENT

Sand from play area fills perimeter planting areas

Play surfacing separating from concrete walk. 1” gap

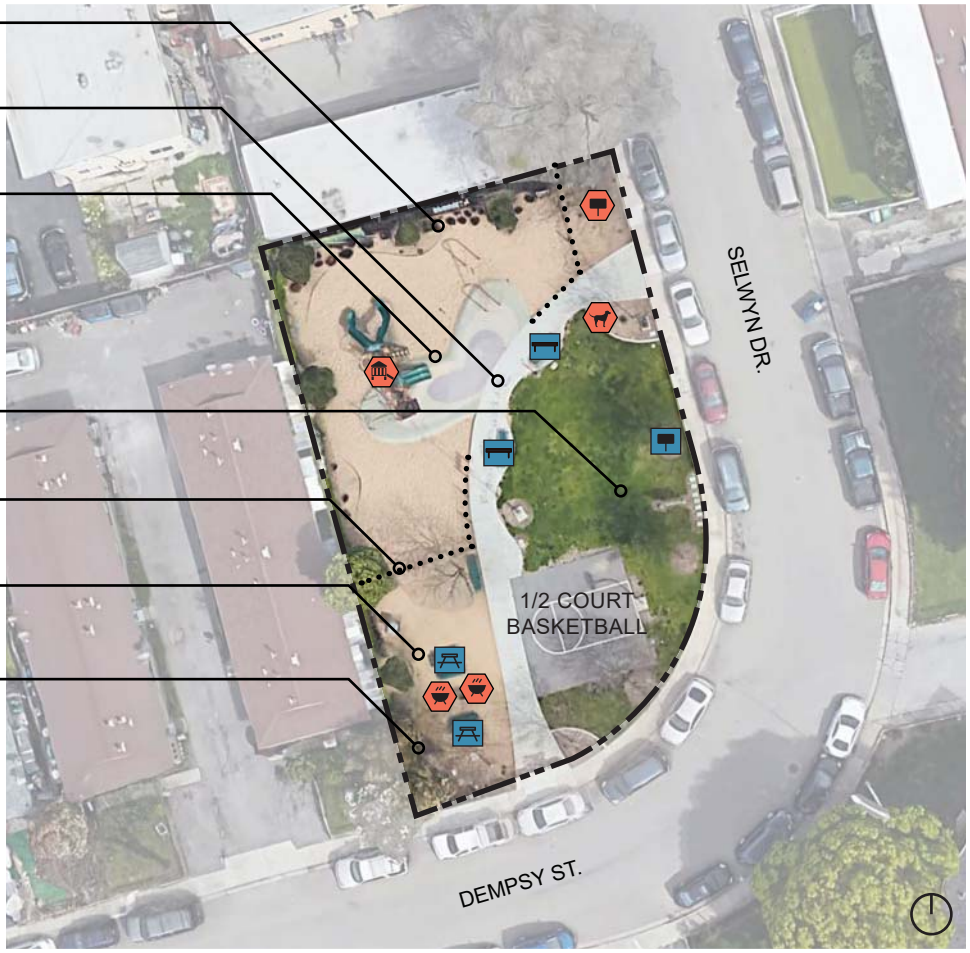
Sand at play structure is low. 8”-12” drop from play surfacing

Patchy turf

Fencing missing panels throughout park

Sand from play area filling group picnic areas

No ADA access to picnic area



LEGEND

- BBQ (2)
- Bench (2)
- Picnic Table (2)
- Play Structure (1)
- Entry Sign (1)
- Ornamental Metal Fence

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Two metal benches have scratched paint and damaged seating. Two metal tables and two barbecues are in poor condition.

Site Accessibility

1 **Paths:** Concrete paths are in good condition.

2 **Picnic Area:** Decomposed granite at picnic area is failing. No ADA picnic tables are provided.

3 **Play Area:** At the time of this document sand at the play area is low creating 8-12" transitions from poured in place surfacing. Repair to the play structure, poured in place surfacing and wood fiber should be conducted and scheduled in order to comply with ADA requirements.

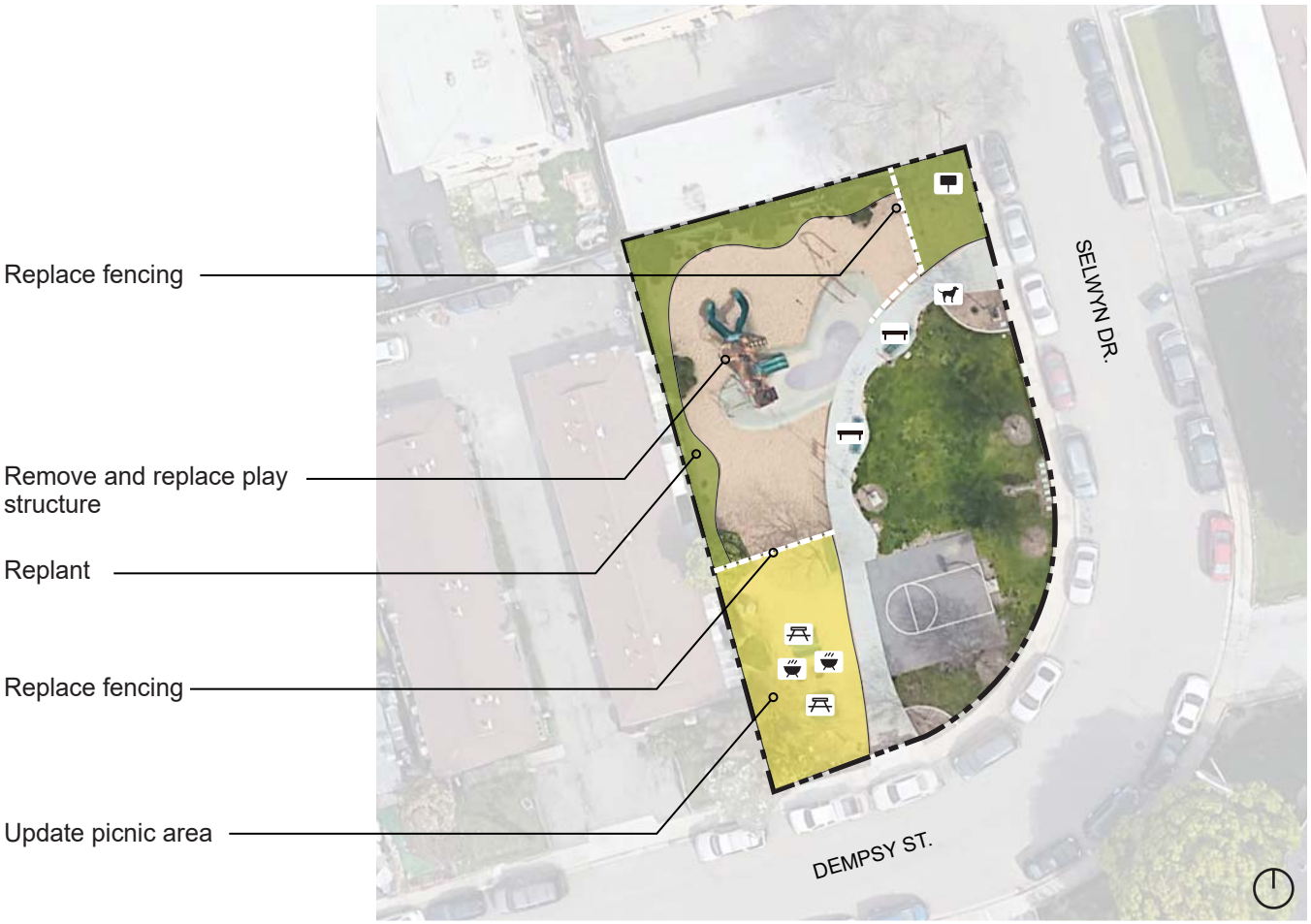
Landscape & Maintenance

1 **Planting Areas:** Planting areas are filled with sand blown in from play areas.

2 **Fencing:** Fencing throughout the park is missing panels and rusted through.

3 **Turf:** Turf is in fair condition with some bare spots.

SELWYN PARK
PROPOSED SITE PLAN



LEGEND

- BBQ (2)
- Bench (2)
- Picnic Table (2)
- Park Rules Sign (1)
- Dog Station (1)

PROPOSED IMPROVEMENTS

Short Term Improvement

- Update picnic area: Replace picnic tables and barbeques with current Milpitas standard, provide ADA accessible models. Provide ash receptacles.
- Playground equipment and surface repairs: Repair damaged portions of poured in place surfacing, replace existing sand surfacing with engineered wood fiber. Update play equipment per Milpitas Playground Rehabilitation Project. [1]
- Replace fencing with Milpitas standard ornamental metal fencing.
- Replace park rules sign.
- Replace dog station.

Long Term Improvements

- Pave picnic areas with concrete and add overhead shade structure.
- Remove and replace play area: Replace structures and provide accessible ground level play elements. Replace poured in place surfacing and engineered wood fiber. Include integrated shade structures.
- Replace all benches with current Milpitas standard. Provide companion seating.
- Replace Landscape and Irrigation: Replant and mulch landscaped areas with drought tolerant California native planting. Adjust irrigation system as needed. Weed, prune, replenish mulch and fertilize quarterly or as needed. Replace irrigation system and controller.

1. See Appendix G: Milpitas Playground Rehabilitation Project

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Repair 42" Height Wire Mesh Fence	1	LS	$20,000.00	$20,000
2	BBQ & Ash Receptacle	2	EA	$5,000.00	$10,000
3	Accessible Picnic Table	2	EA	$4,000.00	$8,000
4	Dog Waste Station	1	EA	$1,500.00	$1,500
5	Play Rule Sign Replacement	1	LS	$2,000.00	$2,000
6	Playground Equipement & Surface Repairs	1	LS	$56,492.00	$56,492
	SUBTOTAL Short Term Park Improvements				$97,992
	Soft Costs (Administration, Inspection) - 30%				$29,398
				Short Term Repairs & Upgrades TOTAL	$127,390
B.	Long Term Park Improvements				
1	Demolition & Grading	6,000	SF	$5.00	$30,000
2	Replace Landscaping & Irrigation	1.00	LS	$100,000.00	$100,000
3	Play Structure	3,600	SF	$70.00	$252,000
4	Rubberized Safety Surfacing	3,600	SF	$30	$108,000
5	Right of Way Improvement	1	LS	$50,000.00	$50,000
6	Site Furnishing	1	LS	$25,000.00	$25,000
7	Pave Pincinc Areas (Concrete)	1,400	SF	$16.00	$22,400
	SUBTOTAL Long Term Park Improvements				$587,400
	Mobilization - 15%				$88,110
	Design & Construction Contingency - 30%				$176,220

SINNOTT PARK (JOHN)

Clear Lake Ave. and Tahoe Dr.

Type: Neighborhood Park
Size: 4.67 acres
Construction Date: 1970

PARK OVERVIEW

Sinnott Park is adjacent to John Sinnott Elementary School and provides passive recreation for the surrounding neighborhood.

The southern end of the park is the active core with a restroom, play area, picnic area, restroom and a sand volleyball pitch.

The northern side of the site consists of a passive use lawn and a fitness court that is in disrepair. The fitness court has connectivity to John Sinnott Elementary School and Robert E. Browne Park to the north.

The park requires renovation due to a lack of ADA complaint amenities and play area, the aging furnishings and infrastructure, eroding pathways, hazardous fitness equipment and sparse planting. No pedestrian lighting is provided.

EXISTING SITE ASSESSMENT

Bike trail

Fitness equipment court in poor condition, poses a safety hazard

Gravel paths throughout site have severe erosion issues, including major gaps at transitions to surrounding sidewalks and paving.

Passive use lawn

Sand volleyball pitch

Play area

Picnic area

LEGEND

- BBQ (3)
- Bench (5)
- Bike Rack (1)
- Dog Station (1)
- Entry Sign (2)
- Park Rules Sign (1)
- Drinking Fountain (1)
- Picnic Table (3)
- Play Structure (1)
- Restroom (1)
- Fitness equipment court (~15 pieces of equipment)

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Three wood picnic tables and three barbeques are provided at the south end of the site, all are in poor condition. Five wood benches are provided, in poor condition. One dog station is provided at the east end of the site with no waste receptacle. There is a drinking fountain attached to the restroom, in poor condition.

2. **Play Area:** The play structure is aging but in fair condition. The swing set is in poor condition. Sand surfacing is spilling into the adjacent volleyball pitch, merging the two areas.

3. **Workout Equipment:** There is a fitness court at the north end of the site adjacent to John Sinnott Elementary School. Approximately 15 pieces of equipment are provided, all are in very poor condition and some pose safety hazards.

- **Signage:** Two entry signs and one park rules sign are in good condition.

Accessibility

1. **Pathways:** The majority of paths are gravel or decomposed granite in very poor condition. Paths exceed allowable slopes in many places, and there are drops of up to 4” from adjacent paving. Paths are not level and there is extensive drainage and ponding throughout. Asphalt pathways are in good condition.

2. **Furnishings:** No ADA-accessible furnishings are provided.

3. **Play Areas:** No accessible equipment is provided. Sand surfacing is not accessible, and there is no ramp into play area.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1. **Landscape Planting:** Most areas are bare of planting, there is no landscape mulch. Remaining planting is not maintained.

2. **Turf:** Turf is in good condition, with some drainage issues at pathways.

- **Trees:** Aging deciduous trees pose a safety hazard. Redwoods are in good condition.

- **Lighting:** The park lacks adequate security lighting.

- **Irrigation:** This site is on the City's centralized irrigation system using potable water.

- **Restroom:** Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace fitness equipment: Add new fitness court with poured in place surfacing. Replace all benches with Milpitas standard, placed on concrete pads to ensure accessibility. Provide companion seating.
- Replace picnic tables and barbeques with current Milpitas standard, provide ADA models, provide ash receptacles.
- Replace benches.
- Replace bike rack.
- Replace park rules sign.
- Replace dog waste station.
- Repair swingset.
- Spot repair gravel paths at transitions to hardscape to remove ADA access impediments. Repair localized drainage issues.
- Conduct tree survey by certified arborist to identify and remove hazardous trees.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn

Long Term Improvements

- Add community garden: Fenced community garden with raised wood planters, irrigation and fiber surfacing.
- Add pickleball courts: Add three full size pickleball courts with fencing, surfacing, benches and nets.
- Remove and replace play area: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Replace fencing where necessary. Include integrated shade structures.
- Pave picnic area, add trash/recycle receptacles and provide shade structure
- Replace all gravel paths with 9' wide concrete paths. Regrade and improve drainage as necessary.
- Add wayfinding signage at north entrance.
- Add pedestrian lighting.
- Right-of-Way Improvement: Installation of ADA curb ramps and bollards at entrances. Sidewalk and curb and gutter repairs and sidewalk expansion as necessary to accommodate improvements

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	3	EA	$5,000.00	$15,000
2	Bench	5	EA	$3,000.00	$15,000
3	Picnic Table	3	EA	$4,000.00	$12,000
4	Bike Rack	1	EA	$2,500.00	$2,500
5	Dog Waste Station	1	EA	$1,500.00	$1,500
6	Fitness Stations (Including Surfacing & Curb)	10	EA	$10,000.00	$100,000
8	Park Rule Sign Replacement	1	LS	$2,000.00	$2,000
9	Swing Repair	1	LS	$10,000.00	$10,000
10	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$130,000.00	$130,000
11	Pathway spot repair	1	LS	$10,000.00	$10,000
12	Conduct Tree Survey & Maintenance Allowance	1	LS	$100,000.00	$100,000
	SUBTOTAL Short Term Park Improvements				$398,000
	Soft Costs (Administration, Inspection) - 30%				$119,400
				Short Term Repairs & Upgrades TOTAL	$517,400
B.	Long Term Park Improvements				
1	Demolition & Grading	80,000	SF	$5.00	$400,000
2	Pave Walking Path (9' Wide, 4" Concrete over 6" CL II AB)	20,000	SF	$16.00	$320,000
3	Pedestrian Lighting	1	LS	$150,000.00	$150,000
4	Large Shade Structure	1	LS	$130,000.00	$130,000
5	Community Garden (1/8 Acre)	1	LS	$150,000.00	$150,000
6	Play Structure	10,000	SF	$70.00	$700,000
7	Rubber Safety Surfacing	10,000	SF	$30.00	$300,000
8	Pave Pincinc Areas (Concrete)	3,000	SF	$16.00	$48,000
9	Right of Way Improvement	1	LS	$100,000.00	$100,000
10	Site Furnishing	1	LS	$150,000.00	$150,000
11	Concrete Pickleball Courts with Acrylic Surfacing	12,000	SF	$20.00	$240,000
13	Pickleball Standards	6	EA	$3,500.00	$21,000
14	8' HT Chainlink Fence w/ Windscreen	450	LF	$175.00	$78,750
15	Drainage system	1	LS	$150,000.00	$150,000
16	Landscaping & Irrigation	4.0	Acres	$75,000.00	$300,000
	SUBTOTAL Long Term Park Improvements				$3,237,750
	Mobilization - 15%				$485,663
	Design & Construction Contingency - 30%				$971,325
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$971,325
				Long Term Park Improvements TOTAL	$5,666,063
				IMPROVEMENTS TOTAL	$6,183,463
C.	Additional Features Annual Maintenance Cost				
	Sports Courts Cleaning (Weekly)	18000	SF	$0.12	$2,160
				Annual Maintenance TOTAL	$2,160

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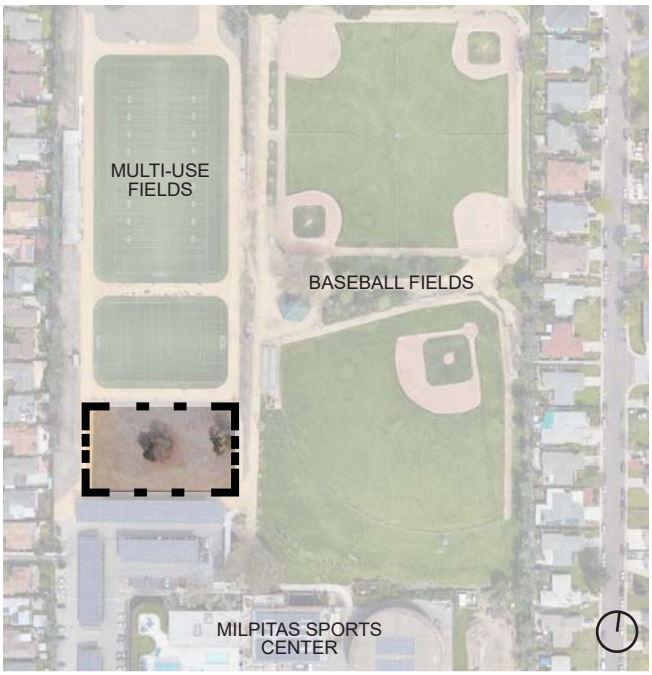


SKATEPARK

Milpitas Sports Center Complex

Type: Special Use Park
Size: 1.23 acres
Construction Date: 2020

PARK OVERVIEW

The Milpitas Skatepark is located in the Milpitas Sports Center Complex, south of the multi-use fields.

This completely ADA-accessible all-wheel facility is designed for users of all ages and levels of experience. The park includes observation areas, a group event area, art features and a fully skateable landscaped areas.

Image courtesy of Verde Design Landscape Architecture

RECOMMENDED IMPROVEMENTS

No improvements are recommended at the time of this document.

STARLIGHT PARK

N. Abbott Ave. and Rudyard Dr.

Type: Neighborhood Park
Size: 3.44 acres
Construction Date: 1963

PARK OVERVIEW

Starlight Park, located across the street from Anthony Spangler Elementary School, provides passive recreation amenities for the surrounding neighborhood.

The park is divided into two main areas with a play area and public restroom on the north side, and a group picnic area to the south. The center of the park features a large passive use lawn and an underutilized horseshoe pit. A restroom is provided at the entrance to the park. A public art piece is showcased at the northeast entrance.

All amenities, play structures, paths and facilities at this site are aging and in poor condition, and no ADA-accessible amenities are provided. The play structures are outdated and do not meet current safety codes. Aging eucalyptus trees pose a significant safety hazard. Pedestrian lighting is provided, however it was not in operation at the time of site inspection. A full renovation is recommended.

EXISTING SITE ASSESSMENT

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Six wood picnic tables and four barbeques are provided; all are in poor condition. All wood benches are in poor condition. There is a drinking fountain attached to the restroom, in poor condition. The art piece is in fair condition with some vandalism damage.
2. **Play Area:** The play structure is in poor condition and poses a safety hazard. Outdated design presents fall hazards. Immediate replacement is recommended.
3. **Signage:** Park entry sign and park rules sign are in good condition.

Accessibility

1. **Pathways:** All gravel paths are in poor condition. Paths exceed accessible slopes in many places, uneven surfaces cause drainage issues throughout the park.
2. **Furnishings:** No ADA-accessible furnishings are provided.
3. **Play Areas:** No accessible equipment is provided. Sand surfacing is not accessible,. There is no ramp into the play area.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Landscape Planting:** Most areas are bare of planting, and there is no landscape mulch. Raised planters are empty.

2 **Turf:** Turf is in good condition.

3 **Trees:** All trees need extensive pruning. Aging eucalyptus trees over the picnic area pose an immediate safety hazard.

Lighting: The park lacks adequate security lighting.

Irrigation: This site is on the City's centralized irrigation system using potable water.

Restroom: Restroom is in fair condition. See Facility Condition Assessment for further information.[1]

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS

Short Term Improvement

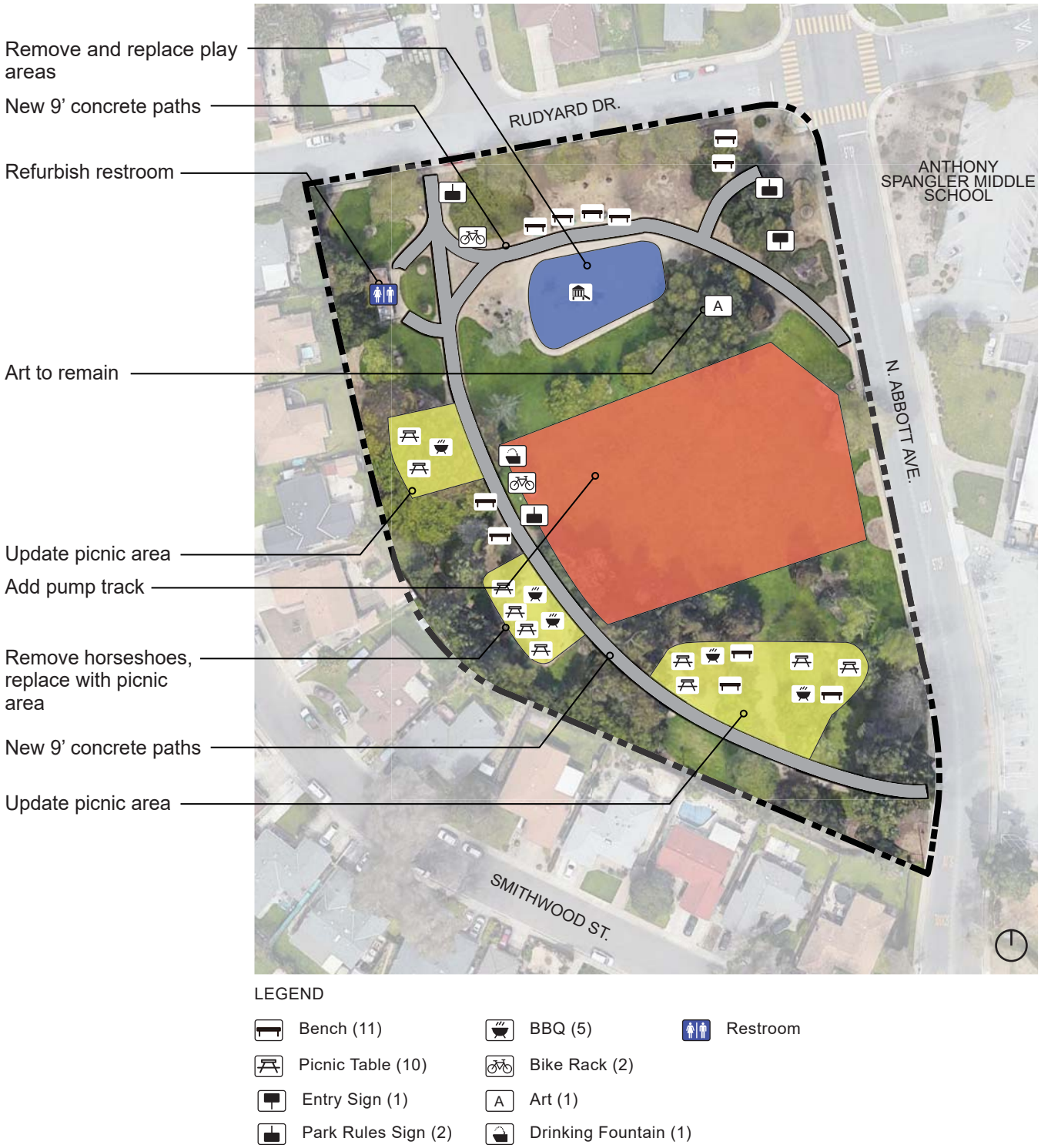
- Remove and replace play area: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Replace fencing where necessary. Include integrated shade structures.
- Replace picnic tables and barbeques with current Milpitas standard, provide ADA models, provide ash receptacles.
- Replace benches, place on concrete pads to ensure accessibility.
- Replace bike rack.
- Repair park rules sign.
- Repair Art piece from vandalism.
- Conduct tree survey by certified arborist to identify and remove hazardous trees.
- Refurbish Restroom: Refurbish and conduct ADA study per Facility Condition Assessment.[1]
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvements

- Add pump track: Add compacted soil pump track with beginner and advanced tracks, bike racks, bike stations, seating and perimeter fencing. Add safety and regulatory signage.
- Update picnic area: Pave picnic areas with concrete and add overhead shade structure where trees do not provide shade. Provide trash recycle and ash receptacles.
- Remove horseshoe pits and replace with small picnic area.
- Replace all gravel paths with 9' wide concrete paths
- Replace pedestrian lighting
- Landscape and Irrigation: with California Native drought tolerant planting, mulch with 3" layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.
- Right-of-Way Improvement: Install ADA curb ramps at all park entrances, provide bollards. Restripe crosswalk striping, expand sidewalk and repair curb and gutter as needed.

1. See Appendix E: Facility Condition Assessment

PROPOSED IMPROVEMENTS SITE PLAN



IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	BBQ & Ash Receptacle	4	EA	$5,000.00	$20,000
2	Bench	9	EA	$3,000.00	$27,000
3	Picnic Table	6	EA	$4,000.00	$24,000
4	Bike Rack	1	EA	$2,500.00	$2,500
5	Repair signage	1	LS	$2,000.00	$2,000
6	Repair Art Piece from Vandalism	1	LS	$10,000.00	$10,000
7	Refrubish Restroom (Refer to Facility Condition Assessment)	1	LS	$131,000.00	$131,000
	Play Equipemnt replacement	1	LS	$400,000.00	$400,000
8	Conduct Tree Survey & Maintenance Allowance	1	LS	$100,000.00	$100,000
	SUBTOTAL Short Term Park Improvements				$716,500
	Soft Costs (Administration, Inspection) - 30%				$214,950
				Short Term Repairs & Upgrades TOTAL	$931,450
B.	Long Term Park Improvements				
1	Demolition & Grading	65,000	SF	$5.00	$325,000
2	Drainage	1	LS	$125,000.00	$125,000
3	Pave Walking Path (9' Wide, 4" Concrete over 6" CL II AB)	12,000	SF	$16.00	$192,000
4	Pedestrian Lighting Replacement	1	LS	$150,000.00	$150,000
5	Site Furnishing	1	LS	$150,000.00	$150,000
6	Landscape and Irrigation	3	Acres	$75,000.00	$225,000
7	Right of Way Improvement	1	LS	$100,000.00	$100,000
8	Pave Pincinc Areas (Concrete)	10,000	SF	$16.00	$160,000
9	Play Structure	6,000	SF	$70.00	$420,000
10	Rubberized Safety Surfacing	6,000	SF	$30.00	$180,000
11	Large Shade Structure	1	LS	$130,000.00	$130,000
12	Pump Track	1	LS	$150,000.00	$150,000
13	Drinking Fountain	1	EA	$10,000.00	$10,000
	SUBTOTAL Long Term Park Improvements				$2,317,000
	Mobilization - 15%				$347,550
	Design & Construction Contingency - 30%				$695,100
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$695,100
				Long Term Park Improvements TOTAL	$4,054,750
				IMPROVEMENTS TOTAL	$4,986,200
C.	Additional Features Annual Maintenance Cost				
	Pump track maintenance	50000	SF	$0.12	$6,000
				Annual Maintenance TOTAL	$6,000

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STRICKROTH PARK (HENRY)

Martil Way and Gemma Dr.

Type: Neighborhood Park
Size: 4.87
Construction Date: 1974

PARK OVERVIEW

Stickroth Park is a large neighborhood park providing a variety of passive and active use facilities. It includes a small picnic area at the north end, two playgrounds for ages 2-5 and 5-12, and a large turf field used for baseball and soccer games. The park is lit by dual street lighting, however no pedestrian lighting is provided at the interior of the park. No restroom is provided. The park requires renovation due to a lack of ADA accessible amenities, play elements, benches, lighting and restrooms.

EXISTING SITE ASSESSMENT

AMENITY CONDITION

- Good Condition
- Fair Condition
- Poor Condition

LEGEND

- Backstop (1)
- BBQ (2)
- Bike Rack (1)
- Dog Station (1)
- Drinking Fountain (1)
- Picnic Table (2)
- Play Structure (2)
- Entry Sign (1)

EXISTING SITE ASSESSMENT

Site Furnishings

1 **Amenities:** Two picnic tables, two barbecues, one bike rack and a drinking fountain are provided. All site furnishings are in poor condition.

2 **Play Area:** The main play structures are in poor condition. The hillside tunnel is in poor condition, posing safety hazards. With no safety handrails or poured in place surfacing below, the bridge above the tunnel presents a fall hazard. The interior of the tunnel is heavily rusted.

Signage: Park entry sign and two park rules signs are in poor condition.

Accessibility

1 **Pathways:** Asphalt paths are in fair condition. Slopes are compliant with current code. The decomposed granite picnic area is not accessible.

2 **Play Areas:** No accessible equipment is provided. Sand surfacing is not accessible, and there is no ramp into the play area.

Furnishings: No ADA-accessible furnishings are provided.

EXISTING SITE ASSESSMENT

Landscaping & Maintenance

1 **Landscape Planting:** Most areas are bare of planting, and there is no landscape mulch. Tree planters at the sidewalk are empty.

2 **Turf:** Turf is in good condition.

3 **Trees:** All trees need extensive pruning. Aging pine trees pose an immediate safety hazard.

Lighting: The park lacks adequate security lighting.

Irrigation: This site is on the City's centralized irrigation system using reclaimed water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Replace picnic tables and barbeques with current Milpitas standard, provide ADA models, provide ash receptacles.
- Refurbish hill tunnel play feature: Add safety surfacing and safety railings at bridge. Repaint tunnel interior and remove all rust and jagged edges.
- Replace bike rack.
- Repair park rules sign.
- Replace dog waste station
- Replace drinking fountain
- Replace ornamental metal fencing at play area
- Conduct tree survey by certified arborist to identify pruning and removal of hazardous trees.
- Landscape Maintenance: Weed and prune all landscaped areas and prune trees where necessary, remove all dead or dying vegetation. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvements

- Add cricket pitch: Add cricket pitch infield and close infield striping.
- Add parking lot with at least 20 car capacity, accessed off Corinthia Dr.
- Remove and replace play area: Replace structures and provide accessible ground level play elements. Replace sand surfacing with poured in place surfacing and engineered wood fiber. Replace fencing at north play area with Milpitas standard ornamental metal fencing. Include integrated shade structures.
- Update picnic area: Pave picnic areas with concrete and add overhead shade structure where existing tree canopies do not provide shade. Provide trash/ recycle and ash receptacles.
- Replace all asphalt and decomposed granite paths with 9’ wide concrete paths.
- Regrade and improve drainage where necessary.
- Add pedestrian lighting.
- Add single stall restroom
- Add benches, place on concrete pads.
- Replace baseball backstop.
- Landscape and Irrigation: with California Native drought tolerant planting, mulch with 3” layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed. Replace irrigation controller.
- Right-of-Way Improvement: Install ADA curb ramps at all park entrances, provide bollards. Restripe crosswalk striping, expand sidewalk and repair curb and gutter as needed.

PROPOSED IMPROVEMENTS SITE PLAN

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Drinking Fountain	1	EA	$10,000.00	$10,000
2	Dog Waste Station	1	EA	$1,500.00	$1,500
3	BBQ & Ash Receptacle	2	EA	$5,000.00	$10,000
4	Picnic Table	2	EA	$4,000.00	$8,000
5	Signage Repair	1	LS	$2,000.00	$2,000
6	Metal Fencing Repair	1	LS	$5,000.00	$5,000
7	Refurbish Hill Tunnel	1	LS	$50,000.00	$50,000
8	Conduct tree survey and maintenance (allowance)	1	LS	$100,000.00	$100,000
	SUBTOTAL Short Term Park Improvements				$186,500
	Soft Costs (Administration, Inspection) - 30%				$55,950
				Short Term Repairs & Upgrades TOTAL	$242,450
B.	Long Term Park Improvements				
1	Demolition & Grading	40,000	SF	$5.00	$200,000
2	Parking Lot (3.5" AC over 14.5" CL II AB)	8,500	SF	$12.50	$106,250
3	Pave Walking Path (9' Wide, 4" Concrete over 6" CL II AB)	12,600	SF	$16.00	$201,600
4	Drainage	1	LS	$125,000.00	$125,000
5	Pedestrian Lighting	1	LS	$150,000.00	$150,000
6	Cricket Pitch (Full Striping - Sod Lawn)	1	LS	$200,000.00	$200,000
7	Prefabricated Restroom (Single Stall)	1	LS	$200,000.00	$200,000
8	Utilities for New Restroom (Water, Sewer, Electrical)	1	LS	$100,000.00	$100,000
9	Entry Sign (City Standard)	3	EA	$5,000.00	$15,000
10	Play Structure	8,000	LS	$70.00	$560,000
12	Rubber Safety Surfacing	8,000	SF	$30.00	$240,000
13	Pave Pincinc Areas (Concrete)	5,000	SF	$16.00	$80,000
14	Backstop (10' Wide)	1	EA	$75,000.00	$75,000
15	Site Furnishing	1	LS	$150,000.00	$150,000
16	Landscape and Irrigation	5	Acres	$75,000.00	$365,250
17	Right of Way Improvement	1	LS	$150,000.00	$150,000
	SUBTOTAL Long Term Park Improvements				$2,918,100
	Mobilization - 15%				$437,715
	Design & Construction Contingency - 30%				$875,430
	Soft Costs (Design, Administration, Inspection, Permitting) - 30%				$875,430
				Long Term Park Improvements TOTAL	$5,106,675
				IMPROVEMENTS TOTAL	$5,349,125
C.	Additional Features Annual Maintenance Cost				
	Parking lot cleaning (Weekly)	8500	SF	$0.12	$1,020
	Athletic field maintenance (Daily/Weekly)	50000	SF	$0.25	$12,500
				Annual Maintenance TOTAL	$13,520

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TOM EVATT PARK

South Abel St. and Machado Ave.

Type: Neighborhood Park
Size: 4.42
Construction Date: 2007

PARK OVERVIEW

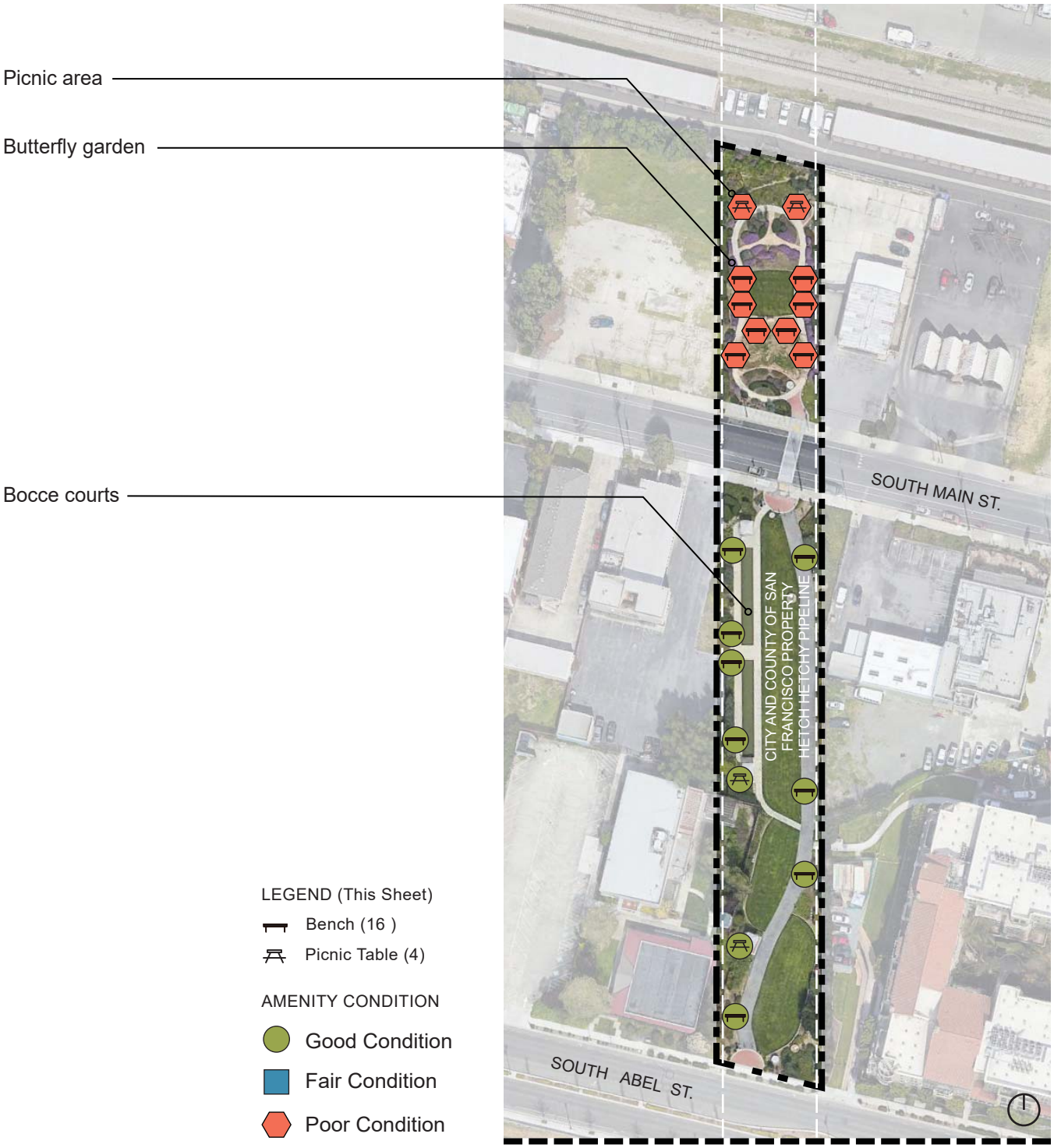
Tom Evatt Park was constructed in 2007 as part of the Midtown Redevelopment area. It extends from Hammond Way on the east end to Thompson Court on the west, and crosses South Abel St. and South Main St. It is adjacent to John McDermott Park. An 8 car parking lot with one ADA accessible stall is provided at Thompson Ct. and Machado Ave. An approximatly 12' high sound wall along Machado Ave.

The east end of the park contains the activity center, with two tennis courts, two half basketball courts, a playground and a picnic area. A greenbelt and walking trail connects to picnic areas along South Abel Street. The central portion of the park between South Abel Street. and South Main Street has two underutilized bocce courts and seating. The eastern portion of the site across from South Main Street is a butterfly garden with seating and picnic areas.

The butterfly garden is overgrown with planting and site furnishings are in poor condition. The central and western portions of the site are relatively new and in good condition.

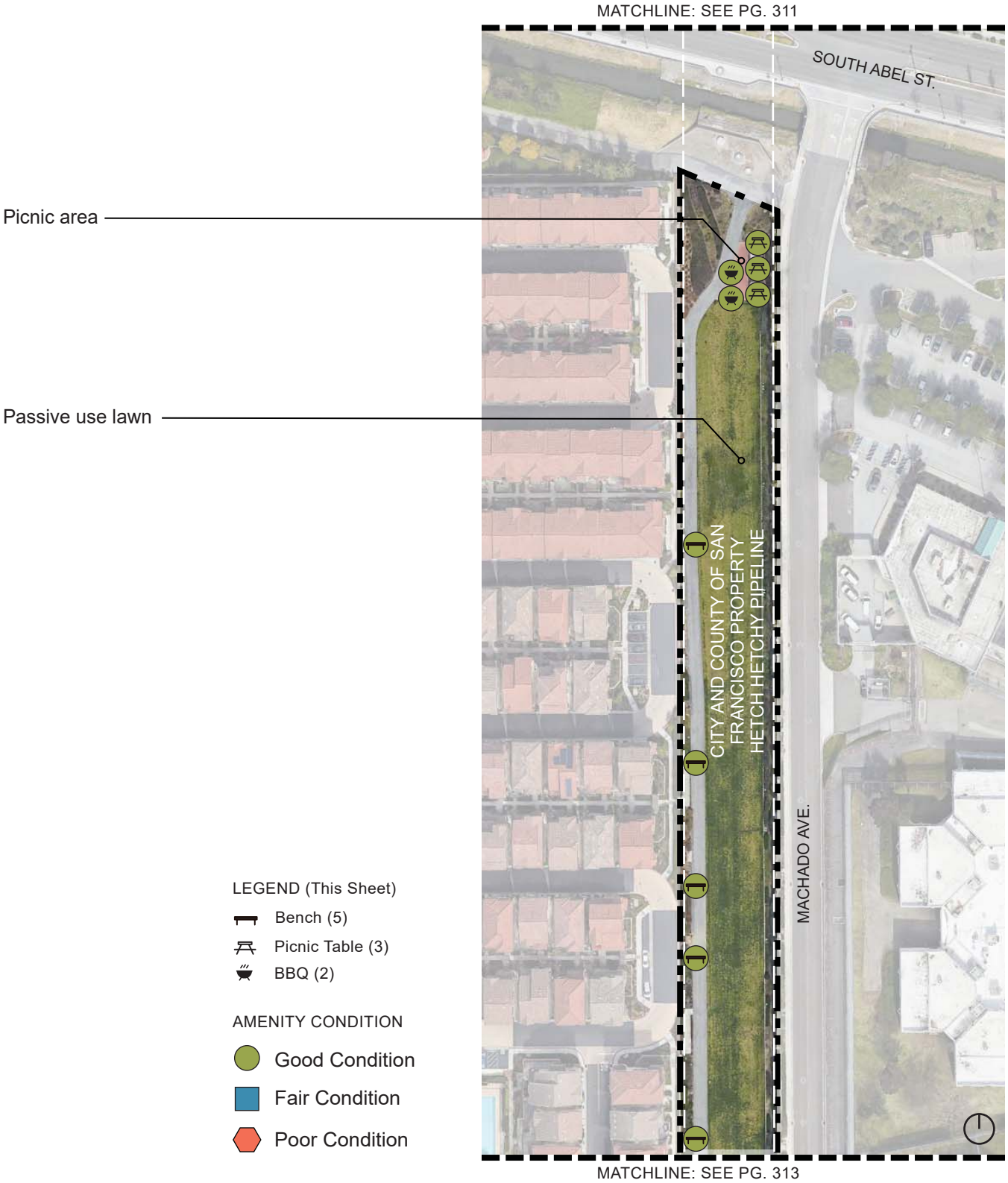
The entirety of the park lies within the City and County of San Francisco Hetch Hetchy pipeline property. Any renovations in this area require a permit from the SFPUC.

EXISTING SITE ASSESSMENT

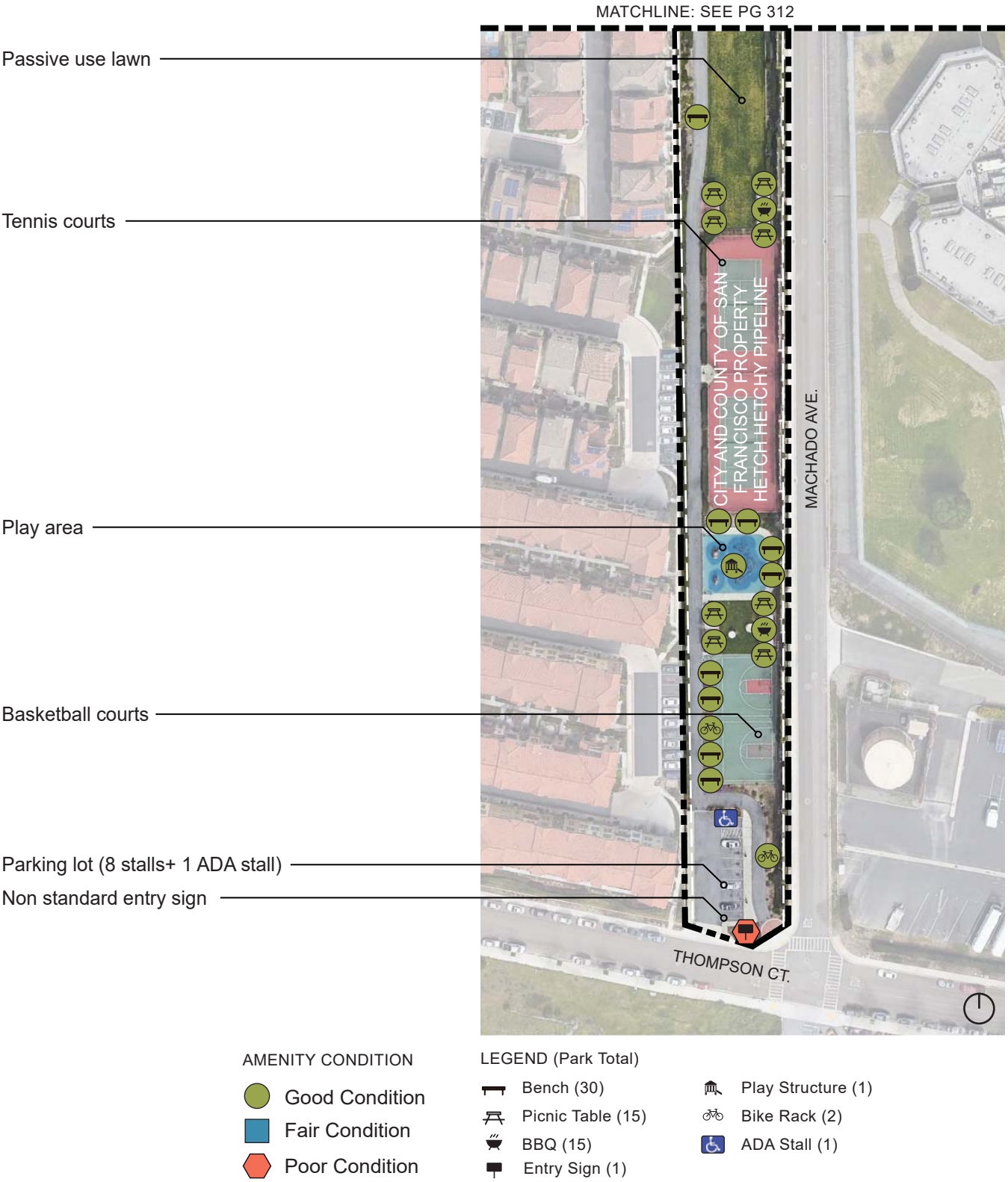


MATCHLINE: SEE PG. 312

EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT



EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Sixteen picnic tables, eleven with shade structures, four barbecues, two drinking fountains and thirty benches are provided throughout the park. All site amenities are in good condition with the exception of the butterfly garden at the east end of the park.
2. **Play Area:** The play equipment is in good condition. There are minor issues with the rubberized grips on climbing elements.

- **Signage:** Park signage is adequate and in good condition.

Accessibility

1. **Pathways:** Asphalt paths are in good condition. Slopes are compliant with current code. The pavers at all picnic areas are heaving and settling, creating uneven surfaces.
2. **Play Areas:** Accessible play equipment is provided.

- **Furnishings:** Accessible tables, benches and drinking fountains are provided.

EXISTING SITE ASSESSMENT

Sports Facilities

1 **Tennis Courts:** Two tennis courts are provided at the west end of the park. Both are in good condition.

2 **Basketball Courts:** Two half basketball courts are provided at the west end of the park. Both are in good condition.

3 **Bocce Courts:** Two bocce courts are provided between South Abel Street and South Main Street. Both are in poor condition and underutilized.

Landscaping & Maintenance

1 **Planting:** The butterfly garden east of South Main Street is heavily overgrown, weeds are prevalent and planting is encroaching on pathways

1 Site planting is in fair condition between Thompson Court and South Main Street.

2 **Fencing:** Ornamental metal fencing delineates public and private property. All fencing is in good condition.

3 **Turf:** The park is primarily a linear turf lawn with asphalt paths providing access. The turf is in fair condition. Some areas directly south of South Main Street are patched with multiple different types of grass.

Irrigation: This site is on the City's centralized irrigation system using potable water.

PROPOSED IMPROVEMENTS

Short Term Improvement

- Update Playground: Replace safety surfacing. Remove the Diagonal Saucer Rope Climber and Rocking Seat equipment per the Milpitas Playground rehabilitation project.[1]
- Replant: Replant Butterfly Garden with California Native butterfly planting such as Buckwheat, Yarrow, Mimulus, and Milkweed. Mulch with 3" layer of recycled wood mulch per Milpitas City standards. Adjust or repair irrigation as needed.
- Replace all sod at Butterfly Garden
- Replace all benches and picnic tables at butterfly garden with Milpitas standard.
- Refurbish bocce ball courts: Remove weeds from artificial turf surfacing, replace where necessary. Replace court sidewalls.
- Replace all pedestrian pavers with color patterned stamped concrete.
- Replace entry signs with Milpitas Standard
- Remove graffiti throughout site.
- Landscape Maintenance: Weed and prune all overgrown landscaped areas, remove all dead or dying vegetation and ensure planting does not encroach on pathways. Weed, prune and fertilize all landscaped areas quarterly, mulch annually or as needed. Mow and edge all lawn areas weekly.

Long Term Improvements

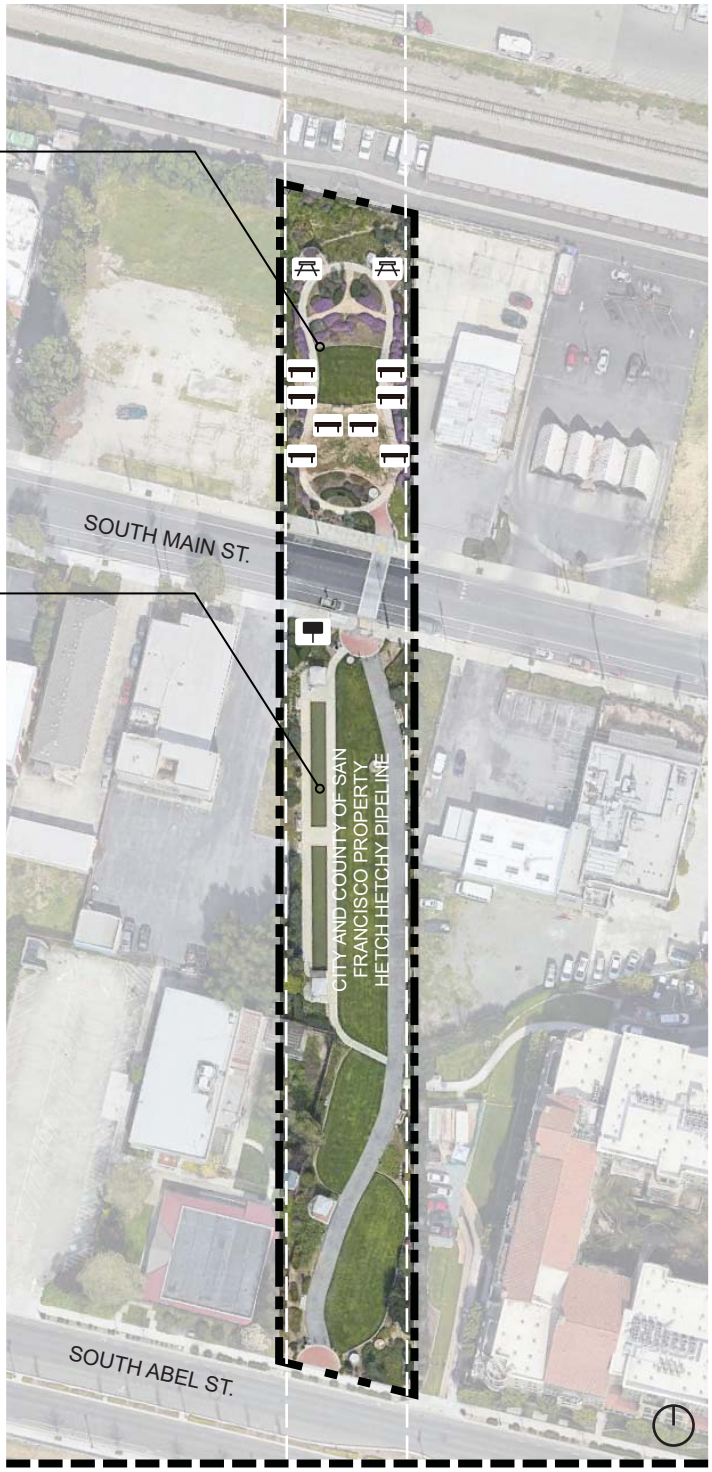
- No long term improvements proposed at the time of this document.

1. See Appendix G: Milpitas Playground Rehabilitation Project

PROPOSED IMPROVEMENTS SITE PLAN

Replant butterfly garden and replace sod at garden

Refurbish bocce ball courts



LEGEND (This Sheet)

- Bench (8)
- Picnic Table (2)
- Entry Sign (1)

MATCHLINE: SEE PG. 318

PROPOSED IMPROVEMENTS SITE PLAN (CONT.)

Replace pavers with color patterned stamped concrete

MATCHLINE: SEE PG. 317

MATCHLINE: SEE PG. 319

PROPOSED IMPROVEMENTS SITE PLAN (CONT.)

IMPROVEMENTS COST

	Item	Quantity		Unit Cost	Subtotal
A.	Short Term Repairs & Upgrades				
1	Replace Picnic Area Pavers w/ Stamp Concrete	2,000	SF	$24.00	$48,000
2	Bench	8	EA	$3,000.00	$24,000
3	Picnic Table	2	EA	$4,000.00	$8,000
4	Replanting at butterfly garden	17,000	SF	$7.00	$119,000
5	Repair Bocce Court	2	EA	$12,500.00	$25,000
6	Demolition	1	LS	$25,000.00	$25,000
7	Street Name Sgn replacement	2	EA	$5,000.00	$10,000
8	Playground Equipement & Surface Repairs	1	LS	$88,295.00	$88,295
	SUBTOTAL Short Term Park Improvements				$347,295
	Soft Costs (Administration, Inspection) - 30%				$451,484
				Short Term Repairs & Upgrades TOTAL	$798,779
B.	Long Term Park Improvements				
	No long Term Park Improvements Proposed				
C.	Additional Features Annual Maintenance Cost				

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ALVISO ADOBE

2087 Alviso Adobe Ct.

Type: Historic Building
Size: 2,200 SF
Construction Date: 1835
Latest Renovation: 2021
Parking: 2 ADA parking stalls

OVERVIEW

The Alviso Adobe was built in 1835 by Jose Maria de Jesus Alviso. The site was originally used for cattle ranching and crops. Since its construction the Adobe and surrounding buildings have gone through extensive changes. In 1853 the second story was added, and in 1922 the property was acquired by the Cuciz family who planted orchards, built a water tank house, a barn, carriage shed, and many other improvements. The City of Milpitas acquired the property in 1996 and many of these historic artifacts have been preserved or reconstructed on site for the public to see.

Today, tours of the Alviso Adobe are provided, showcasing the original adobe walls from 1830, framing, doors and windows from 1853 and a mostly intact 1920's kitchen. The surrounding park contains the outbuildings and artifacts from the Adobe's history.

PROGRAMS:

- Guided tours

FACILITIES:

Facility	Description
Historic Building	*Historic Adobe open for guided tours*
Restroom	*Detached restroom*

JOSE HIGUERA ADOBE

Wessex Pl.

Type: Historic Building
Size: 3,000 SF
Construction Date: ~1828 -
Latest Renovation: 2003
Parking: 2 ADA parking stalls
19 standard stalls

OVERVIEW

please provide info on the caretaketers cottage

Jose Higuera Adobe was built around 1828 by Josè Higuera after being granted the land by Pablo Vincente de Sola, the last Spanish governor of California. The fig, pepper and olive trees surrounding the Adobe are historic, planted by Josè Higuera in the 1830s. The building on site now is a facade built in the 1960's to protect the ruins of the old adobe.

The City acquired the property in the 1970's and added a kitchen and indoor restrooms. Following the Loma Prieta earthquake extensive reconstruction was needed. In 1993 the City built public restrooms adjoining the kitchen. Today there are historic exhibits that can be visited by the public.

PROGRAMS:

- Facility rentals
- Summer camps

FACILITIES:

Facility	Description
Auditorium	*The main building can be rented for gatherings of up to 50 people*
Picnic Area	*The shaded picnic area behind the Adobe can be rented*
Kitchen	*Used for events*
Restroom	*Indoor restroom*

MILPITAS COMMUNITY CENTER

1325 E. Calaveras Blvd.

Type: Community Center
Size: 24,000 SF
Construction Date: 2010
Parking: 3 ADA parking stalls
116 standard stalls

OVERVIEW

The Milpitas Community Center is a multi-purpose facility hosting a variety of services including performing arts, cultural arts, Pre-K services, and community and City events. The Center is located adjacent to City Hall and the Barbara Lee Senior Center.

The facility has an auditorium perfect for wedding receptions, concerts and performances, or business events. There are three rooms for Pre-K education, an art room, a large conference room and a dance studio. The auditorium, dance studios, and conference room can be rented out for private parties and events.

The auditorium overlooks the adjacent Civic Center Plaza featuring an open lawn and stage area for outdoor performances and gatherings.

PROGRAMS:

- Pre-K learning
- Teen education programs
- Art workshops
- Music classes
- Dance classes
- Martial arts classes
- Yoga classes
- Theatre productions
- Summer camps
- Cultural events

FACILITIES:

Facility	Description
Auditorium	*300-person capacity auditorium with stage*
Dance studio	*20-person capacity dance studio*
Conference room	*40-person capacity conference room*
Civic Center Plaza	*Shaded lawn area and amphitheater*
Kitchen	*Kitchen accessible to caterers during private and public events*

BARBARA LEE SENIOR CENTER

40 N. Milpitas Blvd.

Type: Senior Center
Size: 22,000 SF
Construction Date: 1983
Latest Renovation: 2010
Parking: 8 ADA parking stalls
98 standard stalls

OVERVIEW

The Barbara Lee Senior Center provides programs and classes for seniors in Milpitas as well as hosting a teen center for the City's youth.

The facility has a main community room/auditorium, a game room, classrooms, an art room, an exercise room and a fitness center. There is also a coffee and snack bar lounge area.

SENIOR PROGRAMS:

- Case management services
- Lunch program
- Legal and financial assistance
- Senior outings
- Dance classes
- Yoga classes
- Art classes
- Music classes
- Arts and crafts
- Bingo
- Book club

TEEN CENTER PROGRAMS:

- Dance classes
- Fitness classes
- Cooking workshops
- Service projects
- Homework center
- Game rooms
- Movie days
- Outdoor outings
- Mental health services
- Video game tournaments

FACILITIES:

Facility	Description
Auditorium	*399-person capacity multi-purpose auditorium*
Classrooms (3)	*102-person capacity total*
Game room	*30-person capacity pool and ping pong room*
Snack bar	*Small lounge area with coffee and snacks for sale*
Kitchen	*Kitchen for lunch program and private events*

MILPITAS SPORTS CENTER COMPLEX

1325 E. Calaveras Blvd.

Type: Sports Center
Size: 39,700 SF
Construction Date: 1999
Latest Renovation: 2015
Parking: 9 ADA parking stalls
187 standard stalls

OVERVIEW

The Milpitas Sports Center contains a 33-piece fitness center, three pools, two dance/aerobic studios, locker rooms and a snack area.

The Sports Center offers fitness classes, personal trainers and organized adult sports leagues.

PROGRAMS:

- Parent/Child basketball classes
- Youth basketball clinics and scrimmages
- Futsol
- Dance classes
- Martial arts classes
- Yoga classes
- Leadership acadamy
- Lifeguard training
- Adult swim classes

FACILITIES:

Facility	Description
• Gym	*600-person capacity basketball gym with bleachers*
• Fitness center	*34-person capacity fitness center with cardio machines, weight training machines, and freeweights*
• Dance studios (2)	*Two 40-person capacity dance rooms with sound systems and equipment storage*
• Training pool	*Shallow 20-person capacity pool*

FACILITIES:

Facility	Description
• 25 yard pool	*160-person capacity lap pool*
• 25 meter pool	*180-person capacity lap pool*
• Snack area	*Snack and lounge area*
• Locker rooms	*Locker rooms for gym, dance and fitness facilities*
• Pool lockers	*Locker rooms for pool users*
• Multi-purpose room	*Used for yoga, dance, teen programs*

IMPLEMENTATION

6

OVERVIEW

This Master Plan is intended as a living document. With a 15-year time horizon, changes in circumstances, opportunities, resources and demand will evolve. This chapter provides criteria for evaluating project opportunities in order to prioritize use of resources. It also discusses various funding mechanisms that may be pursued to implement the recommended projects, and includes a table of estimated costs for improvements as of the time of this report.

IMPLEMENTATION

In order to provide a range of opportunities, actions are categorized into five implementation strategies that can increase the level of service:

- **Activate** – Provide programming and community events to bring more people into parks and public spaces, as an interim solution in spaces awaiting renovation, and to test community interest in potential future amenities.
- **Connect** – Improve connections between parks and an integrated network of streets, sidewalks and trails.
- **Renovate and Re-purpose** – Rebuild or replace existing park facilities to increase service and usage.
- **Develop** – Provide new park and school district facilities on community land.
- **Create** – Create new parks through dedication, purchase, and creation of privately owned publicly accessible recreation areas through the development process.

For all five implementation strategies, the Recreation and Community Services Department will seek opportunities to collaborate with partners and alternate providers to improve service levels for parks.

The COVID-19 pandemic has severely impacted anticipated City revenues and staff is forecasting a $25 million shortfall over the next three fiscal years. To help offset these revenue losses, staff reviewed existing and proposal capital projects to ensure that funding be prioritized for essential and safety-oriented projects, and funding was reduced or eliminated for projects that could be delayed. The 2020-25 Capital Improvement Program (CIP) includes these cost savings in the amount of $5.67 million for fiscal year 2020-21, helping to offset the anticipated revenue losses to the General Fund.

ACTIVE PROJECTS

Active projects are those that have already begun construction. Milpitas is regularly implementing enhancements. These projects require continued investment in staff time, consulting fees or CIP funds until completed. Active projects incluude:

- McCandless Park
- Citywide Park Rehabilitation
- Minor Sports Courts Rehabilitation
- Sports Fields Turf Rehabilitation Program

PENDING PROJECTS

Projects in the 'Pending' category are ready to move forward but require a funding source. For example, a pending project may be a park site with an approved master plan that is awaiting funding for the next design phase, or a project that has completed the design phase and awaiting CIP funding for construction. Currently pending is:

- Sandalwood Park

FUTURE PROJECTS

These are projects that have not yet been started. They are awaiting a funding source to begin. New projects will likely be proposed during the lifespan of this document and will need to be added to this list.

- Cardoza Park
- Dixon Landing Parking Lot Addition
- Citywide Park Rehabilitation
- Minor Sports Courts Rehabilitation

- Metro Subdistrict Park
- Metro Community Facility Building

PRIORITIZATION CRITERIA

Within the overall park system, prioritization of individual projects is critical to achieving the vision of ensuring that Milpitas has an accessible, equitable and sustainable system of parks and open spaces that maximizes the recreational opportunities available to all of the City's residents, workers and visitors.

Over the course of this Master Plan, Milpitas will determine which projects to move into the "Active" category. The criteria in this section will guide City Staff and elected officials in their decision making process, and will help to determine which projects make the best use of available resources.

The criteria below will help Milpitas determine how to prioritize resources when projects are considered to be moved from either the Future or Pending category to the Active category:

- **Funding availability:** Projects or initiatives for which Milpitas has identified capital and operating funding sources should be moved to active status as capacity allows. An additional consideration is whether the costs are one-time or recurring. Multiple benefit projects or initiatives, those that advance the goals, projects, and directions of other City plans, often have more sources for funding.
- **Reduces operating costs or generates revenue:** Projects or initiatives that can create additional revenue, improve maintenance or operations efficiencies, and conserve water or reduce water usage should be given high priority to move forward.
- **Time-limited opportunity**: Opportunities arise, and often come with a time constraint, such as a property coming up for sale, a new residential or commercial development, or a project being completed by another department or agency. Time-limited opportunities should be leveraged.
- **Partnership potential:** Partnerships are an important aspect of Milpitas' approach to parks and recreation services. Those projects or initiatives with one or more partners who will help with implementation and/or ongoing operation should take precedence.
- **Quick win:** Some projects can be quickly implemented, demonstrating results to the community. Providing quick wins keeps staff and the community motivated and invested while longer term and more complicated projects are underway.

FUNDING STRATEGIES

The master plan describes a comprehensive range of park improvements desired by the community to maintain the quality of the current parks system and address current unmet needs. The cost for these improvements is $83,410,380.00. If these improvements were to be implemented over the next 10 years, the cost in year one would be $8,341,038.00. Currently, the average CIP provides $6,062,200.00 per year to fund park improvements, leaving a gap of $2,278,838 per year. This gap will grow over time. While the City continually pursues grants and other funding sources, there is a need to establish a secure, predictable funding stream to allow park improvements projects to proceed in a cost effective and timely manner.

In addition to addressing existing parks and recreation needs, the projected growth of the City will require additional parkland and recreation facilities to meet the needs of future residents. Currently this need is addressed by requiring new development to provide parks for their communities. However, with the cost and shortage of available land in Milpitas, this has been a challenge and will compound existing deficiencies.

In order to secure funding to meet Milpitas Parks and Recreation needs, the City should consider:

- Review of current Development Impact Fees to confirm they reflect the true costs to acquire parkland and develop park facilities to meet the needs of future residents. The current Milpitas fees are lower than other Santa Clara County communities. Some cities have park impact fees for an office, rental, individual and institutional uses. The City may wish to explore a similar fee structure.
- Explore a potential nexus study to broaden use of Development Impact Fees to add amenities and enhance capacity of existing parks throughout the City to meet the needs of new residents.
- Explore benefits and costs as well as potential support for development of special assessment districts (Community Facilities Districts or Enhanced Infrastructure Financing Districts) or a bond measure to fund improvements. An assessment or bond could address funding for much needed improvements to existing community buildings as well.

REVENUE POTENTIAL

The Quimby Act

The Quimby Act permits the City to require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for parks or recreation purposes as a condition to the approval of a tentative or parcel map. Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City has adopted park fees as allowed by the Quimby Act.

FUNDING SOURCES

Milpitas Development Impact Fee Program

Development impact fees are charged as a condition of development to defray all or a portion of the cost of public facilities and improvements including park improvements. The revenues are used to pay for the City's future construction of facilities, or to reimburse the City for facilities constructed by the City with funds advanced by the City from other sources.

General Fund and Potential Tax Measures

In Milpitas, property taxes including in-lieu payments and sales taxes account for approximately 60 percent of total General Fund revenues. The remaining 40 percent is accounted for by transient occupancy tax, licenses and permits, charges for service, franchise tax, and "other" sources licenses. At the City's discretion, the General Fund can be used for park improvements as part of Capital Improvement Projects (CIP Program). Capital improvements may include the cost of all acquisition, construction, expansion, or rehabilitation of facilities. In 2018 - 2019 in Milpitas park improvements account for 24% of the total CIP budget. However, by 2020 – 2021 the portion of CIP budget allocated for park improvements is projected to drop to 15% and by 2022 – 2023 to less than 3% of total CIP budget.

The City of Milpitas should explore the potential for a park bond or tax assessment that can be assessed to households with in the City in order to fund future park improvements.

Private Sector Collaboration

The top three employers in Milpitas are Cisco Systems, KLA-Tencor and SanDisk, which are responsible for approximately 6,000 employees working in Milpitas.

Metro Park Fund & TASP Impact Funds

As part of the Specific Plan process a strategy was developed to access impact fees on new development to develop new and rehabilitate existing park lands to accommodate additional use from new residents.

Based on its 2020 – 2025 CIP Programs, the City hopes to invest $59 million on existing park improvements. The Sports Field Turf renovations will be funded through the Midtown Park Fund. The Community Wellness and Open Space project and the new trade zone / Montague Park will be funded with TASP impact fees.

However almost $47 million in projects do not have an identified funding source.

Measure F

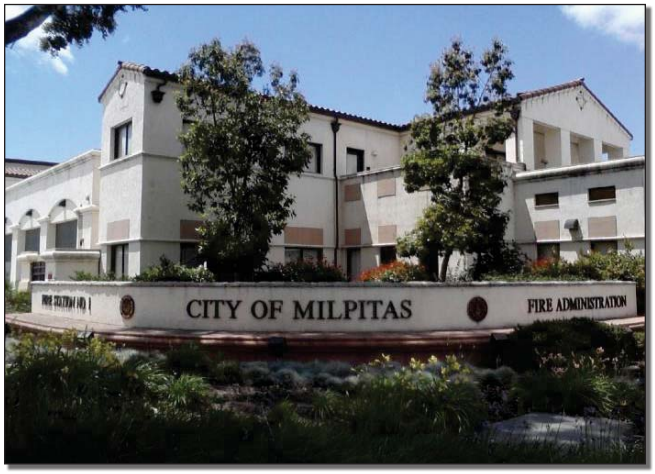
Measure F authorizes an additional sales tax of 0.25% for eight years and will generate an estimated $6.5 million per year the for the City's General Fund, increasing the total sales tax rate in Milpitas from 9% to 9.25%. Additional funds will be used to maintain the City's finances and services, including: police and fire, emergency responses, and natural disaster preparation; youth, senior, and recreation services; repairing park equipment and maintaining parks and recreation centers; and attracting and retaining local businesses.

Measure T

Measure T removes the 'sunset' on Measure Q's funding by keeping the existing $24 annual parcel tax in place with no end date. Measure Q was the Open Space, Wildlife Habitat, Clean Water and Increased Public Access Funding Measure. Since passing, Measure Q has brought in roughly $7.9 million each year for the Santa Clara Valley Open Space Authority, and the Authority has been able to double the amount of preserved land in the jurisdiction and make much of that land available for residents to explore and enjoy.

The action plan (Table 6-1) presents each action, indicates the goal or goals it implements, and identifies a time frame for implementation. The time frames are: completed within one to three years, completed within three to five years, initiated five years or more from this document, or ongoing.

The action plan is intended to be updated over the life of the PRMP and this version is a snapshot in time.



PROJECT COSTS

In this era of escalating and varying costs, Table 6-2 on the following pages provides a snapshot of general project costs at this time. Construction costs have generally risen 5-10% annually over the last 15 years. This table shows current preliminary cost estimates for various types of park projects, amenities, improvements and repairs based on recently completed comparable projects and master plans.

Description	Unit	Cost (Materials & La or)
24 Box Tree	Per Unit	$1 250.00
36 Box Tree	Per Unit	$1 800.00
42 HT Chainlink Fence	Per Linear Foot	$125.00
48 HT Chain Link Fence	Per Linear Foot	$125.00
6 HT Chainlink Fence	Per Linear Foot	$150.00
6 HT Chainlink Fence	Per Linear Foot	$150.00
8 HT Chainlink Fence	Per Linear Foot	$175.00
Accessible Curb Ramp	Per Unit	$7 000.00
Accessible Picnic Table	Per Unit	$4 000.00
Acrylic Surfacing	Per Square Foot	$2.50
All Abilities Playground	Per Square Foot	$70.00
Asphalt Path (Resurface)	Per Square Foot	$4.50

Table 6-2: Project Costs

Description	Unit	Cost (Materials & La or)
Backstop	Per Unit	$150 000.00
Backstop (10 Wide)	Per Unit	$75 000.00
Ball Wall 18	Per Unit	$25 000.00
BBQ and Ash Receptacle (Small)	Per Unit	$5 000.00
BBQ and Ash Receptacle (Large)	Per Unit	$10 000.00
Bench	Per Unit	$3 000.00
Bench with Charging Station	Per Unit	$4 000.00
Bike Rack	Per Unit	$2 500.00
Bleachers	Per Unit	$24 000.00
Bouldering Wall	Per Unit	$50 000.00
Community Garden (1/8 Acre)	Per Square Foot	$12.00
Concrete Paving (4 Concrete over 6 CL II AB)	Per Square Foot	$16.00
Concrete Ping Pong Table	Per Unit	$7 500.00
Cricket Pitch (Full Striping - Sod Lawn)	Per Field	$200 000.00
Decomposed Granite Paving (3 DG over 6 CL II AB) with Header broad	Per Square Foot	$10.00
Demolition & Grading	Per Square Foot	$5.00
Dog Park surface	Per Square Foot	$5.00
Dog Waste Station	Per Unit	$1 500.00
Drainage	Per Square Foot	$5.00
Drinking Fountain	Per Unit	$10 000.00

Table 6-2 (cont.): Project Costs

Description	Unit	Cost (Materials & La or)
Dugout	Per Unit	$35 000.00
Entry Sign (City Standard)	Per Unit	$5 000.00
Fabric Shade Sail	Per Unit	$25 000.00
Field Lighting	Per Park	$750 000.00
Fitness Stations (Including Surfacing & Curb)	Per Unit	$10 000.00
Formalize Cricket Pitch	Per Field	$250 000.00
Interpretive Signage	Per Unit	$5 000.00
Landscaping & Irrigation	Per Square Foot	$12.00
Large Shade Structure	Per Unit	$130 000.00
Native Hydroseed	Per Square Foot	$0.15
Paint Ornamental Metal Fence	Lump Sum	$2 500.00
Park Rules Signage	Per Park	$5 000.00
Parking Lot (3.5 AC over 14.5 CL II AB)	Per Square Foot	$12.50
Pave Picnic Areas (Decomposed Granite)	Per Square Foot	$15.00
Pave Pincinc Areas (Asphalt)	Per Square Foot	$4.50
Pave Pincinc Areas (Concrete)	Per Square Foot	$16.00
Pave walking path (3.5 AC over 14.5 CL II AB)	Per Square Foot	$7.50
Pave walking path (4 Concrete over 6 CL II AB)	Per Square Foot	$16.00
Pedestrian Lighting	Per Unit	$15 000.00
Pickleball Court Striping @ Tennis Courts	Per Court	$50 000.00

Table 6-2 (cont.): Project Costs

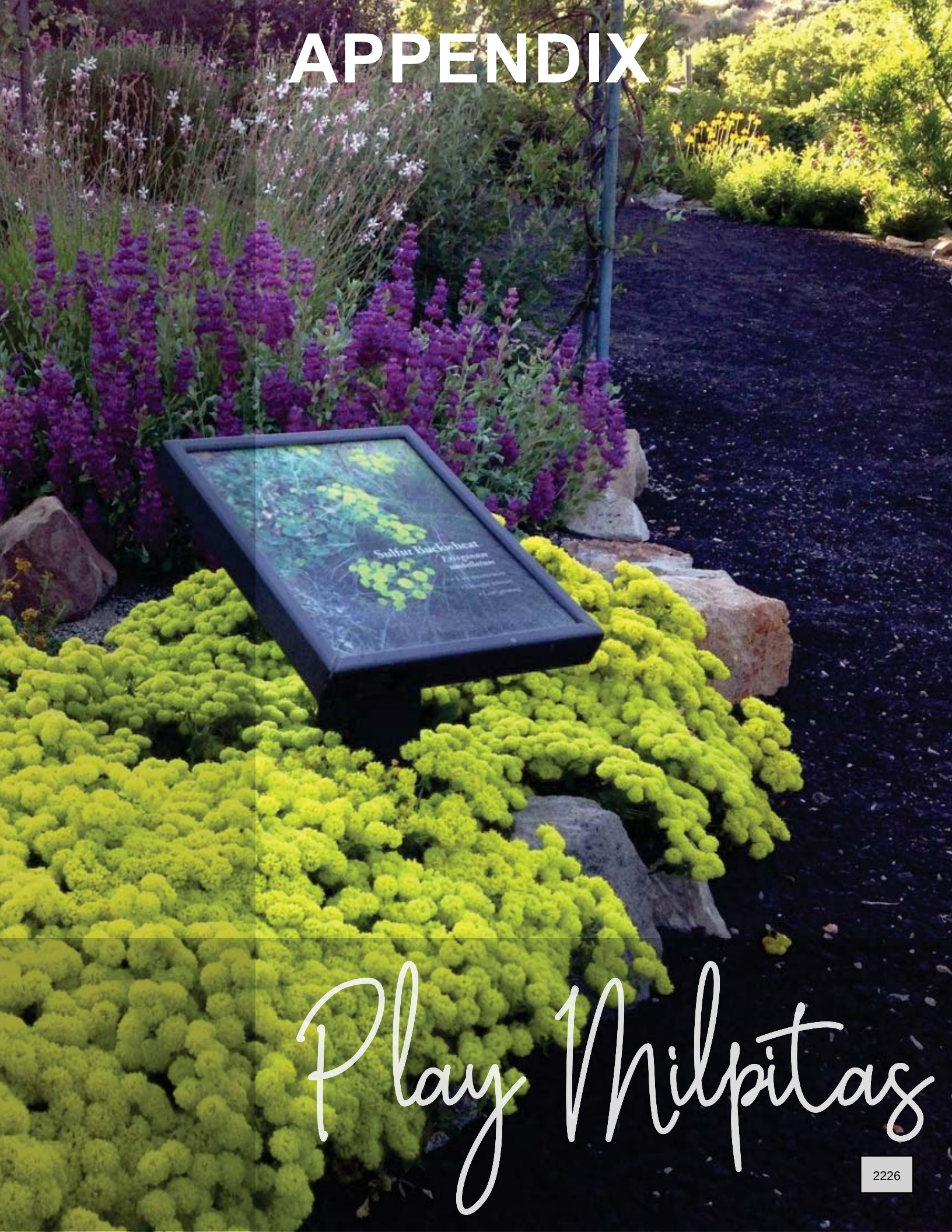
Description	Unit	Cost (Materials & La or)
Pickleball Standard	Per Unit	$3 500.00
Picnic Area (Concrete)	Per Square Foot	$16.00
Picnic Table	Per Unit	$4 000.00
Player Bench	Per Unit	$5 000.00
Post Tension Concrete Pickleball Courts	Per Square Foot	$16.00
Prefabricated Restroom (Single Stall)	Lump Sum	$200 000.00
Prefabricated Restroom Utilities (Water Sewer Electric)	Per Restroom	$100 000.00
Public Art	Per Unit	$100 000.00
Pump Track	Per Unit	$150 000.00
Repair 42 Height Wire Mesh Fence	Lump Sum	$20 000.00
Repair Bocce Court	Per Unit	$12 500.00
Bollard with City Standard	Per Unit	$1 500.00
Replace Concrete BBQ	Per Unit	$5 000.00
Replace Concrete Stairs	Lump Sum	$25 000.00
Replace Message Kiosk	Per Unit	$7 500.00
Replace Park Rules Sign	Per Unit	$1 000.00
Replace Shade Sail Fabric	Per Unit	$10 000.00
Replace Swing Set	Per Unit	$35 000.00
Replenish Mulch All Areas	Per Park	$1 500.00
Reseed Lawn	Per Square Foot	$2.15

Table 6-2 (cont.): Project Costs

Description	Unit	Cost (Materials & La or)
Resurface & Restripe Exisitng Parking Lot	Per Square Foot	$4.50
Resurface Handball Court	Per Unit	$7 500.00
Retrofit Existing Parking Lot for Accessibility	Lump Sum	$150 000.00
Rubberized Safety Surfacing	Per Square Foot	$30.00
Sand Volleyball Court	Per Court	$50 000.00
Scoreboard	Per Unit	$35 000.00
Shade Fabric at Dugouts	Per Unit	$25 000.00
Small Shade Structure	Per Unit	$75 000.00
Soccer Goal	Per Unit	$12 000.00
Sod Lawn	Per Square Foot	$2.50
Softball Backstop & Dugouts	Per Field	$100 000.00
Storage Container	Per Unit	$30 000.00
Teen Hangout Space (Concrete)	Per Square Foot	$16.00
Tennis Court - Reseal & Restripe	Per Unit	$6 500.00
Trash & Recycle Receptacle	Per Unit	$3 500.00
Tree Survey Service	Per Park	$ 5 000.00

Table 6-2 (cont.): Project Costs

APPENDIX



Play Milpitas

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COMMUNITY OUTREACH

The following section contains all the materials used for community outreach, including presentations, boards, marketing collateral, online survey responses, and meeting summaries. This section is organized in chronological order.

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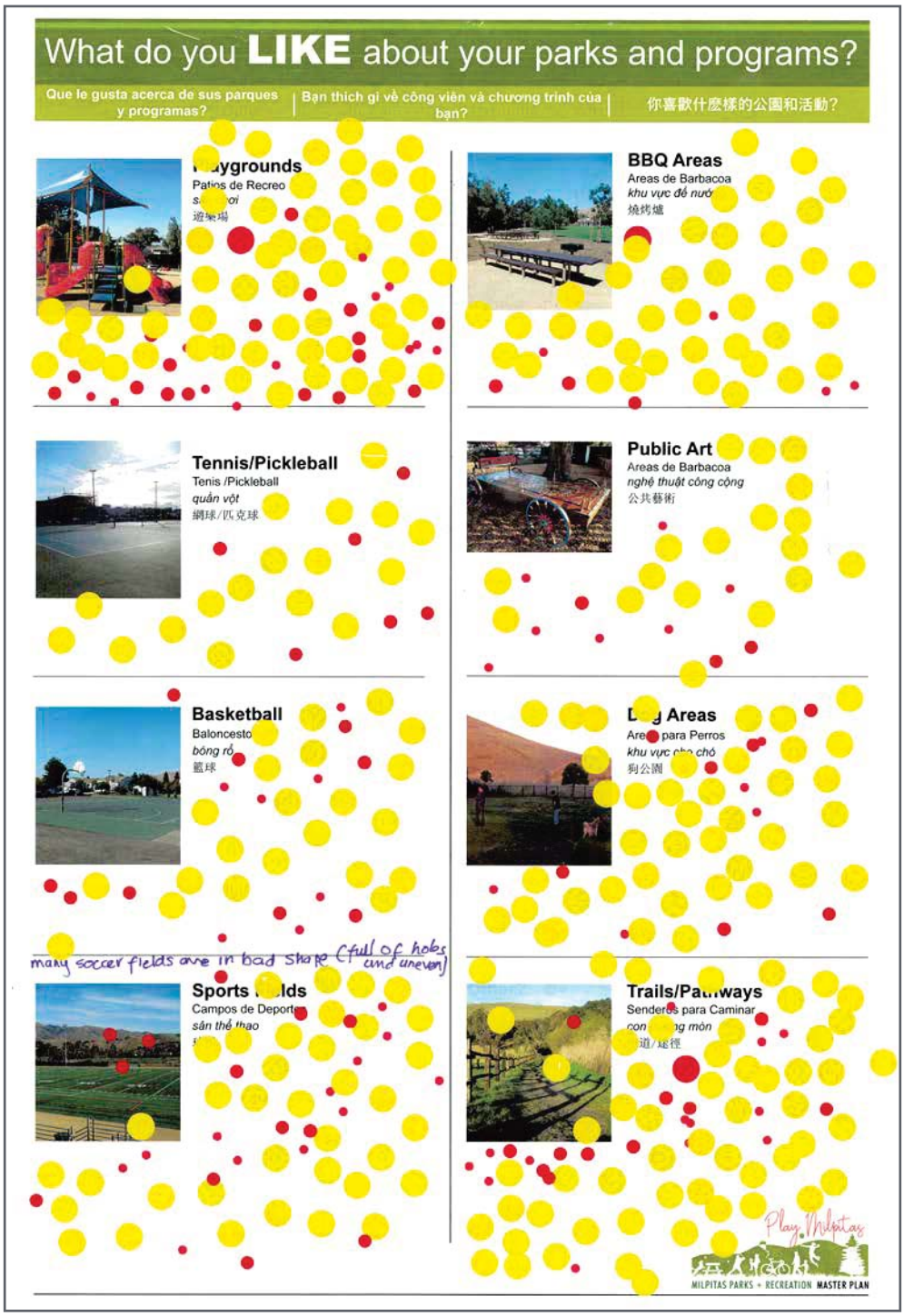
TREE LIGHTING EVENT (DEC. 1, 2019) - FLYER

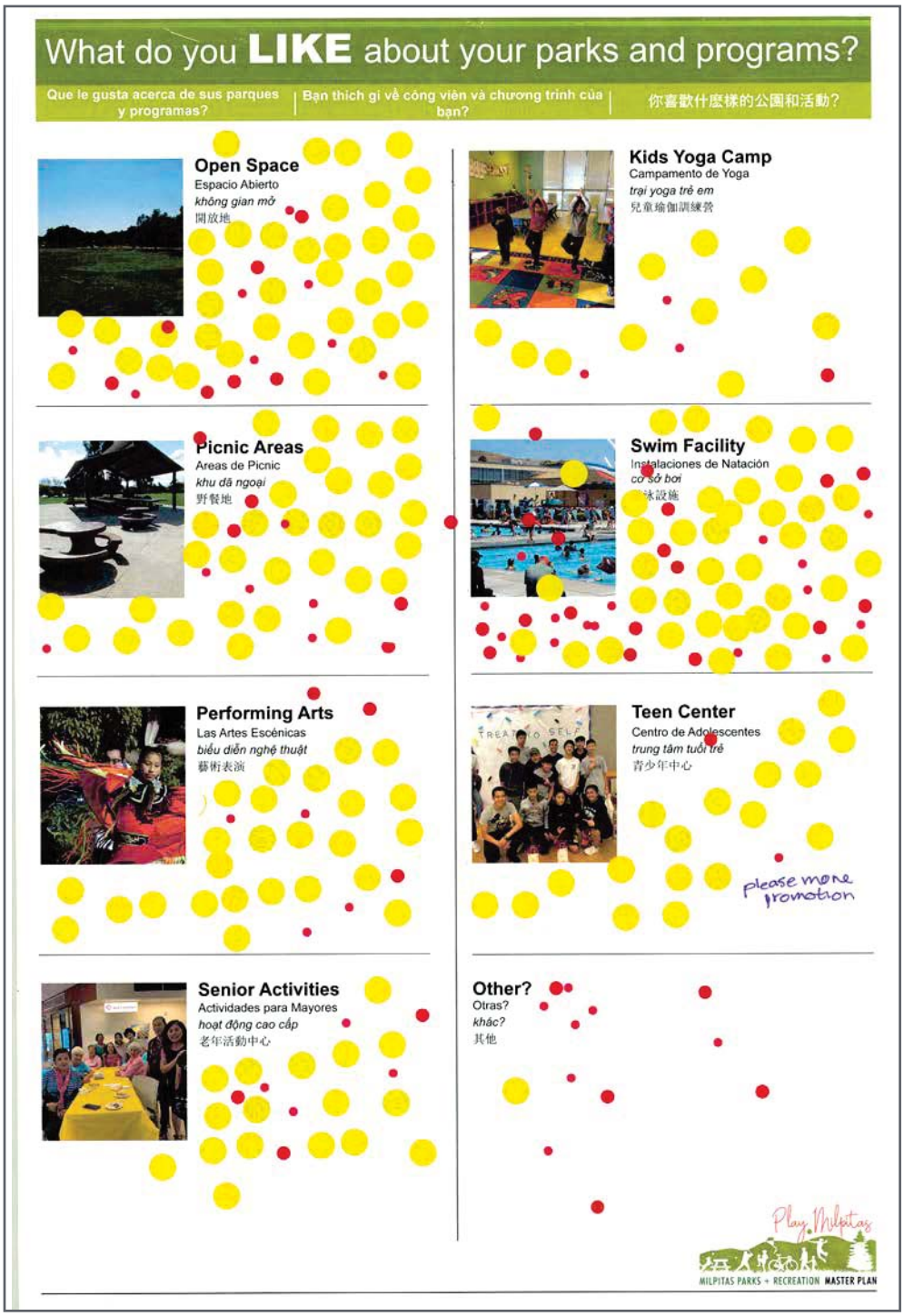
TREE LIGHTING EVENT (DEC. 1, 2019) - PHOTOS

TREE LIGHTING EVENT (DEC. 1, 2019) - PHOTOS

TREE LIGHTING EVENT (DEC. 1, 2019) - BOARDS



TREE LIGHTING EVENT (DEC. 1, 2019) - BOARDS



TREE LIGHTING EVENT (DEC. 1, 2019) - BOARDS

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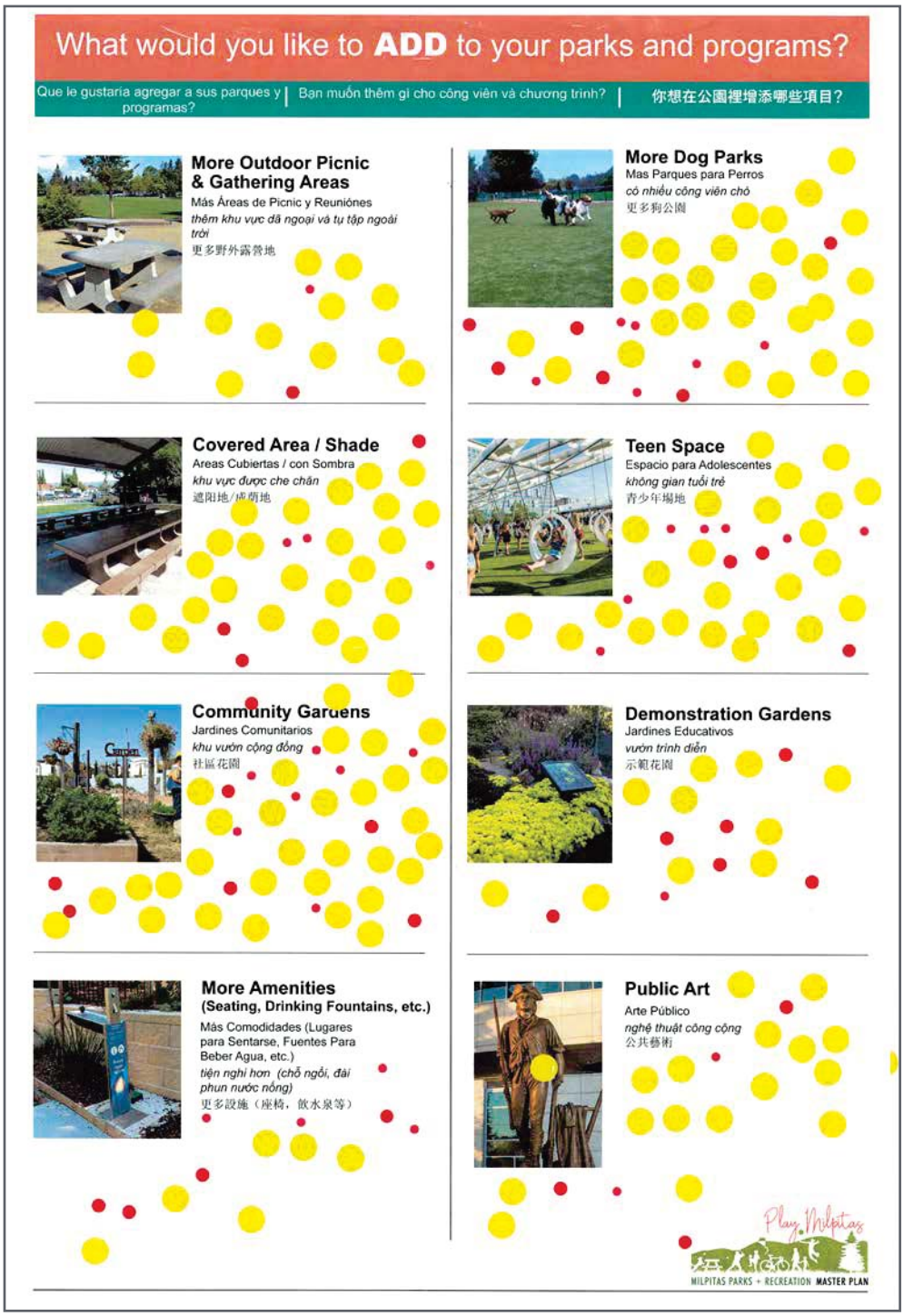
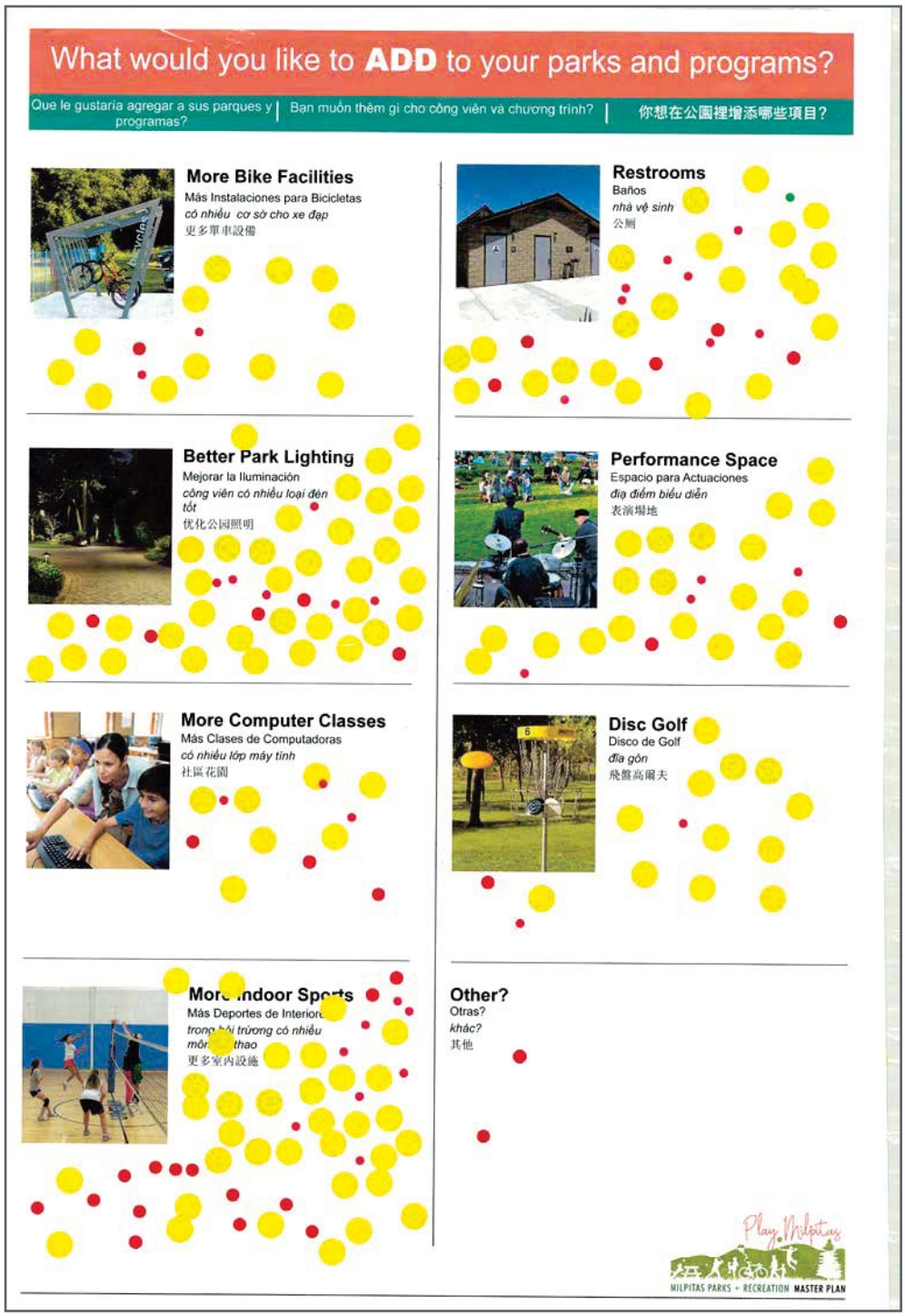
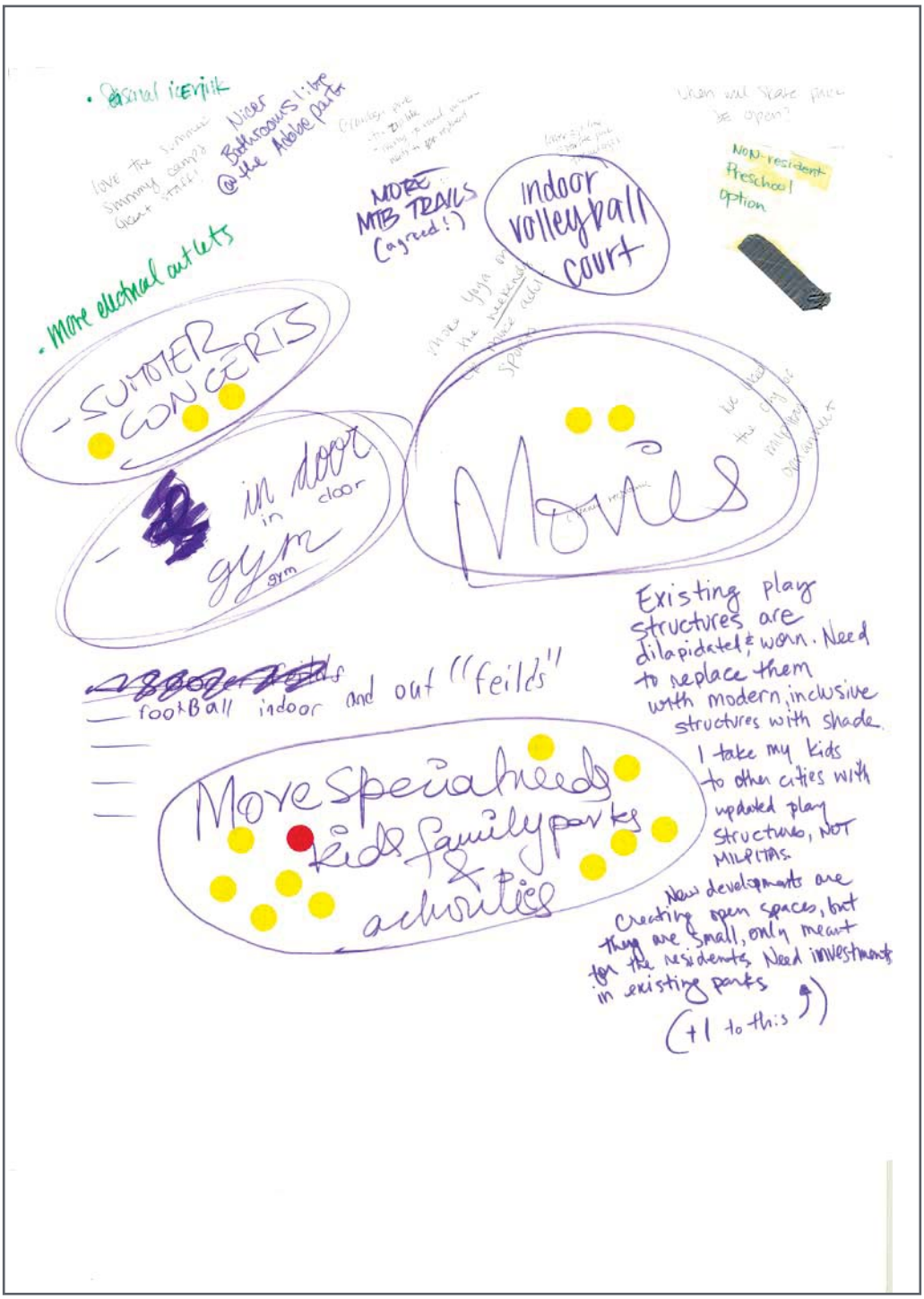


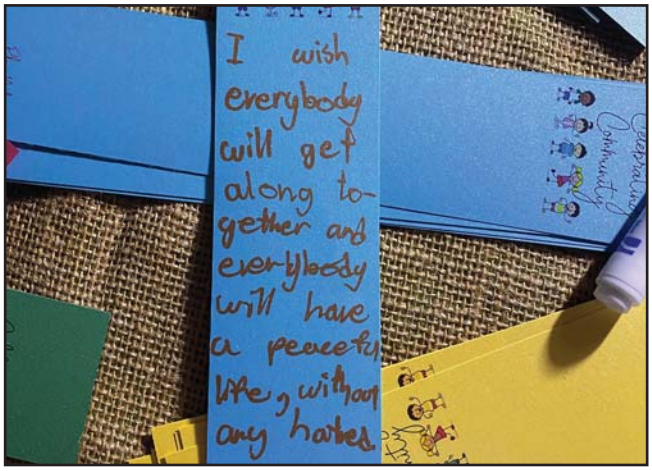
TREE LIGHTING EVENT (DEC. 1, 2019) - BOARDS



TREE LIGHTING EVENT (DEC. 1, 2019) - WRITE-IN COMMENTS



LUNAR NEW YEAR EVENT (JAN. 8, 2020) - PHOTOS



ROUND 1 ONLINE SURVEY MARKETING COLLATERAL

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

4/21/2020 Milpitas Parks and Recreation Online Survey

What is your age?

202 out of 203 answered

1	35 - 44 years old	31% / 63 resp.
2	45 - 55 years old	17% / 36 resp.
3	25 - 34 years old	14% / 29 resp.
4	65 - 74 years old	13% / 27 resp.
5	55 - 64 years old	12% / 26 resp.
6	13 - 17 years old	4% / 9 resp.
7	75 years or older	3% / 7 resp.
8	Under 12 years old	1% / 3 resp.
9	18 - 24 years old	1% / 2 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

4/21/2020 Milpitas Parks and Recreation Online Survey

How often do you enjoy our City **PARKS**?

1 out of 203 answered

1	Weekly	43% / 86 resp.
2	Daily	25% / 51 resp.
3	Monthly	17% / 34 resp.
4	Every few months	12% / 25 resp.
5	Never	1% / 3 resp.
6	Other	0% / 1 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

4/21/2020 Milpitas Parks and Recreation Online Survey

How often do you use a City **RECREATION FACILITY**? (Eg: Milpitas Community Center, Barbara Lee Senior Center, Milpitas Sports Center, Higuera Adobe Park, Sal Cracolice and Alviso Adobe)

5 out of 203 answered

1	Every few months	31% / 62 resp.
2	Weekly	29% / 58 resp.
3	Monthly	16% / 32 resp.
4	Never	13% / 27 resp.
5	Daily	6% / 13 resp.
6	Other	2% / 5 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

4/21/2020 Milpitas Parks and Recreation Online Survey

What are some of the reasons you go to a park or recreation facility?

17 out of 203 answered

1	Exercise	76% / 152 resp.
2	Enjoy Nature	65% / 130 resp.
3	To Socialize	42% / 84 resp.
4	Informal Sports	23% / 47 resp.
5	Dog walking/Playing with Dogs	23% / 46 resp.
6	Organized Sports	23% / 46 resp.
7	Swimming	18% / 37 resp.
8	Art, Culture & History	10% / 21 resp.
9	Other	8% / 17 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

For the Park and Recreation Facilities Master Plan, what should be our priority?

6 out of 203 answered

1	Renovate and improve existing parks	69% / 139 resp.
2	Ongoing maintenance of existing parks and facilities	58% / 118 resp.
3	Provide elements for all ages and abilities	37% / 75 resp.
4	Expand recreation, aquatic and sports program offerings	31% / 64 resp.
5	Build new parks	28% / 58 resp.
6	Creating a variety of uses and experiences	27% / 56 resp.
7	Renovate and improve indoor recreation facilities	25% / 51 resp.
8	Build new indoor recreation facilities	21% / 44 resp.
9	Improve access to parks and facilities	16% / 34 resp.
10	Other	3% / 6 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

If you do not use the City's Parks and Recreation facilities, what are the barriers?

26 out of 203 answered

1	Lack of equipment/amenities I want	30% / 51 resp.
2	Lack of maintenance	24% / 40 resp.
3	I don't have time	16% / 27 resp.
4	I use parks and facilities outside of Milpitas	14% / 24 resp.
5	Nothing close to me	13% / 23 resp.
6	Program costs	12% / 21 resp.
7	Safety concerns	12% / 20 resp.
8	Lack of parking	11% / 19 resp.
9	Lack of child care	10% / 18 resp.
10	I use private facilities	5% / 9 resp.
11	Other	15% / 26 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **ADULTS**?

20 out of 203 answered

1	More hours	40% / 62 resp.
2	Additional fitness classes	35% / 55 resp.
3	Health and wellness classes	30% / 47 resp.
4	Enrichment classes	26% / 41 resp.
5	Urban farming/gardening classes	25% / 39 resp.
6	Additional art classes	23% / 36 resp.
7	Additional dance classes	20% / 31 resp.
8	Additional sports program	17% / 27 resp.
9	More locations	17% / 26 resp.
10	N/A	11% / 18 resp.
11	Other	13% / 20 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **SENIORS**?

12 out of 203 answered

1	N/A	47% / 73 resp.
2	Health and wellness classes	21% / 33 resp.
3	Enrichment classes	19% / 30 resp.
4	Field trips	19% / 30 resp.
5	More hours	17% / 27 resp.
6	Additional fitness classes	16% / 25 resp.
7	Urban farming/gardening classes	13% / 20 resp.
8	More locations	10% / 16 resp.
9	Additional art classes	9% / 15 resp.
10	Additional dance classes	7% / 11 resp.
11	Other	7% / 12 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **TEENS AGES 13-17**?

9 out of 203 answered

1	N/A	37% / 61 resp.
2	Additional sports programming	27% / 44 resp.
3	Enrichment classes	26% / 42 resp.
4	More hours	26% / 42 resp.
5	More locations	22% / 36 resp.
6	Additional fitness classes	19% / 32 resp.
7	Additional art classes	18% / 29 resp.
8	Field trips	18% / 29 resp.
9	Health and wellness classes	18% / 29 resp.
10	Additional dance classes	16% / 26 resp.
11	Urban farming/gardening classes	11% / 18 resp.
12	Other	5% / 9 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **PRE-TEENS AGES 10-12**?

8 out of 203 answered

1	N/A	45% / 68 resp.
2	Additional sports program	27% / 41 resp.
3	More hours	24% / 37 resp.
4	More locations	22% / 34 resp.
5	Additional art classes	21% / 32 resp.
6	Field trips	18% / 28 resp.
7	Health and wellness classes	18% / 28 resp.
8	Urban farming/gardening classes	15% / 24 resp.
9	Additional dance classes	13% / 21 resp.
10	Additional fitness classes	13% / 20 resp.
11	Other	5% / 8 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **YOUTH AGES 5-9**?

7 out of 203 answered

1	N/A	40% / 62 resp.
2	More hours	31% / 48 resp.
3	Additional sports programming	28% / 44 resp.
4	Additional art classes	24% / 37 resp.
5	More locations	23% / 36 resp.
6	Additional dance classes	18% / 29 resp.
7	Additional fitness classes	17% / 27 resp.
8	Health and wellness classes	16% / 25 resp.
9	Field Trips	14% / 23 resp.
10	Urban farming/gardening classes	13% / 21 resp.
11	Other	4% / 7 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How can the City improve classes and programs for **AGES 18 months - 4 years old**?

6 out of 203 answered

1	N/A	51% / 79 resp.
2	Additional pre-school classes	30% / 47 resp.
3	More hours	26% / 41 resp.
4	Additional enrichment classes	22% / 34 resp.
5	Lower cost	22% / 34 resp.
6	More locations	18% / 29 resp.
7	Other	3% / 6 resp.

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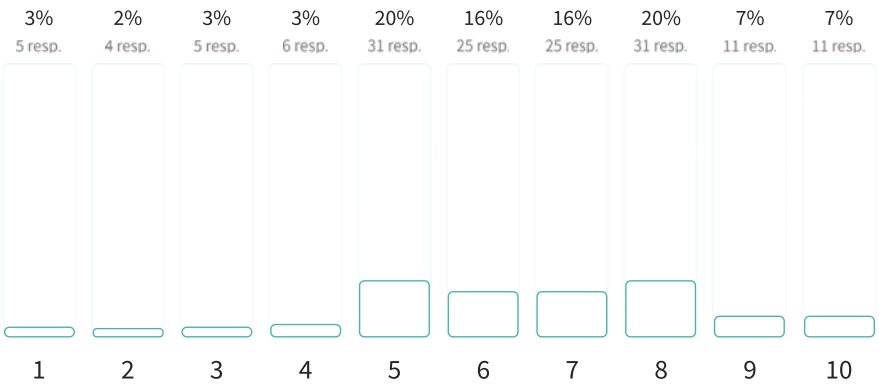
ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

How satisfied are you with the City's online class registration/rental software system?

154 out of 203 answered

6.4 Average rating



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ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

Which City **PARK** do you visit most frequently? (Check all that apply)

2 out of 203 answered

1	Cardoza Park	39% / 65 resp.
2	Murphy Park	22% / 37 resp.
3	Gill Memorial Park	20% / 34 resp.
4	Higuera Adobe Park	14% / 24 resp.
5	Augustine Memorial Park	13% / 22 resp.
6	Ben Rogers Park	12% / 20 resp.
7	Sinnott Park	11% / 19 resp.
8	Hidden Lake Park	10% / 17 resp.
9	Bob Mcguire Park	9% / 16 resp.
10	Hall Memorial Park	9% / 15 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

11	I don't know	8% / 14 resp.
12	Dixon Landing Park	8% / 13 resp.
13	Alviso Adobe Park	7% / 12 resp.
14	Foothill Park	6% / 11 resp.
15	Hillcrest Park	6% / 11 resp.
16	Pinewood Park	5% / 9 resp.
17	McCandless Park	4% / 8 resp.
18	Milpitas Dog Park	4% / 8 resp.
19	Starlite Park	4% / 8 resp.
20	Stickroth Park	4% / 7 resp.
21	Creighton Park	3% / 6 resp.
22	Sandalwood Park	3% / 6 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

23	Tom Evatt Park	3% / 6 resp.
24	Robert E Browne	3% / 5 resp.
25	Calaveras Ridge	2% / 4 resp.
26	Jones Memorial Park	1% / 3 resp.
27	Augustus Rathbone Park	1% / 2 resp.
28	Cerano Park	1% / 2 resp.
29	Calle Oriente Mini-Park	0% / 1 resp.
30	Park Metro East	0% / 1 resp.
31	Park Metro Middle	0% / 1 resp.
32	Park Metro West	0% / 1 resp.
33	Skate Park	0% / 1 resp.
34	John McDermott Park	0% / 0 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

35 O'Toole Elms Park 0% / 0 resp.

36 Pecot Park 0% / 0 resp.

37 Selwyn Park 0% / 0 resp.

38 Other 1% / 2 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

Which City **RECREATION FACILITIES** do you visit most frequently? (Check all that apply)

3 out of 203 answered

1	Milpitas Sports Center	53% / 85 resp.
2	Milpitas Community Center	43% / 69 resp.
3	Barbara Lee Senior Center	19% / 30 resp.
4	I don't know	13% / 22 resp.
5	Higuera Adobe Park	8% / 13 resp.
6	Alviso Adobe	3% / 6 resp.
7	Sal Cracolice	1% / 3 resp.
8	Other	1% / 3 resp.

What do you **LIKE** about your **PARKS and PROGRAMS**?

163 out of 203 answered

Playgrounds 31% / 52 resp.

Trails/Pathways 16% / 26 resp.

Tennis/Pickleball 11% / 18 resp.

Open Space 10% / 17 resp.

BBQ Areas 4% / 7 resp.

Dog Areas 3% / 6 resp.

Public Art 3% / 6 resp.

Sports Fields 3% / 6 resp.

Basketball 3% / 5 resp.

Picnic Areas 3% / 5 resp.

Swim Facility 3% / 5 resp.

Preforming Arts 1% / 3 resp.

Other 1% / 2 resp.

Senior Activities 1% / 2 resp.

Teen Center 1% / 2 resp.

Kids Yoga Camp 0% / 1 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

What should be **ADDED** to your **PARKS and PROGRAMS** ?

162 out of 203 answered

More/Updated Playgrounds 25% / 41 resp.

Exercise Stations 7% / 12 resp.

More Community Events 7% / 12 resp.

Adult Space 5% / 9 resp.

Better Park Lighting 5% / 9 resp.

More Indoor Sports 5% / 9 resp.

Pump Track 5% / 9 resp.

Teen Space 5% / 9 resp.

More Outdoor Picnic and Gathering Areas 4% / 7 resp.

Covered Area/Shade 3% / 6 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

More Dog Parks 3% / 6 resp.

Restrooms 3% / 6 resp.

Bocce 3% / 5 resp.

More Amenities (Seating, Drinking Fountains, etc.) 2% / 4 resp.

Community Gardens 1% / 3 resp.

More Bike Facilities 1% / 3 resp.

More Computer Classes 1% / 3 resp.

Other 1% / 3 resp.

Public Art 1% / 2 resp.

Demonstration Gardens 0% / 1 resp.

Game Tables 0% / 1 resp.

Horseshoes 0% / 1 resp.

ROUND 1 ONLINE SURVEY QUESTIONS & RESPONSES
(AS OF 4/21/2020)

Performance Space 0% / 1 resp.

Disc Golf 0% / 0 resp.

What would you like in your preforming arts facility?

87 out of 203 answered

Amphitheater 46% / 40 resp.

Traditional Theater 37% / 33 resp.

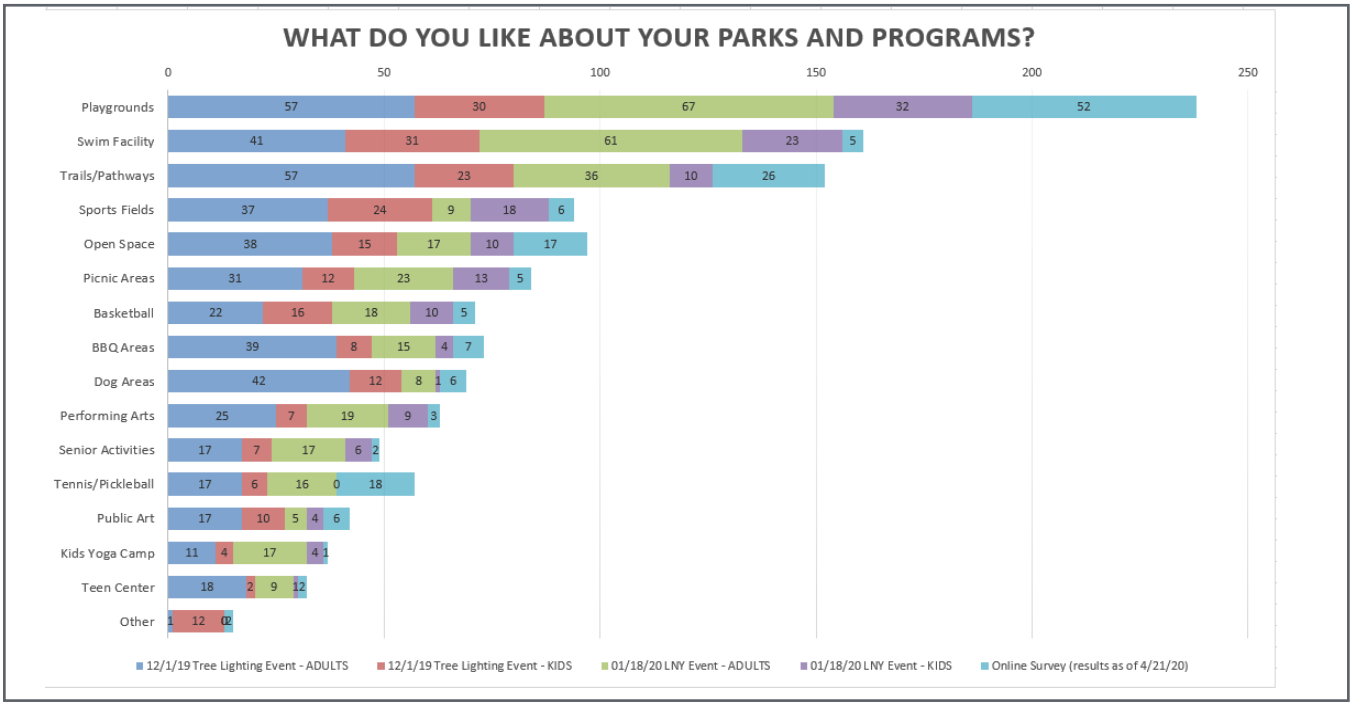
Historic Artifact Display Space 8% / 7 resp.

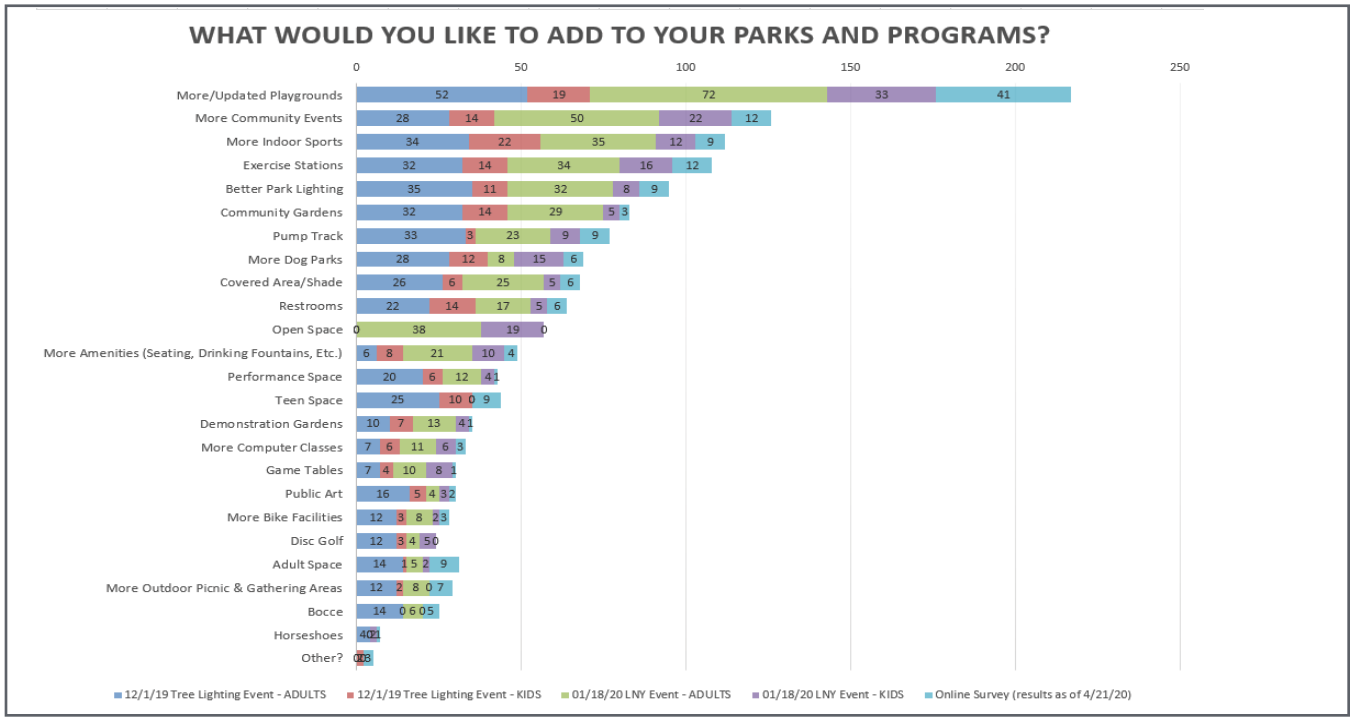
Black Box Theater 5% / 5 resp.

Other 2% / 2 resp.

ROUND 1 OUTREACH RESULTS

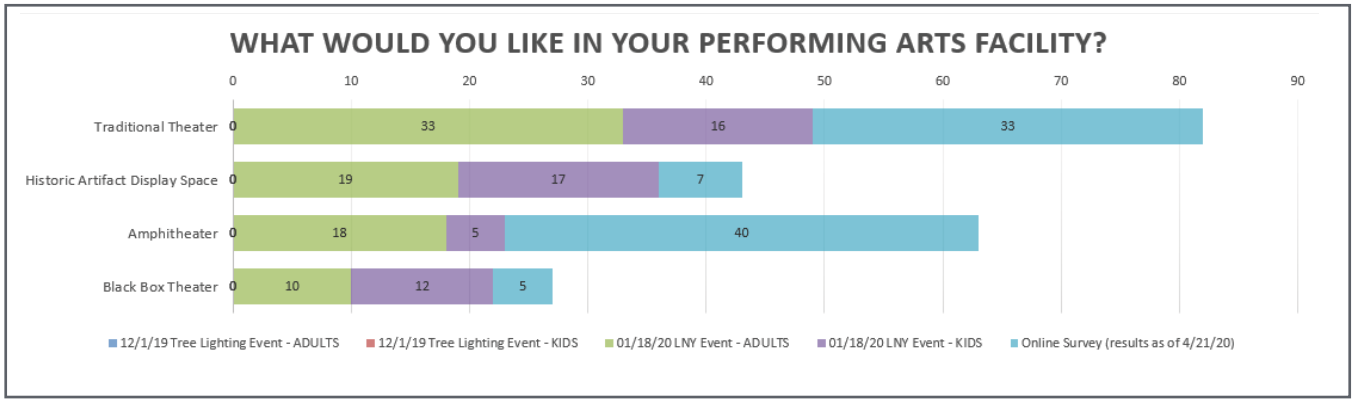
TREE LIGHTING POP-UP | LUNAR NEW YEAR POP-UP | ONLINE SURVEY





ROUND 1 OUTREACH RESULTS

TREE LIGHTING POP-UP | LUNAR NEW YEAR POP-UP | ONLINE SURVEY



SPORTS FOCUS GROUP

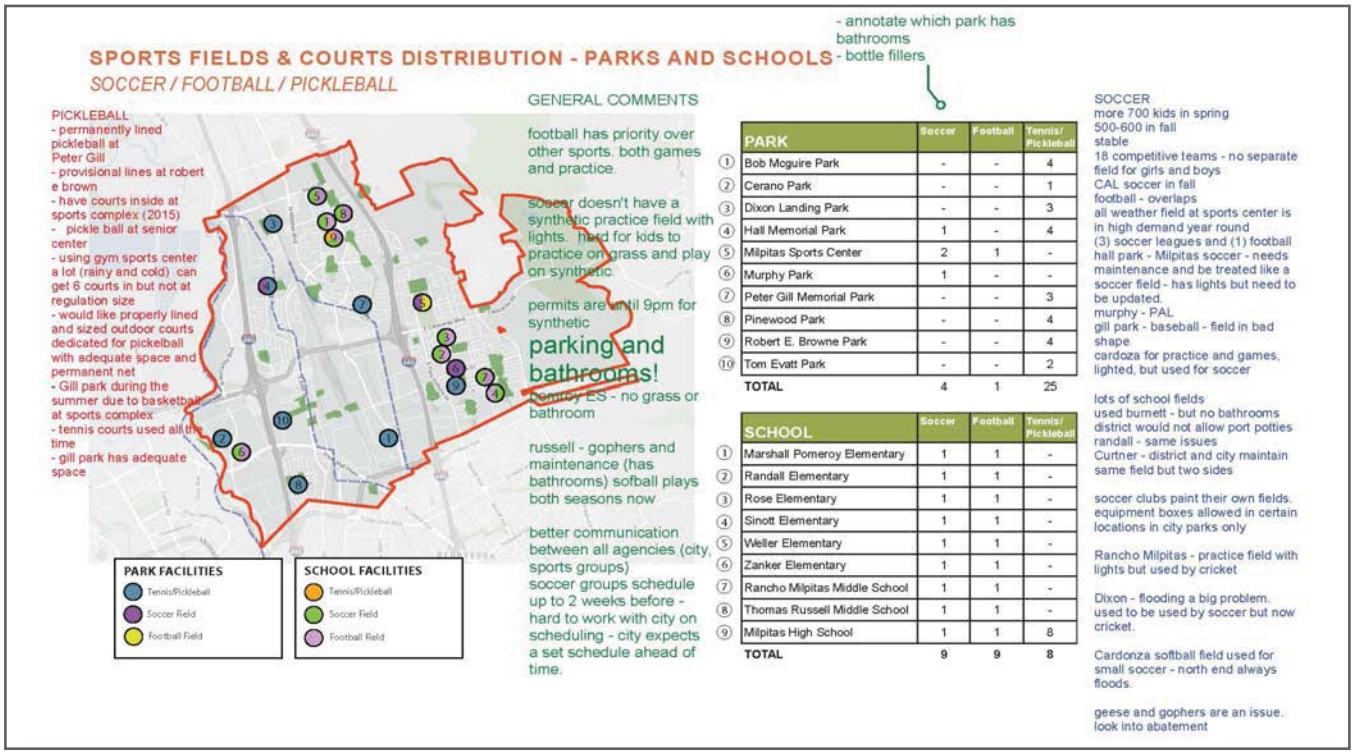
SEPT. 24, 2020 | ZOOM

PURPOSE OF MEETING

This meeting was held to discuss the needs of the Organized Sports User Groups in relation to the City-owned and/or maintained sports fields and courts. Our team reviewed efforts-to-date and held a Q&A session within breakout rooms. The sports groups invited to share input included:

- Cricket
- Milpitas Youth Soccer
- PAL Softball
- PAL Soccer
- Youth Rugby & JR Giants Baseball
- Knights Football
- Youth Baseball
- Adult Soccer
- Pickleball

SOCCER / FOOTBALL / PICKLEBALL BREAKOUT ROOM PARTICIPANT INPUT



	PARK	Soccer	Football	Tennis/ Pickleball
1	Bob Mcguire Park	-	-	4
2	Cerano Park	-	-	1
3	Dixon Landing Park	-	-	3
4	Hall Memorial Park	1	-	4
5	Milpitas Sports Center	2	1	-
6	Murphy Park	1	-	-
7	Peter Gill Memorial Park	-	-	3
8	Pinewood Park	-	-	4
9	Robert E. Browne Park	-	-	4
10	Tom Evatt Park	-	-	2
	TOTAL	4	1	25

	SCHOOL	Soccer	Football	Tennis/ Pickleball
1	Marshall Pomeroy Elementary	1	1	-
2	Randall Elementary	1	1	-
3	Rose Elementary	1	1	-
4	Sinott Elementary	1	1	-
5	Weller Elementary	1	1	-
6	Zanker Elementary	1	1	-
7	Rancho Milpitas Middle School	1	1	-
8	Thomas Russell Middle School	1	1	-
9	Milpitas High School	1	1	8
	TOTAL	9	9	8

SPORTS FOCUS GROUP

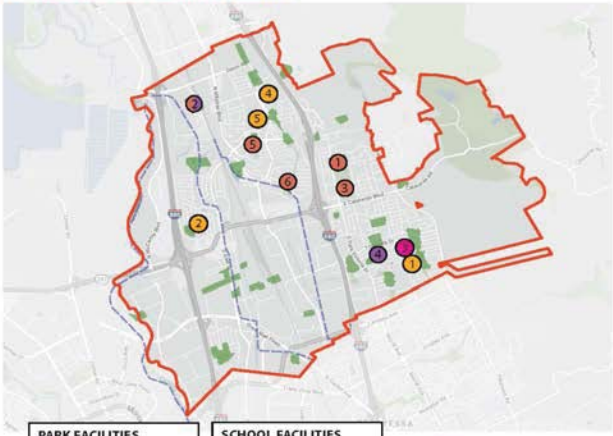
SEPT. 24, 2020 | ZOOM

BASEBALL / SOFTBALL / CRICKET BREAKOUT ROOM

PARTICIPANT INPUT

SPORTS FIELDS DISTRIBUTION - PARKS AND SCHOOLS

BASEBALL / SOFTBALL / CRICKET



	PARK	Diamond Field	Cricket
1	Cardoza Park	1	-
2	Dixon Landing Park	3	1
3	Milpitas Sports Center	5	-
4	Murphy Park	-	1
5	Peter Gill Memorial Park	1	-
6	Stickroth Park	1	-
	TOTAL	11	2

	SCHOOL	Diamond Field	Cricket
1	Sinott Elementary	1	-
2	Spangler Elementary	1	-
3	Rancho Milpitas Middle School	-	1
4	Thomas Russell Middle School	4	-
5	Milpitas High School	2	-
	TOTAL	8	1

SOFTBALL:
Softball cannot use baseball fields
Grass is baseball only

Softball uses 1 field @ Cardoza and Russell MS
They are separate from little league

Ideally rec softball would be able to use 4 fields in same location, at minimum. (for revenue, for families)

Little league uses the fields @ Dixon (not softball)

Non-lighted fields are a restriction (none @ Dixon)

LITTLE LEAGUE:
Uses MSC for main fields, Dixon for practice. The Senior Field at MSC is the only with lighting.
Issues: in spring/late fall with lack of lighting (@ Dixon); storage.
Well-accommodated in terms of # of fields.

Trend - multiple sport accommodation within same complex

CRICKET:
Strongly oppose cricket pitch @ Dixon Landing. Too small, for even practice.

Murphy Park is joint-use city/school.

SPORTS FOCUS GROUP - MEETING SUMMARY

SEPT. 24, 2020 | ZOOM

Milpitas Sports Focus Group Meeting

Breakout Group #2 Cricket and Ballfields

Softball

PAL Softball	Tina Ortiz and Elena Gill
JV Softball	Rosie Walker – Milpitas Monsters Softball
Rec Softball	

Cricket

Club and Academy	Abrar Ahmad
Milpitas Youth	

Baseball

Little league	Jose Gomez, Laurie and Brian King
Adult / Tournament	Jose Gomez
Farr T-ball	

Requirements

Softball

	2001 outfield, skinned infield

Baseball

Little league	300’ to centerfield
	Skinned / grass infield games, skinned practiced
Jr. Baseball	225’ – 250’ to centerfield

Cricket	flexible / 50’ x 250’ – 300’

SPORTS FOCUS GROUP - MEETING SUMMARY

SEPT. 24, 2020 | ZOOM

	Baseball				Softball		
*Assuming Milpitas Master Plan	Adult	LL Game	LL Practice	T-ball Practice	Game	Practice	Cricket
City Parks							
Cardoza					1	1*	
Dixon	1	2		2			1
Milpitas Sports	1	2	2				
Murphy Park / School							1
Gil Memorial					1		
Strickroth				1			
Schools							
Russel Middle School					3	1	
Rancho Milpitas			1				1

Findings:

Cricket – Fast growing non-contact sport, intermural and competitive leagues. Need better facilities. Have money to invest in improvements.

Baseball – Currently feels they have adequate fields.

Some t-ball use conflicts at Dixon T-ball with cricket pitch.

Softball – Currently has 4 fields at Russel Middle School.

This allows them to schedule all games together and support concession stand. District improvements current schools have closed fields. In future only 2 fields available. Sports is expanding to year round.

Competitive softball team exploring relocating to Fremont fields.

Recommendations:

- Consider lighting of fields at Dixon Landing, Rancho Milpitas and Murphy Park to expand hours of operations and accommodate more use as community grows.
- Consider converting synthetic turf to expand field capacity to handle wear and team with additional use and ability to use fields year round.
- Add storage facilities at fields.
- Provide access to restrooms and parking.

SPORTS FOCUS GROUP - MEETING SUMMARY

SEPT. 24, 2020 | ZOOM

- Work with school district to allow city to maintain and schedule fields on school property after school hours.
- Add “shared” baseball / cricket batting cages
- Consider relocating path at Murphy Park to reduce conflict with cricket. Cricket and ball field could be co-located at this site.
- Improvements to grades and field condition in cricket/t-ball portion of Dixon landing could expand usability of those fields.

All sports groups recognize the challenge of meeting sports recreation needs in a community where there’s very limited new park land. All users were willing to work collaboratively to address needs.

SPORTS FOCUS GROUP - MEETING SUMMARY

SEPT. 24, 2020 | ZOOM

Soccer / Football / Pickleball Breakout Group - Summary

SOCCER

- 700+ kids in spring; 500-600 in fall; stable
- 18 competitive teams - no separate field for girls and boys
- PAL soccer in fall (**Murphy Park**)
- Football – overlaps
- All weather field at sports center is in high demand year round
- (3) soccer leagues and (1) football
- **Hall Park**: Milpitas soccer - needs maintenance and be treated like a soccer field - has lights but need updating
- **Gill Park**: baseball field in bad shape
- **Cardoza Park:** for practice and games, lighted, but used for soccer; softball field used for small soccer; **north end flooding issues**
- **Many school fields, but lack of bathroom access:**
  - **Burnett**, **Randall**
  - District would not allow port-a-potties
- **Curtner** - district and city maintain same field but two sides
- Soccer clubs paint their own fields. Equipment boxes allowed in certain locations in city parks only
- **Rancho Milpitas**: practice field with lights but used by cricket
- **Dixon**: **flooding** issues; previously used by soccer but now cricket.
- Geese and gophers are an issue; look into abatement

PICKLEBALL

- **Peter Gill:** has permanently lined pickleball; adequate space; used during summer due to basketball @ sports complex
- **Robert E Browne:** Provisional lines
- Have courts inside at sports complex (2015)
- Pickleball at senior center
- Using gym sports center a lot (rainy and cold); can get 6 courts in but not at regulation size
- Would like properly lined and sized outdoor courts dedicated for pickleball with adequate space and permanent net
- Tennis courts used all the time

GENERAL COMMENTS

- Football has priority over other sports (both games and practice)
- **Recommend a synthetic practice field for soccer** – difficult for kids to practice on grass and play on synthetic; permits are until 9pm for synthetic
- **Need parking and restrooms**
- **Pomeroy Elementary** - no grass or bathroom
- **Russell** - gophers and maintenance (has bathrooms); softball plays both seasons now
- **Need better communication between all agencies** (city, sports groups); soccer groups schedule up to 2 weeks before; scheduling difficulties with City (expect a set schedule ahead of time)

TEEN FOCUS GROUP - MEETING SUMMARY

OCT. 1, 2020 | ZOOM

PURPOSE OF MEETING

This meeting was held to discuss the needs and desires of teens in relation to the City-owned parks and recreational programming. The project team asked a group of 10 participants to provide input on what their barriers were to using the existing parks, and also to share what they want to see in parks and programming.

Milpitas Teen Focus Group 10/01/2020

How can the Milpitas Park and Recreation system address the needs of the teen population?

10 participants – primary use Dixon Landing Park and Pinewood

What use the barriers to park usage?

- Lack of amenities tailored to teens, amenities primary for younger children
- Parents concern for teen safety when visiting park independently
- Condition of some amenities; taken and benches aging, parks feels old
- Paths to narrow to accommodate variety of users – skateboarders, joggers, bikes
- Basketball and tennis accommodate by the user groups
- Lack of time when school is in session

What would you like to see in parks?

1. Park opportunities to socialize through planned events provide
   - Movie in park, stargazing
   - Food trucks, pop-up café
   - Special lighting and music for evening events

2. Amenities geared to teams

   - Rope challenge course, large spinner requiring collaboration to move, tall climbing elements
   - Wi-fi
   - Exercise stations clustered to socialize
   - Art (interactive mural)
   - Swings for teenagers
   - Ping pong tables
   - Skateboard spots in local parks so teens can walk not drive
   - Informal stage

TEEN FOCUS GROUP - MEETING SUMMARY

OCT. 1, 2020 | ZOOM

3. Provide a place to connect with natives
   - Habitat for birds
   - Emphasis sustainability
   - Appreciate beauty of scenery
   - More natural characters

4. Make parks more comfortable in summer, when teens are not in school

   - Splash pads (but do not waste water)
   - Co-sheltered tables
   - Areas to gather in shade and hang out
   - No wood tables/benches

5. Current activities

   - Picnic
   - Paint
   - Meet friends

NEW RESIDENT FOCUS GROUP - MEETING SUMMARY

OCT. 1, 2020 | ZOOM

PURPOSE OF MEETING

This meeting held to discuss the needs and desires of new residents in relation to City-owned neighborhood parks. The project team asked a group of 5 participants to provide input on what their barriers were to using the existing parks, and also to share what would get them outside.

Milpitas New Resident Focus Group 10/01/2020

How can the Milpitas Park and Recreation system meet the needs of the new residents living in higher density neighborhoods?

5 participants, primarily use Bob McGuire and Pinewood Park.

Emerging Themes –

1. Want parks to facilitate "getting to know neighbors"

    - Group exercise area to socialize and workout
    - Activate park with events – outdoor Zumba or yoga class
    - Movies in park

2. Park needs to be convenient and comfortable to visit and linger

    - Need Wi-Fi
    - Restrooms especially for parents with small children
    - Within walking or biking distance

3. Want equity protocols / systems to reduce use conflicts

    - Tennis courts very popular, need timer, sign-up sheet or on-line reservable as possible strategies to schedule court use.

4. Provide adequate parking to accommodate reserved use of recreation building or group picnic areas

    - Possible permits for on-street parking areas with reservation

NEW RESIDENT FOCUS GROUP - MEETING SUMMARY

OCT. 1, 2020 | ZOOM

5. Provide a greater variety of uses

    - Pickleball, outdoor ping pong, tennis ball backboard
    - Shaded group picnic area
    - Want swings for adults and kids

6. Create a shared history

    - Provide information about history of park name or events with Milpitas in Park

7. Misc.

    - Limit sand in play areas (cleanliness and safety)
    - Avoid evening use of park
    - Like 7 Seas Park play area for toddler

VIRTUAL TOWN HALLS - MARKETING COLLATERAL

OCT. 10 & 14, 2020 | ZOOM

VIRTUAL TOWN HALLS

OCT. 10 & 14, 2020 | ZOOM

PURPOSE OF MEETINGS

The project team held two virtual town hall meetings via Zoom that were open to the community. Conducted in a webinar style, the interactive meeting included polling questions where participants could submit answers in real time. The meeting sought to increase awareness and understanding of the Master Plan process, collect input on current barriers to using the parks and participating in recreational programming, and identify community needs and desires in relation to City-owned parks and programming.

VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

INTRODUCTIONS

The Master Plan Team

- Milpitas City Staff
- Gates + Associates
- Matrix Consulting Group

MILPITAS RECREATION AND COMMUNITY SERVICES

GATES +ASSOCIATES LANDSCAPE ARCHITECTURE

matrix consulting group

Play Milpitas

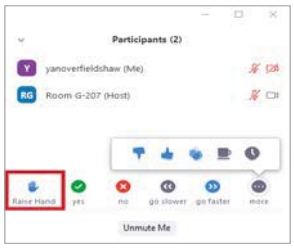
MILPITAS PARKS + RECREATION MASTER PLAN

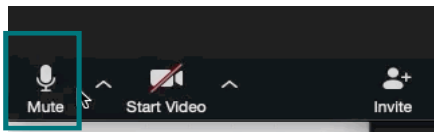
ZOOM PROTOCOLS

Best Practices

Please utilize the Q&A window to ask questions while others are talking!

Raise your hand if you have a comment or question!





Mute yourself when not talking

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

MEETING OVERVIEW

Purpose:

» Review efforts to date on Parks & Recreation Master Plan Update

» Gather community input

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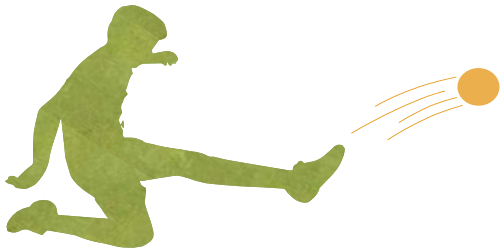
PARKS & RECREATION MASTER PLAN UPDATE

Purpose of this Project

Create a **ROAD MAP** to guide **FUTURE IMPROVEMENTS** to existing parks, planned parks and programs



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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

POLLING

Question 1:

How many people are participating with you on this Zoom call?

- ☐ Just me
- ☐ 1 other person
- ☐ 2 or more

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2008 PARKS & RECREATION MASTER PLAN

Park Improvements

26 million dollars in improvements:

- » New synthetic fields, pool rehab, and upgraded locker rooms at the **Milpitas Sports Center**
- » New Skate Park, Restrooms and Concession Building
- » The new **Creighton Park** re-design
- » **Sandalwood Park** re-design
- » Higuera Adobe Park and Building re-design & retrofit
- » Major improvements to Alviso Adobe, Pinewood, Cardoza, and Calle Oriente Parks

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

PLANNING CONTEXT

Milpitas General Plan

City of Milpitas
GENERAL PLAN

Adopted: December 1994
Last Amended: April 2015

Park and Recreational Facilities Guiding Principles:

4.a-G-1 Provide a park and recreation system designed to serve the **NEEDS OF ALL RESIDENTS** of the community.

4.a-G-3 **Cooperate** with other agencies, such as the **County** and **MUSD**, to provide recreational opportunities to residents.

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DEMOGRAPHICS

People

The population has grown 21% since 2010

Milpitas is very diverse:
- 67% Asian
- 16% Caucasian
- 15% Hispanic or Latino

The population of Milpitas is projected to grow to 106,000

	2010	2019
POPULATION	66,790	84,196
AGE:		
Under 19	26%	25%
20-44	38%	37%
45-64	27%	27%
Over 65	9%	11%

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

PLANNING CONTEXT

Milpitas General Plan

"EXPERIENCE OVER ACRES"

Table 4-2

Park Standards for New Facilities

	Urban Parks	Neighborhood Parks	Community Parks
Distribution (acres/1,000 residents)	5 acres with a minimum of 3 acres per 1000 residents for public parks outside of the Midtown and Transit Specific Plan areas. 3.5 acres with a minimum of 2 acres per 1,000 residents for public parks within the Midtown and Transit Specific Plan areas.		
Service Area Radius	1/4 Mile	3/8 Mile	Citywide

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POLLING

Question 2:

How many parks do you think are in the Milpitas Parks & Recreation system?

- ☐ 15
- ☐ 26
- ☐ 36

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

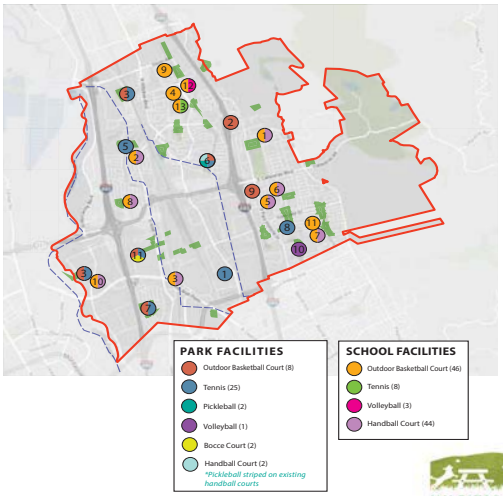
PARKS & RECREATION MASTER PLAN UPDATE

Existing Conditions Assessment

» 36 parks

» 6 Facilities

SPORTS COURTS DISTRIBUTION - PARKS AND SCHOOLS



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EXISTING CONDITIONS ASSESSMENT

AUGUSTUS RATHBONE PARK

Expedition Ln / Jubilee Dr

Type: Neighborhood Park
Size: 73 acres
Construction Date: ——

PARK OVERVIEW

Augustus Rathbone is a modern, compact neighborhood park. It is well maintained and contains modern play elements and amenities.

The entrance of the park features a large art piece and ornamental planting areas. Shaded picnic areas with accessible seating sit adjacent to a well maintained playground and open lawn.

Modern pedestrian lighting and bollard lights provide safety and security in the eventing hours.

The park will soon double in size with the addition of an adjacent lot off of Sango Court. The expansion will feature picnic areas, playgrounds and public art.

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Three metal picnic tables and one ADA table are provided, all are in good condition. Four metal benches are in good condition. One bike rack is in good condition.
2. **Play Equipment:** Play equipment and poured in place surfacing is in good condition.

Accessibility

1. **Pathways:** All concrete pathways are in good conditions with no cracking or heaving. All slopes and ramps are within ADA compliance.
2. **Furnishings:** ADA accessible benches and tables are provided.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in overall good condition. Mulch in planted areas is low.
2. **Turf:** Turf is in good condition with some sparse areas.
- **Irrigation:** This park is on the City's centralized irrigation system using reclaimed water.

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

PARKS & RECREATION MASTER PLAN UPDATE

More Than Just Parks

- » Programs
- » Events
- » Community Support Services

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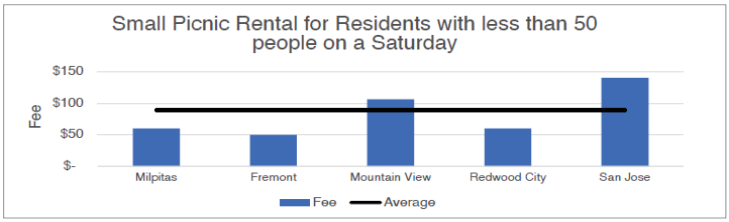
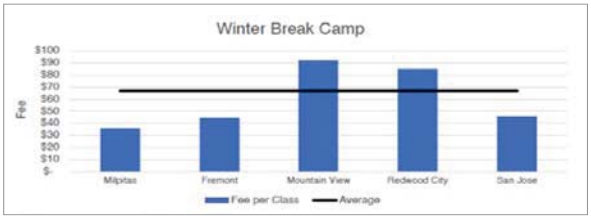
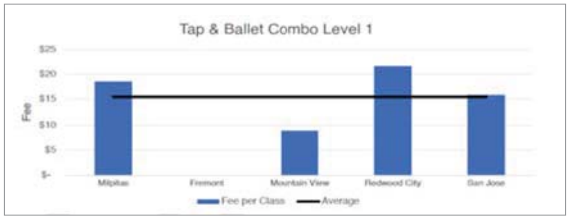
MILPITAS PARKS + RECREATION MASTER PLAN

PROGRAM FEE ASSESSMENT & COST RECOVERY







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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

POLLING

Question 3:

What types of <u>online</u> programs would you like to see?

- ☐ **Fitness Classes** *(yoga, zumba, etc.)*
- ☐ **Enrichment Classes** *(art history, cooking, guitar, etc.)*
- ☐ **Art Classes** *(painting, photography, crafts, etc.)*
- ☐ **Teen-focused Classes** *(coding, web design, academic, sports)*
- ☐ **Youth** *(virtual kids club, keyboarding, art, academics)*
- ☐ **Pre-K Enrichment** *(parent/child classes - music, soccer, yoga)*
- ☐ **Other**

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MILPITAS PARKS + RECREATION MASTER PLAN

POLLING

Question 4:

Which class are you most looking forward to attending <u>in person</u> in the future?

- ☐ **Fitness Classes** *(yoga, zumba, etc.)*
- ☐ **Enrichment Classes** *(art history, cooking, guitar, etc.)*
- ☐ **Art Classes** *(painting, photography, crafts, etc.)*
- ☐ **Teen-focused Classes** *(coding, web design, academic, sports)*
- ☐ **Youth** *(virtual kids club, keyboarding, art, academics)*
- ☐ **Pre-K Enrichment** *(parent/child classes - music, soccer, yoga)*
- ☐ **Other**

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

POLLING

Question 5:

What are your barriers to participating in Milpitas' recreation programs? *(select all that apply)*

- ☐ None - I participate in the programs
- ☐ Cost
- ☐ Lack of time
- ☐ Classes offered at inconvenient times
- ☐ Nothing of interest to me
- ☐ Lack of childcare
- ☐ I don't know what is offered

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MILPITAS PARKS + RECREATION MASTER PLAN

RECREATION & COMMUNITY SERVICES

City-Sponsored Events

- **Large, Citywide Events** *(i.e. fireworks)*
- **Smaller, Focused Events** *(i.e. diversity celebrations like Lunar New Year, LGBTQ+ Pride)*
- **Holiday Events** *(i.e. tree lighting)*
- **Cultural Performances** *(i.e. Concerts in the Park, Center Stage)*
- **Health & Wellness Events** *(i.e. Bike to Work Day)*
- **Events for Special Interest Groups** *(i.e. car shows)*
- **Age-Group Specific Events** *(i.e. children/seniors/teens)*
- **Events that Support Local Businesses** *(i.e. art walk)*

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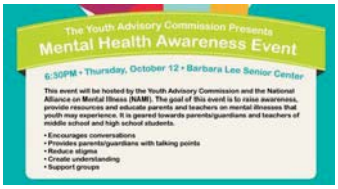
VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

RECREATION & COMMUNITY SERVICES

City-Sponsored Social Services

- Senior Nutrition Program
- Senior Health Screenings
- Senior Case Management *(expanding to everyone Oct. 26)*
- Milpitas Assistance Program *(fee assistance)*
- Suicide Prevention Resources
- After School Childcare
- Youth Job Corps
- Teen Center *(i.e. art walk)*
- Volunteer Opportunities
- Food Resources
- Senior Services via Partner Groups *(legal, tax, home repair)*
- Presentations from Service-Providing Community Non-Profits
- Rent Assistance



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COMMUNITY INPUT

Engagement Schedule

ONLINE SURVEY → DECEMBER 2019 - APRIL 2020

ROUND 1
What is the vision for our park and recreation programs?

- **DECEMBER 5** Pop Up Booth @ Tree Lighting Event
- → **JANUARY 18** Pop Up Booth @ Lunar New Year Event

ROUND 2
Confirm, clarify & prioritize

- → **SEPT/OCT** Focus Groups
- → **OCT 10 & 14** Virtual Town Halls

ONLINE SURVEY → JULY 2020 - CURRENT

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

COMMUNITY INPUT

Summary: Efforts to Date

- 700+ PARTICIPANTS
- (2) Pop-Up Event Booths & Online Survey
- (3) Focus Groups
- (2) Virtual Town Hall Meetings
- English, Spanish, Chinese, Vietnamese

WHAT DO YOU LIKE?

1. Playgrounds
2. Swim Facility
3. Trails/Pathways
4. Sports Fields
5. Open Space
6. Picnic Areas
7. BBQ Areas
8. Tennis / Pickleball

WHAT SHOULD WE ADD?

1. More/updated playgrounds
2. More community events
3. More Indoor Sports
4. Exercise Stations
5. Better Park Lighting
6. Community Gardens
7. Dedicated Teen Space

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MILPITAS PARKS + RECREATION MASTER PLAN

POLLING

Question 6:

How did you learn about this Town Hall Meeting?

- ☐ From a friend or family
- ☐ Social Media *(Facebook, Instagram, Twitter)*
- ☐ Master Plan website
- ☐ Email
- ☐ City website

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

COMMUNITY INPUT

Current Online Engagement Opportunities

» Online Survey & Interactive Map

https://wikimapping.com/Milpitas-Parks-and-Recreation-Master-Plan-Update.html

» City Council Meeting - Oct. 20

Tell your friends!

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COMMUNITY INPUT

Park-Specific Amenities / Trends

PUMP TRACK
MURPHY PARK
GILL MEMORIAL PARK
SINNOTT PARK

FENCED DOG PARK
FOOTHILL PARK
MURPHY PARK
AUGUSTINE MEMORIAL PARK

FITNESS EQUIPMENT
MURPHY PARK
GILL MEMORIAL PARK
SINNOTT PARK

COMMUNITY GARDENS
MURPHY PARK
ROGERS PARK
SINNOTT PARK

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

FOCUS GROUPS

Organized Sports

- Stronger joint-use with schools
- **Amenities access** (parking, storage, restrooms)
- **Expand usability** (lighting, synthetic turf)
- **Collaboration** (share fields, concessions, batting cages)

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FOCUS GROUPS

Teens

- **Informal uses geared to teens** (climbing wall, table tennis, swings)
- **Improve Aging, Unattractive Parks** (wi-fi, site furniture)
- **Sustainability & Natural Feel**
- **Social Activities** (food trucks, astronomy nights)
- **Use Conflicts** (pathway width, dominant users)
- **Safety Concerns** (parents vs. need to socialize)
- **Summer Usage** (shade structures, spray elements)

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

FOCUS GROUPS

New Residents

- » **Opportunities for Neighbor Interaction** (exercise stations, planned activities - zumba/ yoga/movies)
- » **Reduce Competition for Facilities** (scheduled tennis, additional amenities like paddle ball, adult swings, table tennis)
- » **Convenience** (wi-fi, walkability, restrooms)
- » **Rental Space** (permit parking, group picnic shelters, building access)

Play Milpitas
MILPITAS PARKS + RECREATION MASTER PLAN

POLLING

Question 7:

What are your barriers to using Milpitas' parks?
(select all that apply)

- ☐ None - I use parks regularly
- ☐ Lack of time
- ☐ Nothing of interest to me
- ☐ Safety concerns *(social distancing, worn facilities, etc.)*
- ☐ I use other facilities *(private, in other city)*

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VIRTUAL TOWN HALL MEETING SLIDES (OCT. 14, 2020)

WE WANT TO HEAR FROM YOU!

QUESTIONS?

Play Milpitas
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https://milpitasparksrecreationmasterplan.org/

#playmilpitas

THANK YOU!

Don't forget to take our online survey!

SOCIAL SERVICES/INCLUSION FOCUS GROUP - MEETING SUMMARY

OCT. 19, 2020 | ZOOM

PURPOSE OF MEETING

The purpose of this focus group was to discuss how the City of Milpitas can better serve community members who are in one of the following special populations:

• seniors	• people with mental illness
• at-risk teens	• people whose primary langauge is not English
• people with physical disabilities	• people who are low- or very low-income
• people with developmental disabilities	• people who are experiencing homelessness

Milpitas Social Services Focus Group 10/19/2020

How can the Milpitas Park and Recreation system better serve community members in special populations?

9 participants

What amenities should we consider to make our spaces more welcoming and user friendly to our special populations?

- Lack of amenities tailored to teens, amenities primary for younger children
- All-inclusive playgrounds similar to Miracle Bridge playgrounds
- More/additional signage and community awareness of inclusion
- Quiet pods in new and existing playgrounds

What modifications are needed to make existing recreation programs, like classes and events, more welcoming and user friendly to our special populations?

- Better class/program descriptions
- Better staff training working with special populations
- Early access to teachers to discuss curriculum/user level of programs being offered
- Additional staff specially trained to assist/teach special populations
- Teen center hours outside of business hours
- Partner with local inclusion groups that can help with staffing and training

SOCIAL SERVICES/INCLUSION FOCUS GROUP - MEETING SUMMARY

OCT. 19, 2020 | ZOOM

Are there any specially-targeted programs you would like to see Milpitas consider?

- Coding for at risk teens
- Programs that cater to teens and seniors at the same time – to bridge friendships/socialization
- Teen ambassador training/program
- Support groups 9LGBTQ, at-risk teens, etc.)
- Reading groups for younger children
- Ally training

What are some of the unmet needs of Milpitas' special populations?

- More collaboration between police and special populations
- In class/program support for special populations who are taking the class

Do you have ideas on how Milpitas Rec and Community Services could improve awareness and accessibility among special populations about the parks, recreation and community services resources available?

- More signage, better messaging on websites, in facilities, at events and in parks

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Inclusion & Social Services Focus Group

Monday 10/19/20 6pm - 7pm

Play Milpitas

MILPITAS PARKS + RECREATION MASTER PLAN

What Are We Doing Today?

The purpose of this focus group is to discuss how the City of Milpitas can better serve community members who are in one of the following special populations:

- seniors
- at-risk teens
- people with physical disabilities
- people with developmental disabilities
- people with mental illness
- people whose primary language is not English
- people who are low- or very low-income
- people who are experiencing homelessness

AGENDA

1. Introductions
2. Efforts to date
3. Discussion Questions
4. Next Steps

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

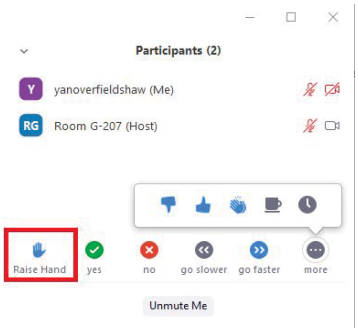
ZOOM Protocols

Please utilize the chat window to ask questions while others are talking!

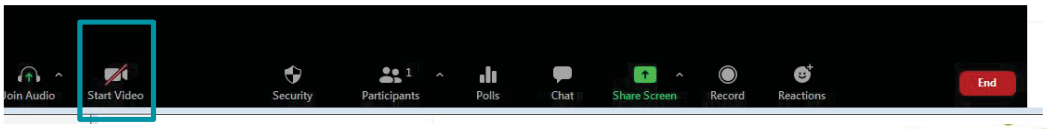
Mute yourself when not talking

ZOOM Protocols

Raise your hand if you have a comment or question!



We encourage you to turn on your video!



SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Who Are We?

- City of Milpitas
- Gates + Associates - Landscape Architects & Planners
  - Linda Gates
  - Melonie O'Sullivan

What is a Parks & Recreation Master Plan?

- Strategic document that studies the existing park & recreation system
- Sets forth a framework for the future

Introductions

Toni Perrina

Kavita Sreedhar

Corinne Tobias

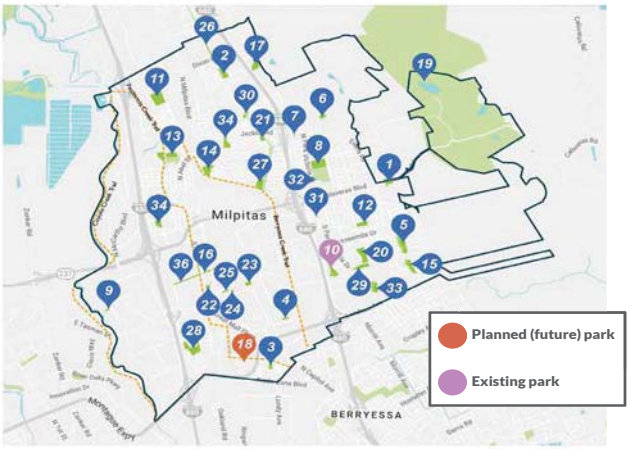
Ron General

Norma Morales

Celia Huang

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Current Park System



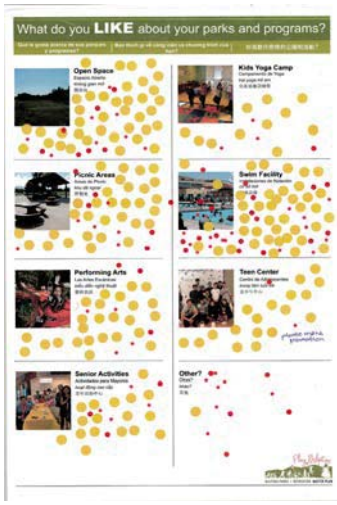
PARKS

1. Alviso Adobe Park
2. Augustine Memorial Park
3. Augustus Rathbone Park
4. Bob McGuire Park
5. Ben Rogers Park
6. Calaveras Ridge
7. Calle Oriente Mini-Park
8. Cardoza Park
9. Cerano Park
10. **Creighton Park**
11. Dixon Landing Park
12. Foothill Park
13. Hall Memorial Park
14. Hidden Lake Park
15. Hillcrest Park
16. John McDermott Park
17. Jose Higuera Adobe Park
18. **McCandless Park**
19. Milpitas Dog Park
20. Murphy Park
21. Oliver W. Jones Memorial Park
22. O'Toole Elms Park
23. Parc Metro East
24. Parc Metro Middle
25. Parc Metro East
26. Pecot Park
27. Peter Gill Memorial Park
28. Pinewood Park
29. Rovert E Browne
30. Sandalwood Park
31. Selwyn Park
32. Skate Park
33. Sinnott Oark
34. Starlite Park
35. Stickroth Park
36. Tom Evatt Park

- **Creighton** (open Nov. 2020)
- **McCandless** (open in 2022)

MILPITAS RECREATION AND COMMUNITY SERVICES · GATES + ASSOCIATES · Play Milpitas

Efforts to Date - Community Outreach



MILPITAS RECREATION AND COMMUNITY SERVICES · GATES + ASSOCIATES · Play Milpitas

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Efforts to Date - Site and Facility Assessments

AUGUSTUS RATHBONE PARK

Expedition Ln/ Jubilee Dr

Type: Neighborhood Park
Size: .73 acres
Construction Date: -------

PARK OVERVIEW

Augustus Rathbone is a modern, compact neighborhood park. It is well maintained and contains modern play elements and amenities.

The entrance of the park features a large art piece and ornamental planting areas. Shaded picnic areas with accessible seating sit adjacent to a well maintained playground and open lawn.

Modern pedestrian lighting and bollard lights provide safety and security in the evening hours.

The park will soon double in size with the addition of an adjacent lot off of Sango Court. The expansion will feature picnic areas, playgrounds and public art.

EXISTING SITE ASSESSMENT

Site Furnishings

1. **Amenities:** Three metal picnic tables and one ADA table are provided, all are in good condition. Four metal benches are in good condition. One bike rack is in good condition.
2. **Play Equipment:** Play equipment and poured in place surfacing is in good condition.

Accessibility

1. **Pathways:** All concrete pathways are in good conditions with no cracking or heaving. All slopes and ramps are within ADA compliance.
2. **Furnishings:** ADA accessible benches and tables are provided.

Landscaping & Maintenance

1. **Landscape Planting:** Landscape planting is in overall good condition. Mulch in planted areas is low.
2. **Turf:** Turf is in good condition with some sparse areas

- **Irrigation:** This park is on the City's centralized irrigation system using reclaimed water.

MILPITAS RECREATION AND COMMUNITY SERVICES · GATES +ASSOCIATES · Play Milpitas

Efforts to Date - Benchmarking

	MILPITAS	CUPERTINO	DUBLIN	MOUNTAIN VIEW	REDWOOD CITY
ACTIVE USE PARKS					
Number of Parks	39	23	27	30	38
Acres developed parkland	173	186	187	118	185
Acres per 1000 residents	2.1	3.1	2.8	1.4	2.1
Residents per park	2,158	2,589	2,434	2,742	2,283
INCLUDING SCHOOL SITES					
Acres	198	410	230.6	202.8	229.2
Acres per 1000 residents	2.4	6.9	3.5	2.5	2.6
REGIONAL PARKS/ OPEN SPACE					
Acres	1,558	5,962	780	797	467

Table X-X Parks and Open Space

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
	Total	Residents per court	Total	Residents per court	Total	Residents per court	Total	Residents per court	Total	Residents per court
SPORTS COURTS										
Outdoor Basketball Court	8	10,525	6	9,879	13	4,987	8	10,342	4	21,481
Tennis/Pickleball	25	3,368	28	2,117	12	4,940	25	3,310	7	12,275
Volleyball	1	84,196	0	-	5	12,965	1	82,739	0	-
Bocce Court	2	42,098	2	29,638	2	32,413	2	41,370	2	42,963
Handball Court	2	42,098	0	-	1	64,826	2	41,370	2	42,963

Table X-X Sports Courts

	MILPITAS		CUPERTINO		DUBLIN		MOUNTAIN VIEW		REDWOOD CITY	
	Total	Residents per field	Total	Residents per field	Total	Residents per field	Total	Residents per field	Total	Residents per field
SPORTS FIELDS										
Football Field	1	84,196	0	-	0	-	2	41,370	0	-
Soccer Field	4	21,049	6	9,879	16	4,052	16	5,171	5	17,185
Diamond Field (Baseball/Softball)	11	7,654	7	8,507	16	4,052	17	4,867	5	17,185
Cricket Pitch	1	84,196	1	59,276	1	64,826	0	-	0	-
SPORTS FIELDS TOTALS										
Total Sports Fields	17		14		33		35		10	
Fields Per 10,000	2.0		2.4		5.0		4.3		1.2	

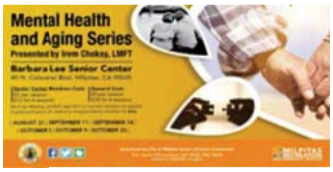
Table X-X Sports Fields

MILPITAS RECREATION AND COMMUNITY SERVICES · GATES +ASSOCIATES · Play Milpitas

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

City-Sponsored Social Services

- Senior Nutrition Program
- Senior Health Screenings
- Senior Case Management *(expanding to everyone Oct. 26)*
- Milpitas Assistance Program *(fee assistance)*
- Suicide Prevention Resources
- After School Childcare
- Youth Job Corps
- Teen Center
- Volunteer Opportunities
- Food Resources
- Senior Services via Partner Groups *(legal, tax, home repair)*
- Presentations from Service-Providing Community Non-Profits
- Rent Assistance



Discussion Questions

As we think about Parks and Facilities improvements, what **amenities** should we consider to make our spaces more welcoming and user-friendly to our special populations?

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Discussion Questions

What **modifications** are needed to make Milpitas' existing recreation programs, like classes and events, more welcoming and user-friendly to our special populations?

Discussion Questions

Some cities have added programs and events that are specifically designed to meet the needs of special populations, such as:

- A recreation program for developmentally disabled adults
- A dance or sports class for those with physical disabilities
- Classes taught in other languages for those whose primary language is not English

Are there any **specially-targeted programs** you would like Milpitas to consider?

SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Discussion Questions

Recreation departments are increasingly offering Community Services to address health and well-being of special populations, access inequity due to poverty and homelessness, language barriers, racial, sexual orientation and other issues.

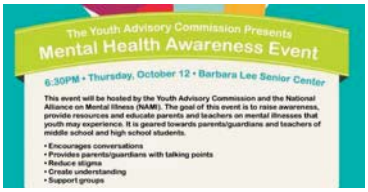
What are some of the unmet needs of Milpitas' special populations?

(These could be either needs that the City should directly address or needs that could be addressed through partnerships with other agencies)

Discussion Questions

One of the biggest challenges in serving special populations is outreach to groups that have traditionally been underserved by Parks and Recreation programs.

Do you have ideas on how Milpitas Recreation and Community Services could improve awareness and accessibility among special populations about the parks, recreation & community services resources available?



SOCIAL SERVICES/INCLUSION FOCUS GROUP PRESENTATION SLIDES (OCT. 19, 2020)

Next Steps

NEXT! Please take the online survey and tell us about the parks nearest you!

https://wikimapping.com/Milpitas-Parks-and-Recreation-Master-Plan-Update.html

UPCOMING! City Council Meeting tomorrow on **Oct 20th**. Tell your friends and family!

Check the Master Plan website for updates:

https://milpitasparksrecreationmasterplan.org/

Additional comments or questions?

*Email us - **melonie@dgates.com***

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

1. The Milpitas community has identified new and updated playgrounds as a high priority. The city currently has 29 playgrounds. How would you prioritize which playgrounds get improved first? Please rank the importance of the following criteria, 5 eing most important, 1 eing least important.

	5	4	3	2	1
Replace equipment in poor condition	187	80	35	7	7
Address accessibility and safety concerns	178	75	39	15	8
Serve neighborhoods with limited access to parks	96	92	78	25	16
Serve neighborhoods with high concentration of children	128	99	65	12	8
Increase capacity to accommodate a range of abilities	123	86	71	14	17
Increase variety of play experience	141	74	58	20	19
New and updated playgrounds are new and updated playgrounds are not a priority for me	0	0	0	0	0
	853	**506**	**346**	**93**	**75**

indicates low priority

Write-in Comments
Serve neighborhoods with older generation population too
bring in new sports to address needs of diverse communities
Ground with cricket pitch. As no grounds are made for cricket game with so much population deprived to play the sport.
Add cricket pitch to the Sports Center
Cricket
Cricket playground is a must requirement.
Add Cricket Pitch to the sports center
Need cricket pitch at sports center
Cricket please
With Covid going on right now, I would say do not prioritize playgrounds right now as people would still be scared to touch things in public and even after finding a cure. The only main improvement I would like to see around playgrounds is to improve on the lighting as sunsets at 4:50pm in the fall/winter. This will help ensure safety to families who go to the park after work hours.
Fix the poor condition roads and children play area. Hillcrest Park's child play area needs to be modernized with a new slides and rubber floors. The roads inside the park needs to be fixed too.
see saws are awesome!!!!!!
Milpitas should also focus on connection the major parks and the Milpitas areas together in one continuous walking and biking riding trails that eventually connect along the back to the adjacent cities. This is such a vital long-term benefit to militas.
I wish the city can put some outdoor exercise equipment in the park and playground. Those outdoor exercise equipment are very popular in China and can be used for wide range of ages.
We need better sports fields too at the schools.
More toys for toddlers to play on. Kiddie swings in every park.
There is park planned and approved for mccandless drive. Its not completed even after 3 years approval. Its so bad that even construction not started till date.
please paint lines for pickleball courts, it's the #1 growing sport in the country. we would love to play outdoors on 'real' courts!
Safety - I see people walking in Milpitas parks without mask - in crowds gathering and doing potluck. Is there a way to enforce safety ?
Jose Higuera Adobe Park is the only one we use.
Starlite park cross the street of Anthony Spangler elementary , its playground is a poor condition, needs to be replaced or deep fix!Thanks
I'm a grandmother and have watched kids pay at Sinnott park a lot.
I am more interested in connecting as many of the parks as possible via safely bikable and walkable trails.
Improve shade and water access at parks, as this is a safety issue during summer months.
I would like a cricket field in Milpitas
Reduce usage of park parking lot by near by residence on daily bases
All of these statements are priorities!!
Just maintaining what we have is also crucial.
We go to Cardoza park, often there is too much liter. Sadly people are slobs but it should be monitored better.
You closed the parks because of COVID-19 and despite them being one of the least unsafe activities for children. Maybe resconsider the decision?
More tennis courts. They are always taken up by adults. Need to limit times or have sign up sheet.
Can't relate to playgrounds, I don't use it or see enough to comment about cardoza park has a nice playground and I see it being used. The random walks past selwyn park makes me think the kids doesnt really use the facility. Maybe selwyn can be changed/updated facility?
Recently I talked to the installers of the new playground equipment in Ben Rodgers Park. They told me it was probably the cheapest playground structure in the world, and they should know since they install these things all over the place. It replaced equipment of equally poor play value for a wide variety of children. Only children about the size of 3 year olds can get through the slot for BOTH slides. No adult could get through to accompany an tinier child. Nor could a child of elementary school age get through either. So, I know the City still went to considerable expense to install this crap. Will they be willing to replace it if we ask in this survey? Why did they not pay any attention to the last survey?
McCandles Park should be a high priority given the high volume of new residents with no where to go for a local park
We need a dog park or two now that the Human Society closed their dog parks...please! I miss the dog park!
I see that Oliver Jones Park is a newer Park and has been well maintained and has been remodeled. Meanwhile, Strickroth Park hasn't been touched in many many years. Would be nice to have a park with rubber flooring and no sand. Thank you for this opportunity to voice this.
Safety and fun is paramount for parks. Kids playgrounds need to be progressive and with best equipment possible: For example: https://www.surfaceamerica.com/playground-surfacing/ There must be intermittent plans for repair and renovation

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

QUESTION 1 WRITE-IN COMMENTS CONT.

Insulation of pickle ball courts
Finish the parks that are being worked on before thinking about starting new parks!
Improve and revamp parks with baseball softball fields even if it's for recreational such as the small field at Strickroth. The field can also be used for soccer area. This park also can use seating near the playgrounds.
What is most important to me is that the girl's Softball has a perm. home.
I'm sorry I simply put a '5' for everything, but this is how I feel about Milpitas' playgrounds. I think majority of them are old and outdated. They need to updated for safety concerns, play experience, and properly "sized" for the concentration of children in the area. Even the newer playgrounds in the city I feel are too small and don't offer a great play experience. Bob Mcguire park is a good example. New playground, but extremely small for the amount of children in the area.
Add a cricket pitch to the sports center
dog park!
None
More dog parks.
Need more tennis courts- the ones in Browne Park are always packed. And more bike paths is always good.
New parks near los coches st
I would prefer you just remove all the playground equipment.
Fishing please
We already have parks all over town, some are run down or lacking in amenities. New parsk are not a priority. With our budget deficit, if we are going to make improvements, let's improve existing parks before developing new parks.
Have more trash and recycling bins laying about. Just having more prevents people from littering! So much trash in some areas.
Add handwashing stations for the most busy parks
I am not a citizen with a child so I can't speak to the fullness of the question but I am for fewer playgrounds and more space that can be used by all people (basketball courts, soccer, etc).
Please update Gill Park playground! Same from when I was a kid.
Let's think of park design that will persevere for the future 20 years. Public WiFi, Water elements that are within drought guidelines. More seating areas, oftentimes the kids want to play for extended times, and it feels like benches are sparse. Maybe some concrete Adirondack chairs styles, innovative and affordable. Let's consider hiring an ideation firm, we have the worlds best in the Bay Area.
Parking and access to clean public restrooms would be nice.
Do not replace playgrounds if they are not in poor condition or pose safety concerns. Instead devote funds that would have gone to those parks to other parks that need more support. I live near Ben Rogers park (a great park btw) and see that a perfectly good playground was replaced with smaller equivalents. This seems to me to be a waist of funds that could've gone to better causes. Also, I see that the sand base was replaced by tan bark which causes splinters. Its not clear to my why this replacement was made.
Murphy Park is in need of an upgrade/update.
I had this survey almost complete and it shut down :(1 - replace dangerous equip 2 - upgrade areas with high concentration of children 3 - Range of abilities would be nice so a toddler and a 12 yr old both have things to do 4 - Play experience...kids are inventive and do not need the play experience most adults think they do - watch what they do with a large cardboard box!
We would love to have interactive game play and art work to engage kids. Like the kind of interactive games that are there in Children's discovery museum, it would be great to have something similar in an outdoor setting

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

2. The community has identified community events as a high priority. What types of events are most important? Please rank the importance of the following criteria, 5 eing most important, 1 eing least important.

	5	4	3	2	1
Large City-wide event (i.e. Fourth of July Fireworks)	111	72	57	23	44
Family focused events (i.e. Pumpkins in the Park Family Game Night)	107	86	74	18	25
Events that celebrate diversity (i.e. Lunar New Year LGBTQ+ LGBTQ+ Pride)	65	74	89	33	40
Holiday Events (i.e. Tree Lighting)	90	104	68	22	19
Performances (i.e. Community Theater Concert Band Community Theatre Concert Band)	68	95	90	24	28
Health and Wellness Events (i.e. Bike to Work Day 5K Run or Walk)	87	96	81	21	24
Events for special interest groups (i.e. car shows)	30	12	17	5	7
Events that that generate revenue for the City (i.e. sponsor)	72	93	89	33	18
Events that support local businesses (i.e. art walk)	116	95	62	19	16
Community Events are not a priority for me	0	0	0	0	0
	746	**727**	**627**	**198**	**221**

indicates low priority

Write-in Comments
City government awareness programs (like fire dept, police, security, environment, etc)
Movies in Park, Family Campout in Park, Arts & Culture Festival
Cricket play ground.
Family focused events and local small businesses should be the main priority. With family focused events, I believe it would be nice to see your neighbors at a local event and get to know other locals. I really do enjoy Music at the Park and Movie night a lot. One thing I wanted to say about Health and Wellness events is that we should increase making green biking lanes around the city FIRST so it would encourage locals to bike. An ideal spot, in case if it isn't planned already, should be South Park Victoria Drive in between Yosemite and Yellowstone. It's not a LONG road but it is heavily used by residents. When they see the green lanes, they would be more inclined to bike. Also, it is next to Murphy park so it would better connect it.
We also need planting more trees. It not only beautifies parks and streets, it provides plenty of shady areas we really need in the hot summer. Right now, our parks and streets are too hot, hardly seeing any shade. If you go to a park like Cuesta park in Mountain View, you will see what I mean.
Bring back the Firecracker 10k race.
bbqs and liv concerts
Bring back the lifesize Candyland game the city used to sponsor.
Egg hunts in park, holloween parade etc.,
cricket ground
Events should focus on supporting local businesses and city/govt entities (e.g. Milpitas library, hospital, etc)
I like the fireworks, pumpkins in park, car show . There was like a faire by the cisco buildings a couple of years back too, it had food trucks, milpitas historical society, the cars, the earthquake simulation vehicle. That one was cool!
Not seeing anything that would particularly interest me as a senior.
Given COVID getting people together would increase exposure. I don't recommend adding events until a cure is widespread.
Large City events-- somehow limit to residents only... City Fireworks is busy event with people from neighboring towns come & no space is left for the resident..
Keep designated softball fields for girlâ€™s sports. Gill, Cardoza, and Dixon parks.
None
Community events are not an appropriate activity for government.
While not necessary to go overboard, make these events like potluck. People should be allowed to bring things, or at least be able to chip in. Also, take ideas of events from the people. There are some good ideas people may have that can be cost-efficient and still fun.
While these are my opinions, I think anything that brings the community together is key. Community Events ought to be community focused and thus there is a certain level to which the majority ought to have greater say instead of trying to please everyone.
This may be hard to build momentum, once it does I have seen it transform the community vibe. Consider some at great mall,
As one of the commissioners on the Energy & Environmental Sustainability Commission, I see parks as a fundamental building-block in our aim to reach a more sustainable Milpitas. If we emphasize our parks correctly, they could become a draw for neighborhoods to continue to work from home and visit the parks for outdoor breaks. Provide more places for folks to sit and tables to eat lunch from. Allow Food Trucks to service the parks and perhaps even act as a local hub for meals for the neighborhood for breakfast or lunch. Another option is to approach our local markets and see if they'd be interested in providing a grocery truck. Letâ€™s give our neighbors no reason to get into their cars and enjoy the parks instead.
Milpitas does not have an area large enough for a safe city wide event..
It would be great to have an open air stage so we could have performances outdoor, summer or winter. Especially during Covid, this would have been a great opportunity to have outdoor movie nights. Money charged during movie night can help the city as well. Definitely a great idea to have art walk and food truck events, which can help local businesses and Milpitas City.

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

3. The community has identified indoor sports as a high priority. What types of indoor sports are you most likely to participate in? Please select your top 5.

1	Dedicated Yoga Studio	177
2	Basketball	166
3	Badminton	151
4	Ping Pong, Table Tennis	145
5	Climbing	136
6	Indoor Soccer, Futsol	129
7	Martial Arts (including lion and dragon dance)	101
8	eSports (organized multiplayer video game competitions	70
9	Pickleball	42

Write-in Comments
Cricket
Cricket
Cricket indoor and outdoor
Cricket should be another choice
Cricket
Cricket
Cricket
Cricket
Cricket
Cricket
bring in new sports to address needs of diverse communities like cricket.
Cricket
Cricket
Cricket
Cricket
Cricket
Add cricket pitch to the Sports Center
Cricket
Cricket
Cricket
Cricket
Cricket
Cricket
Cricket
Cricket
Basketball is a high priority for me. If you can somehow install rock climbing around here then I think it would be popular as well.
Gun range, archery, arcades
Looking forward for sports center to safely reopening soon.
Will you offer yoga/aerobics via video conferencing - we may be in pandemic for a while.I found sports center instructor Aria's video, thank you! And will you update at least once a week for a variation of the exercise?
Volleyball
It's not safe at all due to pandemic
Badminton currently doesn't exists anywhere. Please make it high priority
The highest priority is to maintain the Milpitas Sports Center.
Tennis
cricket
Tai Chi classes
weight training and cardio
Indoor sports are cool but should be free for residents.
Esports events sound fun. You should stream it online if you do host it, like in Twitch. The other sportstuff I can't really relate to due to how infrequent I use the sports center facilities. I sed to swim when i had time, but not anymore.
Silver Sneakers
Given COVID, this is not a priority in 2020 until a cure is in place
Volleyball
Indoor archery range
Might even be good for city to consider having an indoor location for other sports that are traditionally played outdoors (Ie. Football, Baseball, Softball); one indoor shared facility that could be used by these groups during acclimate weather.
Weight lifting, boxing/MMA
Volleyball
Softball baseball
Volleyball
sporting venues are not something government should be involved with
No indoor sports during COVID-19; let's relook at indoor sports after the pandemic has passed through the country (because residents of other counties/states live, work, play and visit in Milpitas, too).
Taiko
We need fields that kids will actually do, half that list makes no sense! Why would the city waste money on Pickleball?!
I dont have good ideas, others may suggest great ideas ,
handball
I have been using the privately run badminton courts in Milpitas for many years now. It would be nice if the city could provide access to that.
No sport other the basketball is popular enough to warrant an INDOOR facility. Maybe 2 large gyms that can be rented. one geared adults and on to kids SINCE NO COMMENT IS AVAILABLE FOR A PUMP TRACK...NO NO NO IT CANNOT BE CONTROLLED. THERE WILL BE SKATE BOARDERS AND TROUBLE CAUSING OUTSIDERS...REMEMBER THE SKATE PARK?

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

4. The community has identified a desire for a pump track. A pump track is a circuit of rollers, anked turns and features designed to e ridden completely y riders pumping generating momentum y up and down ody movements, instead of pedaling or pushing and can e ridden y ridden y people of all ages. The following park sites are potentially suita le for a new pump track. Please select your top 3 preferred locations.

1	Murphy Park
2	Peter Gill
3	Starlite
4	Sinnot
5	Foothill

5. The community has identified a desire for a fenced dog park. The following park sites are potentially suita le for a new dog park. Please select your top 3 preferred locations.

1	Murphy
2	Peter Gill
3	Albert Augustine
4	Foothill
5	Sinnot

6. The community has identified a desire for community gardens. Community gardens include multiple raised planters that can grow her s, flowers, or veggies and fruits, and are tended to y the community. The following park sites are potentially suita le for a new community garden. Please select your top 3 preferred locations.

1	Murphy
2	Sinnot
3	Gill
4	Rogers
5	Jones

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

7. The community has identified a desire for fitness equipment. These can e a series of several, single-activity stations throughout a park or a grouping of several pieces of equipment in one location. The following park sites are potentially suita le for new fitness equipment. Please select your top 5 preferred locations.

1	Murphy
2	Sinnot
3	Gill
4	Rogers
5	Jones

8. The City of Milpitas offers a wide range of programs through the Recreation and Community Services department. In order to keep up with demand, are there any programs types that you would like to see offered? Select all that apply.

1	More adult fitness (i.e. Zumba, yoga)	217
2	More adult enrichment classes (i.e. chess, guitar)	140
2	More youth enrichment (i.e. tutoring, music)	140
3	More teen enrichment (i.e. tutoring, music)	119
4	More teen sports (i.e. skateboarding)	115
5	More teen dance (i.e. hip hop, swing)	91
5	More senior dance (i.e. line-dancing)	91
6	More youth dance (i.e. tap, ballet)	90
6	More youth day trips	90
7	More adult dance (i.e. belly dancing)	88
8	More teen day trips	78
9	More senior day trips	70
10	More senior dance (i.e. line-dancing)	59

Write-in Comments
Cricket
Add Cricket as sport
More cricket training
Lunchtime pilates. Lunchtime sketching. Lunchtime drop-in conversational language program (Spanish practice).
Cricket
Add cricket pitch to the Sports Center
Cricket
My mom (69) is actually a part of the Milpitas zumba.
Don't care for bridge, enjoyed the paint nite you had offered in the past. If you can reduce the cost, more will participate.

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

8. The City of Milpitas offers a wide range of programs through the Recreation and Community Services department. In order to keep up with demand, are there any programs types that you would like to see offered? Select all that apply.

Write-in Comments Cont.

I would really like an indoor site for hobbies, to include laser cutters, 3d printers, and wood working tools, including table saw, miter saw and wood lathe. A textiles area including industrial sewing machines, a serger, and even a quilting machine.
More swim days & times...
Track dedicated for walking and jogging
Classes at the community center for kids milpitas ,are only printed on flyers and can be seen online ! There is none of the in real life ! I sent an email in the beginning of this year 2020 , to marketing dept. to address this issue after I tried to enroll my 7yrs. Old son asking for several ones , there were non active because of low enrollment! It would be great .. if there is actual activate classes .
Theater Arts Programs
more teen cricket
Watercolor and drawing classes
Further engagement of the society will be beneficial, especially with times such as these where social distancing and business closures are forcing people to stay in their homes.
Balance and flexibility
Silver Sneakers (Not just chair exercises. Some walking and standing, balance routines, too.)
Given COVID, this is not a priority in 2020 until a cure is in place
More senior stuff later in the day or weekend
R&B line dancing (rhythm and blues)
Add cricket pitch.
Senior guided monthly 4 mile hikes on local trails.
None
Girls Softball .
Skatepark open soon please! My scooter kid is ready!
City government need not provide these kinds of services.
More youth fitness, more youth sports (winter sports), more weekend programs (adults and youth) to support working adults/parents, more adult sports (winter sports)
Youth basketball
Literally a center that contains much of these would be amazing for the entire county. When somewhere big enough goes for lease, instead of putting a market that caters to only one demographic or a shop that no one actually needs, put one of these there. Life here would be much better with literally just this center and nothing else if no other options could be made reality.
Please open the parks for outdoor fitness classes, following CDC and County regulations of course.
Roller skating
The girls of Milpitas need softball fields! The boys continue to get treated like kings and the girls like peasants! This needs to change and it's sad that the city doesn't see it. It's ridiculous!
WE HAVE A WONDERFUL SENIOR CENTER WITH DAY TRIPS AND MANY OF THE ABOVE PROGRAMSPLEASE, PLEASE DO NOT CLOSE THE SENIOR CENTER!

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

9. Programs and classes are offered at various times and oth during the week and on the weekends. Is there a day or time you would like to see more programs and or classes offered? Select all that apply.

1	More weekend classes (Saturday and Sunday)	224
2	More evening classes (after 6pm)	202
3	More lunch-time classes (noon-1pm)	49

Write-in Comments
Please continue to offer weekend swim classes. I know this was the first year this was offered and would really help single parents solve weekdays are so hectic already after school.
Would be great to see kids classes in the evening so kids with working parents can still attend. During the day or afternoon is very hard for parents who work 9-5 jobs. B
Senior Center opens on weekday only, and only til 4:30pm. Age 50-64 are most likely still working, cannot participate weekday activities at Senior Center. Please consider opening evening or weekend.
Please let them be rolling not only on the flyers!
More morning classes (8am - noon)
If work-life balance returns weekend and evening would likely be best however in today's situation weekday classes may work.
Given COVID, this is not a priority until a cure is in place
The growth of Milpitas currently exceeds anything offered
Programs and classes are a waste of taxpayer funds. I would prefer these funds go to first responders to provide for the health and safety of the community.
More early morning classes before 10 am
If a class is being offered on Sunday, please also offer a similar class on a weekday or Saturday so those who cannot attend classes on Sunday(due to religious beliefs or otherwise) can still take that class.
CAN'T YOU WORK IN TANDOM WITH MILPITAS ADULT ED?????
I don't usually participate in programs. However, programs after 4 PM and on weekends are better because students and parents alike are more available at those times.
We need indoor tennis courts and indoor heated swimming pools

10. During Shelter-in-Place, Milpitas Recreation and Community Services has een offering some of its fee- ased programs online. Please rate your willingness to participate on future online programs.

Yes I will participate in fee-based online programs	48
Maybe – I might participate in fee-based online programs	0
No – I will not participate in fee-based online programs	0

1ST	2ND	3RD

ROUND 2 ONLINE SURVEY QUESTIONS & RESPONSES

(AS OF DEC. 15, 2020)

11. Milpitas Recreation and Community Services is interested in continuing to offer fee- ased programs online. If the fee for the online program was less than the standard in-person program fee, would you participate?

1	Yes, I would participate in an online program for a lesser fee	86
2	Maybe – I might participate in an online program for a lesser fee	0
3	No – I will not participate in an online program for a lesser fee	0

12. What type of fee- ased online programs would you e interested in participating in? Select all that apply.

1	**Adult fitness (i.e. Zumba, yoga)**	145
2	Adult enrichment classes (i.e. chess, guitar)	108
3	Youth enrichment (i.e. tutoring, music)	87
4	Senior Fitness	67
5	Adult dance (i.e. belly dancing)	52
6	Youth Dance	49
7	Teen Dance	43

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

ALVISO ADOBE PARK

Write-in Comments:

Work out an arrangement for parking nearby.
The city did a great job updating this park - the children's play area is wonderful. The picnic areas are good too. No changes, it's one of the nicest parks in Milpitas.

AUGUSTINE MEMORIAL PARK

Priority Ranking for Improvements:

	Fitness Equipment	Dog Park	Community Event Space	Updated Picnic Areas
				5
	4	3	5	3
	3	3	4	5
	5	4	5	5
	3	5	3	5
	3	4	5	5
	5	1	3	5
	5			5
	5	1	4	5
	2	3	4	5
	5		4	3
	5	2	5	5
	5	3	4	5
	4	4	5	5
	3	1	4	5
	1	1	1	5
	5		5	5
	1	4	3	4
	5	1		5
	3	2	5	1
	1	1	4	4
Combined Rankings	73	43	73	95
Total # Votes	20	17	18	20
Average Score	3.65	2.529411765	4.055555556	4.75
Rank	**3**	**4**	**2**	**1**

Write-in Comments:

Update Bathrooms! they are absolutely horrible
Thank you for thinking of me and asking our thoughts. Here is a list of some ideas we brainstormed to do around Milpitas parks: 1) Movie at the park - show movies on a screen in the outdoors - good for spring/ summer; enjoy popcorn

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

BEN RODGERS PARK

Priority Ranking for Improvements:

	Fitness Equipment Stations	Dog Park	Community Garden	Updated Practice Baseball Field	Updated Picnic Areas
	1	5	5	1	5
	4		3	2	4
	5	3	3	4	5
	3	5	1	3	5
	5	1	5	5	5
	4	2	3	4	3
	5				5
	3	2	2	4	5
	4	2	2	1	5
	5	3	5	5	5
	5	2	5	5	5
	1	1	3	3	5
	5	2	5	5	5
	4	2	3	5	4
	2	1	2	3	4
	5	5	5	1	4
	3	4	4	5	5
				5	3
	2	5	2	2	2
	1	1	1	5	5
	1	3	1	3	2
	4	1	5	5	5
	3	2	5	4	5
	5			5	5
	4	4	5	4	5
	3	1	3	1	5
	2	2	3	3	5
	1	4	4	3	5
	2	1	5	2	3
	2	4	5	4	5
	5	1	5	4	5
Combined Rankings	99	69	100	106	139
Total # Votes	30	27	28	30	31
Avg. Score	3.3	2.5555556	3.571428571	3.533333333	4.483870968
Rank	**4**	**5**	**2**	**3**	**1**

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

Write-in Comments for Ben Rodgers Park:

How about some restroom facilities

Ben Rogers Park could really stand to have the trails paved.

we see that sand was removed and wooden chips/mulch is going to be placed instead. could we have rubber playmat ? its safer for infants and toddlers.

Please please DO NOT use mulch for the play area in Ben Rodgers park. Please keep the sand or at least add some rubber material on the ground for safety. Replacing sand with mulch is a VERY bad idea and will cause injuries to kids.

An updated Baseball/Softball Field would help contribute to youth sports in the community and would allow sports programs one additional field to use.

Parking is an issue here

Trex Deck for the picnic tables.

Mens Soccer is played each weekend on the open grass field. All arrive with a full bladder and nowhere to go so naturally they head for the trees. This makes it uncomfortable for those of us who walk the trails there. Please furnish small restrooms on site (even outhouses would be better). And please prioritize piping in reclaimed water for irrigation. One other suggestion: Offer to each park's neighborhood an opportunity to adopt a park. This would create vested interest to work with our contractors to improve things. Irrigation at Ben Rogers is poorly planned - lots of areas getting no water, others getting way too much or spilling right into the streets. A local volunteer care-taker who loves their park might make a positive difference.

More play structures and cater to all age groups and abilities would be more helpful and welcoming.

The worse possible piece of play equipment available in the whole world was installed in the sandlot here. The installers told me this, and they install playground equipment all over the state.

The softball structure is barely used. Perhaps equipment for a more popular sport might be better.

My friends and neighbors do love to walk their dogs in the park. While it shouldn't become a city dog park, perhaps a small fenced area where dogs could run freely might be appreciated. More doggy poo bags need to be provided.

As a senior, I would really appreciate that 'rough" paths should be completed with smooth asphalt. This includes the road into the picnic area from Grant Teton, and the paths, all three of them, into the southern section of the park. More park benches would also be appreciated. Some placed with Covid distances would be nice so we could still talk but at least 6 feet apart.

Add a hand washing station to the drinking fountain.

Picnic tables and benches all need new wood, and stained with preservative so they won't rot.

Hearing talk about little library. One in Ben Rogers would be wonderful.

For fun: some hidden geocaches that can't be stolen.

We are about the only park without an "Art in the Park" Can we get one please.

Remove flammable junipers. Replace with Toyon shrubs. Community garden showcase of native plants that thrive in our area.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

ROBERT E BROWNE PARK

Write-in Comments:

I would LOVE to see basketball courts here. There's no need for a playground here as it's near the one in Murphy Park and Sinnott Elementary School.
Dedicated Pickleball Courts
City seriously needs to pave the road from Sinnott park to this park. It already has a nice playground in this park. If fitness stations can be added around playground, it would be nice. The adults can do some exercises while watching the kids to play.

CALLE ORIENTE MINI PARK

Write-in Comments:

Sounds good. Please get it done. Thanks!
Glad the playground equipment will be updated.

CARDOZA PARK

Write-in Comments:

I am not in favor of this plan. You will be taking out lovely trees that are home to many birds including Cooper's Hawks. This will no longer be a Park, which is truly sad. So call it what it really is, an unwanted Hodgepodge Recreation Center. It will cause way more traffic on Kennedy Drive, and people who can't find parking at the recreation center, will spill over to neighboring streets, like they do for the 4th of July and other major events at Cardoza Park. Please don't ruin this lovely park!
Dedicated PIckleball Courts
Field improvement is key. This map is actually a great representation of the potential of this park to accommodate multiple sports.
The bathrooms need to be updated. There also appears to be a homeless man "living" in or by the bathroom alot. I ask my children to avoid that bathroom for security reasons. I usually walk my kids to the sports center for the bathroom.
Cardoza Park is in desperate need of a second or larger bathroom. It’s a heavily used park and one stall each for male/female is not enough for the use that park sees, especially with plans to add more use area.
Need newer public restrooms
Due to the circumstances we should add handwashing stations in parks and play areas of high usage
The upgrades to softball fields look great but I notice there is no bleacher seating or dugouts for field nearest basketball courts. If this field is going to be an added field for softball or baseball it should have full amenities for use. Also, I noticed the scoreboard is not included in field design and wanted to ensure this field has lighting for night use as these amenities were included in previous field use.
1) Please provide shade for the playground structures. They were blown away or broken and then removed but never replaced. During the summer the structures get really hot because there is no shade. 2) The zip line on one structure was broken and removed long ago. Please fix the zip line or replace with something else in that empty space. 3) A tennis/badmitton court would be nice too.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

CREIGHTON PARK

Write-in Comments:

looks good. please get it done. thanks!
Would like to have seen a basketball court added.
A multipurpose filed on turf area would benefit youth of all caliber to play/practice (ie. Football/soccer/baseball/softball/cricket
can you add pickleball courts here, lots of open space?

DIXON LANDING PARK

Write-in Comments:

sounds good. please get it done. thanks!
This park needs significant upgrade, it's a high density park and needs to address the demand from all the housing in the locale.
Program such as cultural events and senior events at the park are welcome
This would be an iideal location for a city owned softball facility - I never understood why we have two little league baseball facilities and no softball facility. The Russel facility was nice when it was opened but the restroom facility hasn't been maintained very well or the fields. Recently the main field does look better.
Park should be revisited and looked to be redesigned for the growth of Milpitas
Lighted sports fields
Add Both softball and baseball fields
Would like to see revamped fields to accommodate girls softball.
Remove cricket strip so youth in community can effectively play baseball or softball at fields without disruption or fear of injury.
We need more fairy lights and light music playing in the background. Accessibility is a must because we need more integration. I would also love to see events directed at teens or the lantern lightings that they have near IHS. Such events could be painting or movie showings
tennis courts: repair and resurface courts, replace damaged nets and windscreens all around. Replace "parking lot" lights with brighter LED lights suitable for play.

TOM EVATT PARK

Write-in Comments:

Small dog park for part of the grassy area would be great for all the families living in the area
Tom Evatt Park is located in very close vicinity to residential homes with young children. Would like to see more toddler (2-5 years old) friendly play equipment and water splash pad.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

FOOTHILL PARK

Priority Ranking for Improvements:

	Pump Track	Dog Park	Updated Picnic Areas
	1	5	5
	2	3	3
	5	5	5
	3	3	5
	5	1	5
	5	3	4
	4	3	5
	4	2	4
	2	2	5
	4	5	4
	1	4	4
	4	4	5
	1	5	2
	1	1	5
	1	4	5
	4	1	4
	3	4	
	3	4	5
	3	4	5
	5	1	5
Combined Rankings	61	64	85
Total # Votes	20	20	19
Avg. Score	3.05	3.2	4.473684211
Rank	**3**	**2**	**1**

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

GILL MEMORIAL PARK

Write-in Comments:

Add Cricket pitch to the sports center
I put a 5 on fitness equipment stations but ideally update the basketball courts.
Please paint two pickelball courts, one one each side at the tennis practice wall
Expand the handball/tennis backboard area by adding ~6 feet of surface to allow room to play Pickleball. Add pickleball lines to this area.
highest traffic park for milpitas and would need equipment that is sturdy and can last wesr and tear.. and also need to make use of HUGE grass field not being used to its fullest potential
Maintain softball field upgrades as backstop border has broken boards, broken lights, fence needs reinforcement.
Dedicated PIckleball Courts
Field improvement would be ideal for the baseball/softball field.
The playground(s) need to be desperately updated.
An upgraded playful d structure, Maintain Softball field upgrades (backstop, broken lights)
Turn soccer field into turf
The playground needs to be updated very badly.
Appreciate the pickleball lines at the practice wall, it would be great to have dedicated courts somewhere in Milpitas. Itâ€™s the fastest growing sport and many other cities have dedicated courts.
NONE. JUST HAVE A GREEN SPACE WITH WALKING PATHS AND GOOD LIGHTING FOR SAFETY. THAT'S IT.
Update the softball fields and replace lighting.
Update softball field
more Pickle Ball areas.
Please update the playground. Its the same one I used as a child in the 80s.
Playground or ammenities for special needs kids

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

HALL MEMORIAL PARK

Write-in Comments:

Cleaner lagoon / stock fish in the lagoon / Provide pathway (walking and bike) along the levee. Instructions on what people should or should not feed the ducks, etc. FIX THE BALD EAGLE CAM and place it in a better location for better viewing.
Thank you for thinking of me and asking our thoughts. Here is a list of some ideas we brainstormed to do around Milpitas parks: 1) Movie at the park - show movies on a screen in the outdoors - good for spring/ summer; enjoy popcorn
Dedicated PIckleball Courts
What do you mean by Interpretive signage at lagoon? Example would have been nice; Please try and find a way to keep the geese off the field -the geese feces is everywhere. There must be a program that can be done to humanly take back the park from the geese to make it cleaner for the youth who use the field for softball. Update the lightning - look into using solar lights.
Ideally it would be nice to have a full soccer park with lighting as there is a large following for soccer in the community. Also, lighting would provide for ample teams to use the facility at night and not have to wait on use at other facilities. Milpitas should have its own soccer park as the have a baseball complex, softball complex, a football field for public use!!
This park is used quite a lot by our local soccer leagues and would benefit from a turf field. Many of times the city has closed it to let the grass grow multiple times due to gopher holes and the geese poop. Updating the lights would help tremendously since some lights work and don't work consistently, also you could save money putting in an efficient system.
Should be turfed and opened year round. No reason to have limited use of land because of seeding, ect. We need the use of fields (especially one with lights) for our youth sports. Again, city growth exceeds what the city can currently offer.
can you add PB lines to the tennis courts?
A few shaded paths with arbors for walking during summertime. A few scenic focal points for people to admire and take family pictures at. I recommend taking a look at some of the Milpitas neighborhood private parks for visual inspiration and ideas such as Metro Parc by the Great Mall and train tracks which has columns and plants that climb overhead. Another would be Family Fun for Everyone, a very small private park in the townhouse neighborhood behind Kaiser Permanente near the 680 entrance on Calaveras. It's tiny but uses space practically and has wonderful landscape and design features for its small space; arbored walking path lined with lime trees and really nice vining greenery growing against the wall that makes for a wonderful photo backdrop. Most importantly, it's well maintained and clean.
Softball fields for our youth women
It's a very nice park overall. My brother and his friends enjoy playing soccer on the field. However, I feel like the bathroom/tennis area could be remodeled because it's showing signs of wear.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

HIDDEN LAKE PARK

Write-in Comments:

PLEASE install bright lights here. It is so dark at night.
landscape needs updating, trail paving is failing and needs replacing
take care of that poop covered dock!!! it is a disgusting look to our city
Asphalt needs repair as well as second aerator.
Repaving and more garbage cans
Review the picnic table areas and make sure they are maintained.
My family and I really enjoy biking to Hidden Lake Park! We live by Hall Park, so we like to take the Berryessa Creek Trail, head past Hidden Lake Park, and down to the iTea/IHOP area. We haven't been there for a while, but we noticed that the trail path changed. Although we haven't tried biking on it yet, we hope that other trails/paths to parks will be bike-friendly as well.
Repave the path around the lake. There are cracks and hazardous bumps.

HIGUERA ADOBE PARK

Write-in Comments:

This is the only park we use and am grateful for its recent upgrades.
Might be suitable space for dog park as there is lots of open space
Last I checked about 6 months ago, the water coming out of this parks fountain was tainted with something that tastes like paint thinner. Please check.

HILLCREST PARK

Write-in Comments:

Perhaps restrooms would be nice. Or is that a park that is not meant for people to stay around at?
Swings in the playground
Hillcrest park's path is narrow, wore out and uneven. However, MANY residents walk at this park. Short term: During pandemic period, please mark path with one direction, so that people won't need to avoid people walking from opposite direction. Long term: Repave the path. Maybe reduce the grass area and increase the paved path width. Add adults fitness equipment stations, so that people don't need to wait to share the only two hand bars in park and block the walking path.
Trex Deck for the picnic tables, get a professional to remove the wasp nest from the bike rack and from the sprinkler system controller.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

JONES MEMORIAL PARK

Write-in Comments:

HUGE SPACE of a mark will do well for updates
I see the children's play equipment being updated. I don't like the wood chips. Why aren't you put a rubberized surface like the children's play structure at Cardoza. Seems safer to me.
If there are pump tracks, then ample parking is needed.

MCCANDLESS PARK

Write-in Comments:

Could have an open area with just grass for kids to run around and play?
looks good. please get it done. thanks!
Please give higher priority to walking as walkways. Thanks.
I think the design is likely to overcrowd the area. Also I feel that a lot of emphasis is given to dogs given the area assigned within the park. That area will be cut off from the rest of the general public. Also I don't see any path that will allow the public to go around the park either walking or jogging. A jogging track around the park will serve a better purpose for the general public.
Please plant lots of flowers and small trees around the wall equipment area as much as possible. Please make sure the surrounding communities and kids are safe by monitoring the entrances to adjacent neighborhoods.
Please consider adding baseball/softball fields to this Multi use field. There are many School age kids in this area and it would be great if they didnâ€™t have to travel across town for field access
It would be nice to see a backstop put in for baseball or softball to use the multi-use field.
An addition to our the multipurpose field of a Baseball/Softball backstop would contribute to the youth sports teams in the community as it would allow for another venue for them to use.
Can't read details of image, however there should be lighting surrounding field for use. Again, the growth of Milpitas exceeds the needs of our youth sports. Not only do we need the fields for play, we need practice space especially for the older kids....

MCGUIRE PARK

Write-in Comments:

More parking!
Dedicated PIckleball Courts
The playground is too small for the amount of children it's servicing. Also, parking is HORRIBLE!!! The rental facilities at the park are great, but I avoid hosting any events there because guests have no where to park.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

MILPITAS DOG PARK

Write-in Comments:

More seating for Dog owners
I have always had big dogs that are trained, Dog parks have a lot of issues that bring untrained unfriendly dogs in. If we have an intown dog park it needs to be in an area that is NOT secluded like Ben Rodgers

MILPITAS SPORTS CENTER

Write-in Comments:

Cricket
Install a cricket pitch in one of the baseball fields. Cricket and Baseball can share the same field as their field needs are 90% similar.
I think cricket should be added to the facility.
Cricket ground should be included.
Cricket should be included
Add cricket pitch to the sports center
We like to have a cricket field in this place. Thank you
Add Cricket pitch to the sports center
Cricket pitch is needed.
Add cricket pitch to the Sports Center
Band Stand or Amphitheater should be either here or Cardoza.
lookss good. please get it done. thanks!
Need a Cricket pitch in Milpitas Sports Centre. So Cricket lovers can also use the facility.
Add cricket pitch to one of baseball fields to make it All Sports Center
Add cricket pitch to Sports Center
This map is great representation of the potential of this facility. It has improvements to every field and sport.
Looks Great!
Cricket field at the sports center!!!

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

MURPHY PARK

Write-in Comments:

Cricket pitch for children
I believe Murphy Park is the prime park in Milpitas outside of Cardoza/Milpitas Sports Center. You should really look into improving the picnic area, the playground and the open field where the restrooms are. If you can somehow integrate all 3 together, then you would have a prime spot for families to go to. I would highly suggest you upgrade the lights throughout the park to ensure safety for the people around and who want to walk at night. I think the empty field in the north side of the park would be perfect for the pump track that you are looking to create.
Add cricket pitch
Upgrade play equipment (old/broken), upgrade playground material, fix bathrooms/amenities
Squishy ground instead of sand, or small sand area separate from main play structure. Music elements.
Would love to see the playground upgraded/updated...Creighton Park looks wonderful the dog park was a waste of city funding.
I think this space is used already for community events by the playground and bathrooms. On the other side it is used for soccer and cricket. Keep the soccer field it is a precious commodity because there are bathrooms close by unlike other parks and fields. Redo the children's playground if you haven't already.

PINEWOOD PARK

Write-in Comments:

Please update the backboard of the basketball courts here. They are heavily used and are due for a brand new one.
The park needs barriers at EVERY place a car can be driven into the park. You must be tired of fixing the grass when cats drive on it.
sounds good. please get it done. thanks!
would you transition the loose ground for a smooth/flat surface of recycled materials? would like for Milpitas to remedy the cat overpopulation in the neighborhood so that my kids can enjoy running in the grass instead of watching for cat feces. Pinewood Park has trees that release thorns on the paved walk path. in the last 2 years since we moved to the neighborhood, we've spend so much money on replacing our kids' bike tires because of the thorns from the park.
For a park with a lot of open space, a potential for a softball/baseball backstop would be a great addition to the community as it would be nice to have access to practice facilities all over the city.

ROUND 2 ONLINE INTERACTIVE MAP SURVEY

(RESULTS & WRITE-IN COMMENTS AS OF DEC. 15, 2020)

SANDALWOOD PARK

Write-in Comments:

Please dont add more asphalt to a park. An open field meets a variety of needs, better than dedicated loops. joggers can run the periphery and green strip already.
looks good. please get it done. thanks!
This is really needed!!
It would be great to update the amenities and play structure at the park.
I WOULD PREFER TO HAVE ALL THE PLAYGROUND EQUIPMENT, BBQ STATIONS, ETC REMOVED. JUST HAVE GREEN SPACE WITH A WALKING TRAIL AND AMPLE LIGHTING TO MAKE IT SAFE. THIS PARK IS A GATHERING SPACE AT NIGHT FOR PEOPLE WHO ARE UP TO NO GOOD.
convert Basketball area to a pickle ball court.

SINOTT PARK

Write-in Comments:

Permanent pickleball courts
Maintain sand volley court
It will be nice to see more fitness equipment added to the park.

MILPITAS SKATE PARK

Write-in Comments:

Cricket pitch
Why are so much activities and money being spent on youth and teen activities? Milpitas has a large senior population. They deserve attention.
Dedicated PIckleball Courts
Scooter kids are ready!

STICKROTH PARK

Write-in Comments:

This is not strickroth park
A community garden would go well with updated picnic areas. This will encourage families to go out and enjoy the park more as it's more scenic.
I don't think fitness equipments are ideal right now during and in the initial months after covid.
You have 2 strickroth parks on here, one is actually Starlte
New playground equipment. The existing equipment has been here since the park was build.
The field improvement would be ideal for both soccer and baseball/softball and seating and potentially a bathroom
Add public bathrooms so this park could be better used by youth and the public.
this park doesn't have a bathroom. It's difficult to hold youth sports practices there without one. It's a great park to practice soccer or baseball if it was maintained and had a bathroom. Please consider this.

COUNCIL & COMMISSION PRESENTATIONS

MEETING SCHEDULE

No.	Commission Name	Meeting Schedule	City Staff Liasion	Proposal schedule	
				November	December
1	Art	The Arts Commission shall hold meetings the 4th Mondays of January, March, May, September and November at 7:00 PM	Tegan Mclane	11/23/2020	
2	Community Advisory	The Community Advisory Commission shall hold meetings the 1st Wednesday of every month except July, at 7:00 PM	Robert Musallam	11/4/2020	12/2/2020 Conflict with Veteran commission
3	Economic Development and Trade	The Economic Development and Trade Commission shall hold meetings the 2nd Mondays of every month except, December and July, at 4:30 PM	Alex Andrade	11/9/2020	
4	Energy and Environmental Sustainability	The Commission meets the 3rd Wednesday of every month except July, at 6:00 PM	Elaine Marshall	11/18/2020	12/16/2020
5	Library and Education advisory	The Library and Education Commission shall hold meetings the 3rd Monday of every January, March, May, September, and November, at 7:00 PM	John Macon	11/16/2020	
6	Parks and Recreation & Cutureal Rsources	The Parks, Recreation and Cultural Resources Commission shall hold meetings the 1st Monday of every month except July, at 7:00 PM	Renee Lorentzen	Complete	
7	Planning	7:00 p.m. on the 2nd and 4th Wednesday of the month	Ned Thomas	11/11/2020 or 11/25/2020	12/09/2020 or 12/23/2020
8	Public Safety and Emergency Preparedness	The Public Safety and Emergency Preparedness Commission shall hold meetings the 3rd Thursday of every January, March, May September and November, at 7:00 PM	Toni Charlop	11/19/2020	
9	Science, technology and innovation	The Science, Technology and Innovation Commission shall hold meetings the 3rd Monday of every month, except July, at 7:00 PM	Daniel Nam	11/16/2020 conflict with Library and education dvisory	12/21/2020
10	Senior Advisory	The Senior Advisory Commission shall hold meetings the 4th Tuesday of February, April, June, August, October, and December, at 1:30 PM	John Macon		12/22/2020
11	Veterans	The Veterans Commission shall hold meetings the 1st Wednesday of February, April, June, August, October, and December, at 5:30 PM	Dale Flunoy		12/2/2020
12	Youth Advisory	The Youth Advisory Commission shall hold meetings the 2nd Thursdays of every month, except July, at 7:00 PM	Anthony Teschera	11/12/2020	12/10/2020

COUNCIL & COMMISSION PRESENTATIONS

MEETING NOTES

Milpitas Park and Rec Master Plan
Council and Commission Meeting Notes

Art Commission:

- Celebrate the cultural diversity of Milpitas in the park system.
- Need a stage for performing arts must have access to parking.
- Would like to see a community destinations park that was accessible to the total community.
- Each neighborhood park should have a cultural theme based on neighborhood identity
- Like the idea of adding Art to the parks.
- Is it possible to reduce access fees to Levin Park for Milpitas residence?
- Like the idea of food trucks Milpitas is known as a foodie town.
- As we put more activities and events into parks need to make sure there's adequate parking.
- Dixon Landing has been used for the India Spring festival in the past

Community Advisory:

- GET THE WORD OUT!
- No signage related to maritime activities
- Unclear how port advertises to schools and who gets to take advantage of student programs/field trips
- Lack of signage related to Vision 2000 – nothing to tell the story
- Educational signage is there but old and tired. Could be more.
- Address Wi-Fi connectivity issues
- Need update and add more educational panels; add videos via QR Codes
- Address Wi-Fi issue

Economic Development and Trade:

- Over-developed, too intensive for operation and maintenance to maintain. Creates an unwelcoming feeling
- A lot of maintenance for the size of the park
- Spaces defined and amount of turf requires a lot of work – considered high maintenance – 3-4 full time employees

COUNCIL & COMMISSION PRESENTATIONS

MEETING NOTES

Energy and Environmental Sustainability:

- Port video from deconstruction – great for classroom video/educational video
- Public awareness of climate change and sea level rise should be the new focus – challenges we all face
- Opportunity to tell a story re: regional development of shoreline and existing industrial spaces
- Learning opportunities could be improved by are well established. EBParks has access to large user group for outreach and advertising. Beach wheelchair?
- Port sponsors field trips and provides bus transportation. Mainly to Oakland schools but other districts take advantage as well

Library and Education Advisory:

- What are the current users using the park for?
- What do they want to use it for? Who are the target users?
- How do we activate the space for the current users and current needs?
- What is vision 2025? New message re: climate change
- Positive connection to port
- Potential for a lot more enhancement
- Park is used by both community and terminal employees
- Good synergy between community and port goals

PRCRC:

- Park is underutilized
- Access to park not clear or defined, people don't know its there
- Container trucks block bike lane and access into park
- Access is and will be an ongoing challenge

COUNCIL & COMMISSION PRESENTATIONS

MEETING NOTES

Planning Commission:

- Access to power at Parks to facilitate rentals did not want to have to rent generators.
- Would like to see a major community park that could be a destination something unique and fun for the whole community.
- Would like to consider food for us and permaculture in Parks in addition to community gardens.
- Want to see pollinators and habitat improvements and parks.
- Want to know where there was a deficit of Parks in the community. Felt there were more parks on the east side concerned about adequate parks in the more urban areas.
- Wanted to know how small a park could be and still be considered a park.
- Wanted to know how parks were being funded in the new areas and was that a part of our study. Park fees are not a part of the master plan study but guidelines. Defining what constitutes dedicated park facilities will be part of the master plan.
- Ned shared the idea that linear parks along the creeks would connect the smaller parks to create a complete park system.
- the concept of experience over acreage was discussed
- Wanted to see more exercise equipment and Parks discussed the idea of exercise equipment being position to Provide opportunities for socialization at safe distances.
- Parks as a place to get to know your neighbors

Public Safety and Emergency Preparedness:

- What are the current users using the park for?
- What do they want to use it for? Who are the target users?

Science, Technology and Innovation:

- Over developed, too intensive for operation and maintenance to maintain. Creates an unwelcoming feeling
- A lot of maintenance for the size of the park
- Spaces defined and amount of turf requires a lot of work – considered high maintenance – 3-4 full time employees

COUNCIL & COMMISSION PRESENTATIONS

MEETING NOTES

Senior Advisory Committee:

- Port video from deconstruction – great for classroom video/educational video
- Public awareness of climate change and sea level rise should be the new focus – challenges we all face
- Opportunity to tell a story re: regional development of shoreline and existing industrial spaces
- Learning opportunities could be improved by are well established. EBParks has access to large user group for outreach and advertising. Beach wheelchair?
- Port sponsors field trips and provides bus transportation. Mainly to Oakland schools but other districts take advantage as well

Veterans:

- What are the current users using the park for?
- What do they want to use it for? Who are the target users?
- How do we activate the space for the current users and current needs?
- What is vision 2025? New message re: climate change

Youth Advisory:

- Design parks to accommodate more teens
- Agreed to take survey and share with their peers
- Sustainability is priority

PUBLIC COMMENTS ON DRAFT MASTER PLAN

Comments from Public on DRAFT MASTER PLAN
As of June 2, 2021

Page Number: 43

Paragraph Number:

Comment: I would love to see more community gardens, especially in the Great Mall area. We have three large parks within blocks of each other, but most of these parks are under-utilized (at least in the 10 years I've lived here, I've barely seen folx use the park. I will say that during the pandemic, more folx have used it, but it's a handful of people each week. I would like to see a portion of Parc Metro West (the smaller part of the park) be repurposed into a community garden. As a private resident, I'm happy to work on a budget and even help maintain the garden (maybe even source neighborhood kids to learn about gardening). But we have this precious land that we should honor and make the most of.

Name: Anjali Mehta

Email: alakshya@gmail.com

Zip code: 95035

Page Number: 254

Paragraph Number:

Comment: I would love to see a community garden in this budget. I would be happy to help maintain the garden, but we can absolutely get supplies and plants for $2,500. I don't want to convert the whole park into a garden, just a small portion of it.

Name: Anjali Mehta

Email: alakshya@gmail.com

Zip code: 95035

Name: Shrey Chaudhary

Email Address: shreyc01@gmail.com

Subject: Marsh?

Message: Okay, so I'm not sure whether this is public property or private property, but there's a marsh/pond area between CETECOM and I-880 along Dixon Landing Road. Currently, the only way to view the marsh is from CETECOM's parking lot. There appear to be very old, almost destroyed benches on one side of the marsh, which indicates that the area was once accessible to public viewing. My suggestion is to possibly make a small amount of access by making a sidewalk on the other side of Dixon

PUBLIC COMMENTS ON DRAFT MASTER PLAN

Comments from Public on DRAFT MASTER PLAN
As of June 2, 2021

Landing to view the marsh or (if it doesn't disturb the habitat) making a small trail on the north end of the marsh connecting to Milpitas/WarmSprings boulevard.

Page Number: 29/30

Paragraph Number:

Comment: Please continue to offer low cost programs especially for Milpitas residents. Please also look into alternatives of paying for these programs. When registering online, the registration fee charge is very high. Also found out if classes change or schedule changes, this fee is non refundable. Should not charge so much (of the class cost). Would be better if there s a way to register for free. In person if free risks classes being sold out.

Name: Lauren uynh

Email: lauren_huynh@hotmail.com

Zip code: 95035

Page Number: 301

Paragraph Number: Improvements to Sinnott park

Comment: - Community garden - Think too much maintenance and left unmaintained will look messy and unappealing. In my yard, if I leave it for over two weeks, flowers and leaves start wilting. I d rather space be used for another thing. Example Baby - toddler sand box.
- Regarding replacing play ground Great Also good to take out sand and replace with rubber vs wood chips if possible. Anything but sand... since it s not cleaned often, I find trash in the sand.
- Pickle ball? Can you have tennis courts instead? The tennis courts on ellowstone is always always always full Seems tennis is attractive to older folks, and since none of courts available, kids can t play. To compromise... how about tennis court with pickle ball lines too? Share space? Tennis courts would benefit students who would like to excel in that sport without having to pay for gym/court membership. Tennis courts available for free would be beneficial to people who don t have access to expensive clubs due to public availability. I m disappointed M S doesn t open 10 of their courts to the public. That would be nice.
- or more space for tennis courts... perhaps you can take out sand volleyball space. ave volleyball played in grass area instead.
- Lights at night would be good for safety. So ppl don t do bad stuff at the park during the night.
- Thx for having meeting available online. Thx for taking suggestions and giving us time to respond with comments.

Name: Lauren uynh

Email: lauren_huynh@hotmail.com

PUBLIC COMMENTS ON DRAFT MASTER PLAN

Comments from Public on DRAFT MASTER PLAN
As of June 2, 2021

Zip code: 95035

Page Number: 102

Paragraph Number:

Comment: Tennis courts at Bob McGuire Park. o parking at all nfortunate because people outside of the immediate area would never be able to find parking and go to use the tennis courts Amphitheater also extremely limited parking I have driven around for over half an hour looking for parking.

Name: Lauren uynh

Email: lauren_huynh@hotmail.com

Zip code: 95035

Page Number: 54

Paragraph Number:

Comment: More tennis courts in Milpitas please Tennis courts closest to me (on ellowstone) are always taken up My kid and and neighbor are never able to get one. There should be time limits Or sign up lists.

Name: Lauren uynh

Email: lauren_huynh@hotmail.com

Zip code: 95035

Page Number: 48

Paragraph Number: Chapter 4

Comment: Milpitas Parks should offer goal nets to more parks, I have been to most of the parks in Milpitas yet they have no public goal nets or even goal frames. Milpitas has a lot of people who enjoy soccer, they should be able to enjoy it even more with nets.

Name: aushik Patel

Email: kaushikzarna_8@gmail.com

Zip code: 95035

B

PRIORITIZATION MATRIX

The prioritization matrix in the following section was developed as a planning tool to assist with distilling and comparing the large amount of data gathered for each park, and ultimately to begin to rank and prioritize future improvements. The criteria used for the priority matrix were derived from trends and comments received from the community through public meetings and surveys, information and insights from City Staff, reviews of other master plans and frameworks and from the design team's professional judgment. Through an iterative process, the design team worked with the City to revise the criteria to reflect the goals of the City of Milpitas and the community at large as closely as possible.

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PRIORITIZATION MATRIX - PARKS

MILPITAS PARKS PRIORITY MATRIX

FACILITY / ELEMENT	CODE	PARK SIZE	TOTAL	USER GROUP(S) SERVED				CAPACITY				CONDITION				ACCESS			PROXIMITY		COMMUNITY PRIORITY			OPPORTUNITY			TIME FRAME			COST		
				CHILDREN 2-12	TEENS 13-19	ADULTS 18-55	SENIORS 55+	< 50	50-100	100-500	>500	Good	Fair	Poor	Critical	PATH	FURN	PLAY	U	C	Low	Med.	High	M	U	R	1-5 Years	6-10 Years	10-20 Years	LOW	MED	HIGH
Priority		Acres		1	1	1	1	1	2	3	4	0	2	3	4	0-2	0-2	0-2	4	4	0	2	4	2	2	2	1-5 Years	6-10 Years	10-20 Years	LOW	MED	HIGH
Murphy Park (N)	A	8.30	27	1	1	1	1	0	0	3	0	0	0	3	0	1	2	2	0	4	0	2	0	2	2	2		x				
Starlite Park (N)	A	3.44	26	1	1	1	1	0	2	0	0	0	0	0	4	2	2	2	4	0	0	0	4	2	0	0	x					
Sinnott (N)	A	4.67	25	1	1	1	1	0	0	3	0	0	0	0	4	2	2	2	0	0	0	0	4	2	2	0	x					
Peter Gill (N)	B	8.16	24	1	1	1	1	0	0	3	0	0	2	0	0	1	2	2	0	4	0	0	4	0	0	2	x					
Dixon Landing (C)	C	11.40	24	1	1	1	0	0	0	3	0	0	2	0	0	0	2	0	0	4	0	0	4	2	2	2		x				
Strickroth (N)	B/C	4.87	23	1	1	1	1	0	0	3	0	0	0	0	4	2	2	2	0	0	0	0	4	0	0	2	x					
Ben Rogers Park (N)	A	8.66	22	1	1	1	0	0	2	0	0	0	0	3	0	2	2	0	0	0	0	0	4	2	2	2	x					
Robert E Browne (N)	B	4.93	22	0	1	1	1	0	2	0	0	0	0	3	0	2	2	0	0	4	0	0	4	2	0	0	x					
Hidden Lake Park (N)	C	6.57	22	0	1	1	1	0	2	0	0	0	0	3	0	2	2	0	0	4	0	0	4	2	0	0	x					
Foothill (N)	A	3.98	21	1	1	1	0	0	2	0	0	0	0	0	4	2	2	0	4	0	0	2	0	2	0	0	x					
Sandalwood Park (N)	A	3.88	21	1	1	1	0	0	2	0	0	0	0	0	4	2	2	2	0	0	0	0	4	2	0	0			x			
Selwyn Park (U)	M	0.23	19	1	1	1	0	1	0	0	0	0	2	0	0	0	2	1	4	0	0	0	4	2	0	0	x					
Sunnyhills Albert Augustine Jr. Park (N)	B	6.20	19	1	1	1	1	0	0	3	0	0	0	3	0	1	2	0	0	0	0	2	0	2	2	0		x				
Cardoza Park (C)	A	10.15	19	1	1	1	1	0	0	3	0	0	2	0	0	2	2	0	0	4	0	0	0	0	0	2	x					
Hall memorial Park (N)	B	9.91	19	1	1	1	0	0	0	3	0	0	2	0	0	2	2	1	0	0	0	2	0	2	2	0		x				
Calaveras Ridge (S)	A	1.80	19	0	1	1	1	1	0	0	0	1	0	0		2	2	0	0	4	0	0	4	0	2	0			x			
Parc Metro Central (U)	C	0.58	17	1	1	1	1	1	0	0	0	0	2	0	0	0	2	2	4	0	0	0	0	0	2	0		x				
Oliver Jones Memorial (N)	C	4.93	16	1	1	1	1	0	2	0	0	0	0	3	0	1	2	0	0	0	0	0	4	0	0	0		x				
Parc Metro East (U)	B	2.06	15	1	1	1	1	0	2	0	0	0	2	0	0	1	2	2	0	0	0	0	0	2	0	0		x				
Parc Metro West (U)	C	0.98	15	1	1	1	1	0	2	0	0	0	0	3	0	0	2	2	0	0	0	0	0	2	0	0	x	x				
Milpitas Dog Park (S)	M	1.57	15	0	1	1	1	0	2	0	0	0	2	0	0	0	2	0	0	4	0	2	0	0	0	0			x			
Tom Evatt East (N)	C	0.38	14	1	1	1	1	0	2	0	0	0	2	0	0	0	0	0	4	0	0	0	0	2	0	0	x					
Hillcrest Park (N)	C	5.08	14	1	1	1	1	0	2	0	0	0	2	0	0	0	2	2	0	0	0	2	0	0	0	0		x				
Milpitas Sports Center (C)	A	18.47	14	1	1	1	1	0	0	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	2	x					
Otoole Elms (U)	M	1.63	14	1	1	1	1	0	2	0	0	0	2	0	0	0	0	0	4	0	0	2	0	0	0	0	x					
Calle Oriente Mini Park (U)	M	0.35	12	1	1	0	0	1	0	0	0	0	2	0	0	0	1	0	4	0	0	2	0	0	0	0		x				
John McDermott (U)	M	0.94	12	1	0	1	1	1	0	0	0	0	2	0	0	0	2	0	4	0	0	0	0	0	0	0		x				
Pinewood Park (U)	M	9.88	11	1	1	1	1	0	0	3	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0		x				
Tom Evatt West (N)	M	4.04	11	0	1	1	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	x					
Alviso Adobe (S)	M	2.26	10	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0			x			
Jose Huigera Adobe Park (S)	C	4.80	10	1	1	1	1	0	2	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0			x			
Cerano Park (N)	C	1.00	9	1	1	1	1	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0			x			
Bob Mcguire Park (N)	M	3.00	7	1	1	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			x			
McCandless Park (N)	M	4.00	7	1	1	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			x			
Creighton Park (N)	M	5.00	6	1	1	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			x			
Skate Park (S)	M	1.23	5	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			x			
Augustus Rathbone (N)	M	0.73	3	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			x			
Pecot Park (L)		3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		x				

PARK TYPE (X)

(C) Community Park
(N) Neighborhood Park
(S) Special Use Park
(U) Urban Park Park
(L) Linear Park

CODES

A Major Renovation - < $1,000,000
B Minor Renovation - $250,000 - $1,000,000
C Strategic Upgrades $0 - $250,000
M Preventative Maintenance

OPPORTUNITY

M REDUCE FUTURE MAINTEANCE
U TO MEET CURRENTLY UNMET NEED
R GENERATE REVENUE

PROXIMITY

U UNDERSERVED COMMUNITY
C COMMUNITY-WIDE ASSET

PRIORITIZATION MATRIX - PARK COMMENTS

MILPITAS PARKS PRIORITY MATRIX - PARK COMMENTS

FACILITY / ELEMENT	COMMENTS
Cardoza Park	Upgrades to S Play Area IP 2020/21 - Improvements included in Milpitas Sports Center Master Plan
Agustine Memorial	Upgrades to Play Area IP 2021 - Concrete paths are in good condition. Pave DG walking loop trail, replace all site furnishings, replant in Hetch Hetchy Easement. Program open lawn at park enterance
Alviso Adobe	Recently Built - Preventative Maintenance Only
Augustus Rathbone	Recently Built - No Action Required
Ben Rogers	Upgrades to Play Area IP 2020 - Pave all gravel paths, replace all site furnishings, update pedestrian lighting to match Ben Rogers S
Bob Mcguire Park	Recently Built - No Action Required
Calaveras Ridge	Empty lot above Milpitas. Sloping grassland with views over the Bay Area. Limited access, adjacent to gated communities
Calle Oriente Mini Park	Upgrades to Play Area IP 2020/21 - Excellent Condition
Cerano Park	Recently Built - Turf Issue
Creighton Park	Under Construction
Dixon Landing	Upgrades to Play Area IP 2020/21 - Easy retrofit for ADA accessible sports park
Foothill	Upgrades to Play Area IP 2020 - Adjacent to Alexander Rose Elementary, students congeregate at the park. Pave all gravel paths and picnic area, replace all site furnishings
Gill	All furnishings and play equipment require replacement, new paving required at S picnic area, fencing required at basketball courts
Hall memorial Park	Educational opportunity at lagoon
Hidden Lake Park	Repave parking lot, add accessible stall and ramp. Resurface asphalt paths, repair stairs at overlook and add ADA access. Replace all site furnishings.
Hillcrest Park	Upgrades to Play Area IP 2020/21 - Replace all site furnishings and provide access to picnic areas
Jose Huigera Adobe Park	Recently Built - Decomposed Granite Erosion
McCandless Park	Under Construction
McDermott	Upgrades to Play Area IP 2021 - Recently built, provide accessible site furnishings
Milpitas Dog Park	Located on Ed. R. Levin County Park. Adjust benches away from fence, maintain snake proofing at fence
Milpitas Library Site	Undeveloped site, adjacent to Milpitas library, immidiate access to downtown corridor
Milpitas Sports Center	Complete Master Plan Improvments
Murphy Park	Amphitheater/performance space opportunity, replace site furnishings and play equipment, opportunity for dog park
Oliver Jones Memorial	Upgrades to Play Area IP 2020 - Possible dog park location. Low impact park, replace site furnishings, pave gravel paths
Otoole Elms	Upgrades to Play Area IP 2021 - Replace heaving pavers at seating areas, replace information kiosk backing. Consider replacing concrete uplights at trees
Parc Metro Central	Replace site furnsihings and tot lots, consider programming central green
Parc Metro East	Possible dog park location. Fully redesign eastern portion of the site. Fix all paving issues, refurbish site furnishings, replace or remove tot-lot. Program central lawn
Parc Metro West	Replace all planting, furnishings and playstructures, rehab arbors, replace play area. Consider removing palm trees entirely
Pinewood Park	Upgrades to Play Area IP 2020/21 - Excellent Condition - Ongoing Maintenance
Robert E Browne	Popular for tennis, replace all site furnishings, redesign entry to connect to murphy park, program open lawn, develop workout station loop
Sandalwood Park	Under Construction
Selwyn Park	Upgrades to Play Area IP 2020/21 - Highly used pocket park in an underserved community, replace site furnishings, increase maintenance schedule, pave picnic area
Sinnot	Full replacement required, possible redesign
Skate Park	Under Construction
Starlite Park	Full replacement required, possible redesign
Strickroth	Pave picnic area for ADA access, replace both play areas, replant street trees, renovate hill tunnel. Consider improving backstop for baseball games, adding lockers, striping, etc
Tom Evatt East	Good layout, secluded location. Replant butterfly garden, replace site furnishings, increase maintenance schedule
Tom Evatt West	Upgrades to Play Area IP 2021 - Recently built, replace heaving pavers at \seating areas, replace shade sail materials. Consider removing bocce ball courts

C

PROGRAM FEE ANALYSIS

The following section contains the Recreation Fee Assessment of the programs offered by Milpitas Recreation and Community Services. The analysis was performed and compiled by Matrix Consulting Group.

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PROGRAM FEE ANALYSIS

Recreation Fee Assessment

MILPITAS CALIFORNIA

matrix consulting group

March 11, 2020

PROGRAM FEE ANALYSIS

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PROGRAM FEE ANALYSIS

1. Overview

The City of Milpitas as part of the Parks Master Planning effort is evaluating the fee structure of Recreation Fees currently charged by the City to support Recreation programming activities. This draft report summarizes observations and recommendations related to the fees charged by the City for various recreation programming activities. At the present time recreation programming is limited by the existing facilities and programming spaces available to the City for use in providing programming and other recreational activities. The comprehensive parks and recreation master planning effort will likely identify new facilities and park efforts that may be pursued and implemented in the coming years and these will provide additional opportunities to expand the recreational and programming sessions to the community.

The City of Milpitas Recreation and Community Services Department offers a wide variety of program in the following areas: Senior Services Youth Programs Special Events Performing Arts General Classes Aquatics and Sports & Fitness. In general it provides a holistic approach to courses and attempts to meet the diverse and unique needs of the city s residents.

KEY FINDINGS:

The key findings from the fee assessment include:

- A need to adopt a new cost recovery target for overall Department recovery with specific targets for sub-categories if desired.
- Fee adjustments should be made to bring select fees in the City of Milpitas in line with the identified market rates charges by comparable communities.
- Where market data is not available the City should implement at least a cost of living adjustment over current rates to cover internal cost increases (personnel contractual utility and other costs) to prevent costs recovery from being impacted by these annual increases.
- Continue to explore the expansion of recreational programs based upon community input and successful programs provided by other comparable communities recreation programs.

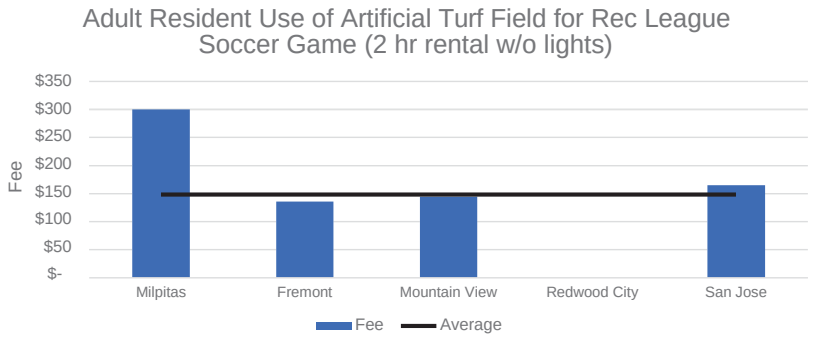
The City should seek to selectively increase those fees where they are below market in the coming year implement annual escalators for future years and conduct a more comprehensive fee assessment that links fees to actual costs of providing service in the future.

PROGRAM FEE ANALYSIS

2. Comparative Assessment of Course / Program Fees

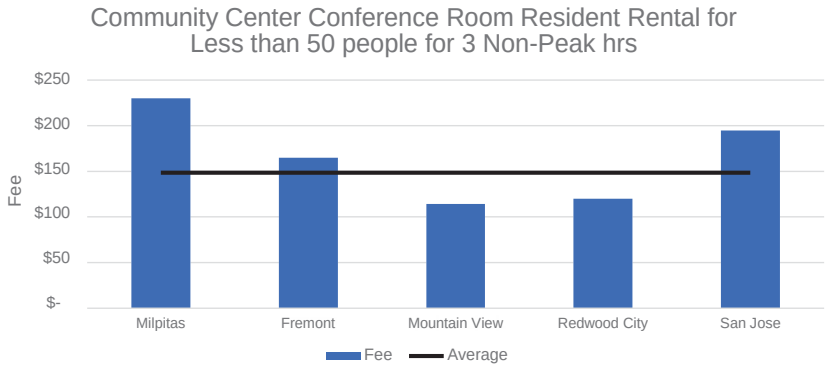
The following tables and graphs compare the City of Milpitas fees for selected programs and services (defined as those generally offered by multiple comparable agencies) to those charged by the comparative agencies. Where applicable the fees are compared on both a per course and per hour basis to "equalize" programs (since many programs and classes had different number of classes or length of classes).

Adult Resident Use of Artificial Turf Field for Rec League Soccer Game (2 hr rental w/o lights)	Fee	Average	Notes
Milpitas	$ 300	$ 148	
Fremont	$ 136	$ 148	$136 for 2 hrs min fee
Mountain View	$ 144	$ 148	Hourly
Redwood City		$ 148	n/a
San Jose	$ 165	$ 148	App fee plus hourly



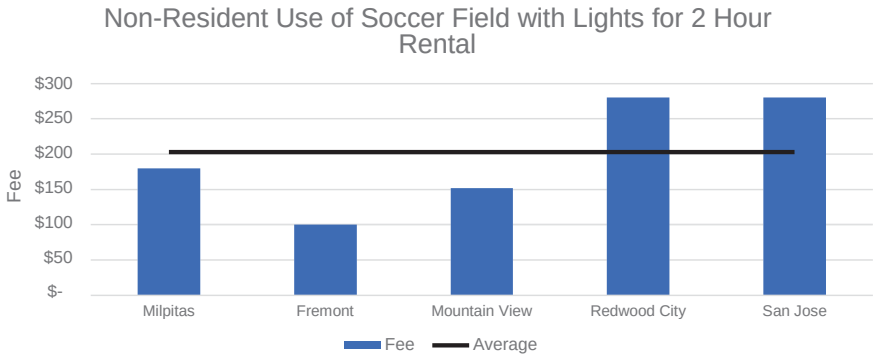
PROGRAM FEE ANALYSIS

Community Center Conference Room Resident Rental for Less than 50 people for 3 non-peak hrs	Fee	Average	Notes
Milpitas	$ 230	$ 149	app fee plus hourly
Fremont	$ 165	$ 149	small meeting room - hourly
Mountain View	$ 114	$ 149	hourly not including deposit
Redwood City	$ 120	$ 149	hourly not including deposit
San Jose	$ 195	$ 149	app fee plus hourly



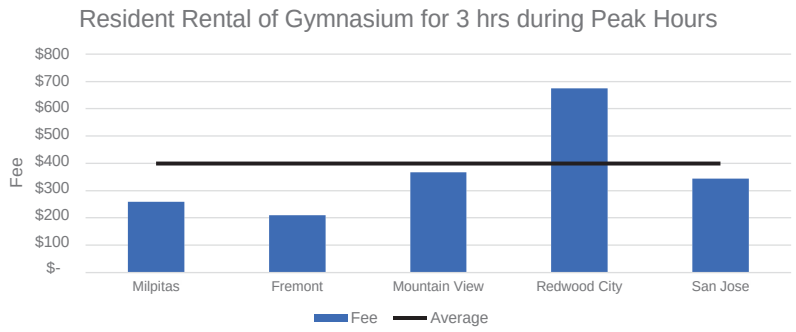
PROGRAM FEE ANALYSIS

Non-Resident Use of Soccer Field with Lights for 2 Hour Rental	Fee	Average	Notes
Milpitas	$ 180	$ 203	app fee plus hourly
Fremont	$ 100	$ 203	hourly
Mountain View	$ 152	$ 203	hourly
Redwood City	$ 280	$ 203	hourly for field and lights
San Jose	$ 280	$ 203	app fee plus hourly for field and lights



PROGRAM FEE ANALYSIS

Resident Rental of Gymnasium for 3 hrs during Peak Hours	Fee	Average	Notes
Milpitas	$ 260	$ 399	App fee plus hourly
Fremont	$ 210	$ 399	Hourly
Mountain View	$ 367	$ 399	hourly+app fee
Redwood City	$ 675	$ 399	Full gym hourly not including deposit
San Jose	$ 345	$ 399	App fee plus hourly

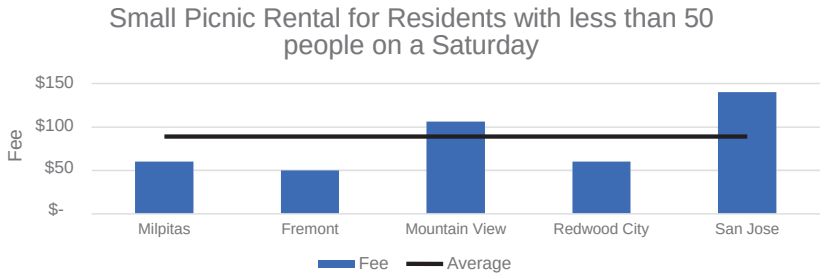


Local Comparatives:

School District – gym rental. Main gym is $103 per hour ($309 for three hours) or $1 648 per day. Small gym is $82.50 per hour ($247.50 for three hours) or $1 320 per day. These rates support the comparative with other municipalities that the City should increase the hourly rate for gymnasium rentals.

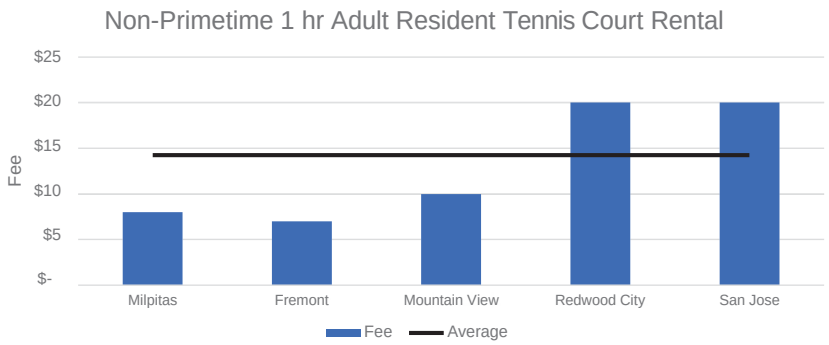
PROGRAM FEE ANALYSIS

Small Picnic Rental for Residents with less than 50 people on a Saturday	Fee	Average	Notes	
Milpitas	$ 60	$ 89	Daily rate	
Fremont	$ 50	$ 89	Rate for 2 tables	not-sheltered
Mountain View	$ 106	$ 89	Capacity of 50	
Redwood City	$ 60	$ 89	rate for 3 tables	
San Jose	$ 140	$ 89	Daily weekend rate	



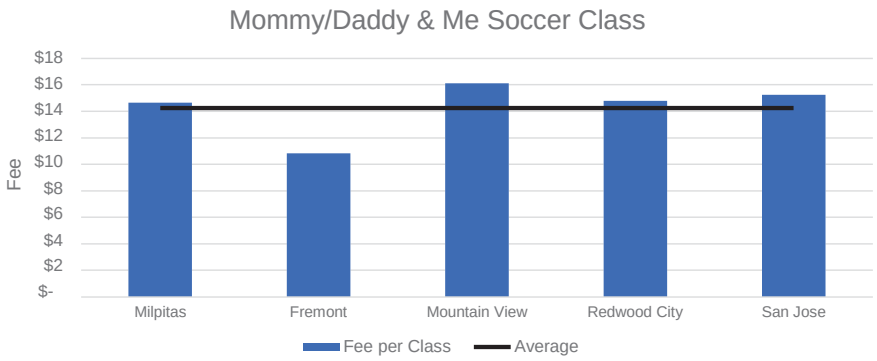
PROGRAM FEE ANALYSIS

Non-Primetime 1 hr Adult Resident Tennis Court Rental	Fee	Average	Notes
Milpitas	$ 8	$ 14	Only for court use
Fremont	$ 7	$ 14	Only for court use
Mountain View	$ 10	$ 14	Court Use without light
Redwood City	$ 20	$ 14	Only for court use
San Jose	$ 20	$ 14	Only for court use



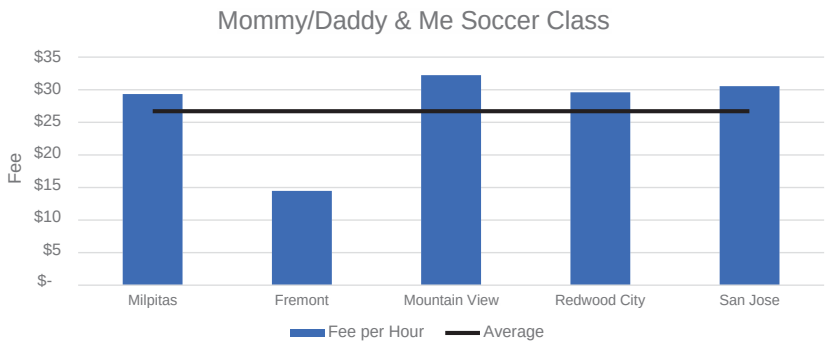
PROGRAM FEE ANALYSIS

Mommy/Daddy & Me Soccer Class	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 15	$ 14	0.50	6.00	$ 88
Fremont	$ 11	$ 14	0.75	6.00	$ 65
Mountain View	$ 16	$ 14	0.50	8.00	$ 129
Redwood City	$ 15	$ 14	0.50	5.00	$ 74
San Jose	$ 15	$ 14	0.50	8.00	$ 122



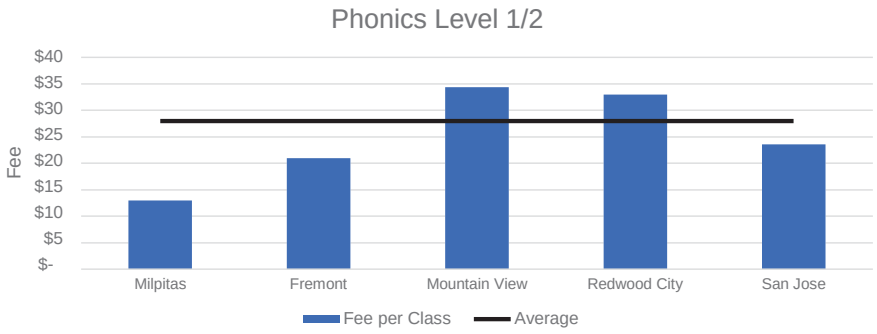
PROGRAM FEE ANALYSIS

Mommy/Daddy & Me Soccer Class	Fee per Hour	Average
Milpitas	$ 29	$ 27
Fremont	$ 14	$ 27
Mountain View	$ 32	$ 27
Redwood City	$ 30	$ 27
San Jose	$ 31	$ 27



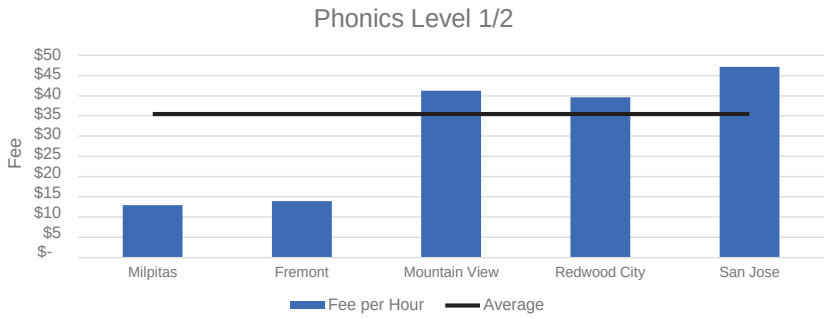
PROGRAM FEE ANALYSIS

Phonics Level 1/2	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 13	$ 28	1.00	10.00	$ 130
Fremont	$ 21	$ 28	1.50	9.00	$ 189
Mountain View	$ 34	$ 28	0.83	6.00	$ 206
Redwood City	$ 33	$ 28	0.83	6.00	$ 198
San Jose	$ 24	$ 28	0.50	7.00	$ 165



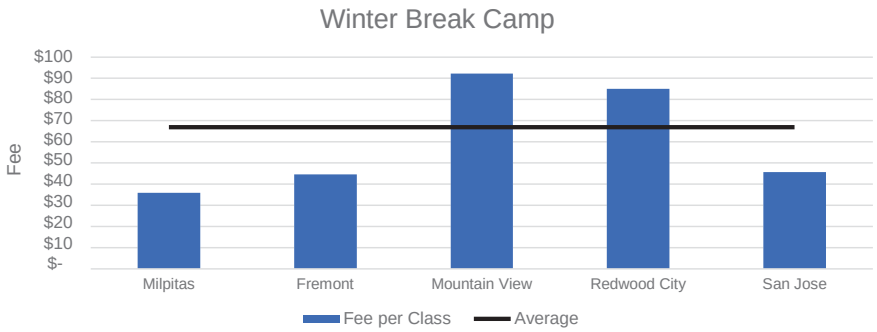
PROGRAM FEE ANALYSIS

Phonics Level 1/2	Fee per Hour	Average
Milpitas	$ 13	$ 35
Fremont	$ 14	$ 35
Mountain View	$ 41	$ 35
Redwood City	$ 40	$ 35
San Jose	$ 47	$ 35



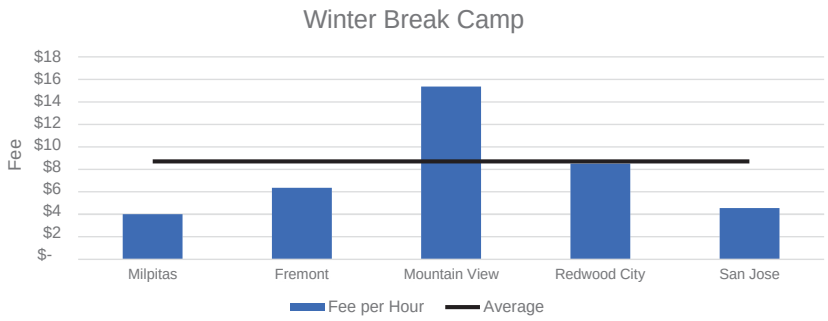
PROGRAM FEE ANALYSIS

Winter Break Camp	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 36	$ 67	9.00	3.00	$ 108
Fremont	$ 45	$ 67	7.00	2.00	$ 89
Mountain View	$ 92	$ 67	6.00	4.00	$ 369
Redwood City	$ 85	$ 67	10.00	5.00	$ 425
San Jose	$ 46	$ 67	10.00	4.00	$ 183



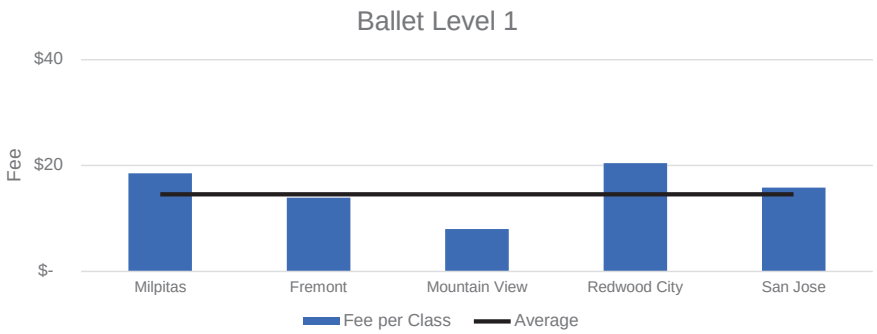
PROGRAM FEE ANALYSIS

Winter Break Camp	Fee per Hour	Average
Milpitas	$ 4	$ 9
Fremont	$ 6	$ 9
Mountain View	$ 15	$ 9
Redwood City	$ 9	$ 9
San Jose	$ 5	$ 9



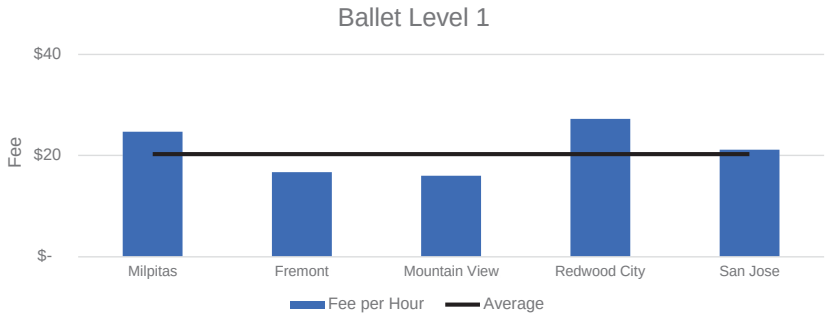
PROGRAM FEE ANALYSIS

Ballet Level 1	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 19	$ 15	0.75	7.00	$ 130
Fremont	$ 14	$ 15	0.83	9.00	$ 125
Mountain View	$ 8	$ 15	0.50	8.00	$ 64
Redwood City	$ 20	$ 15	0.75	11.00	$ 225
San Jose	$ 16	$ 15	0.75	8.00	$ 127



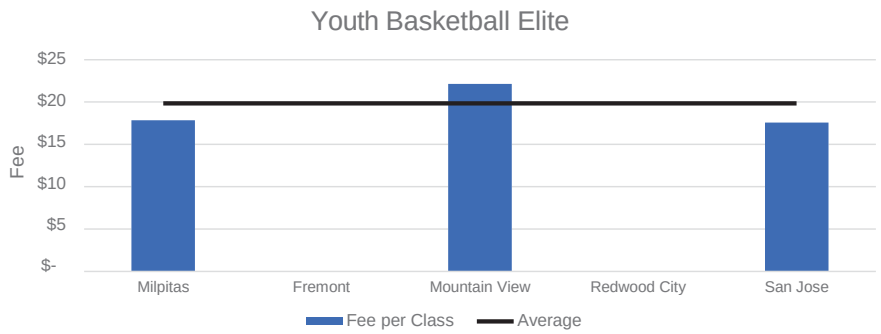
PROGRAM FEE ANALYSIS

Ballet Level 1	Fee per Hour	Average
Milpitas	$ 25	$ 20
Fremont	$ 17	$ 20
Mountain View	$ 16	$ 20
Redwood City	$ 27	$ 20
San Jose	$ 21	$ 20



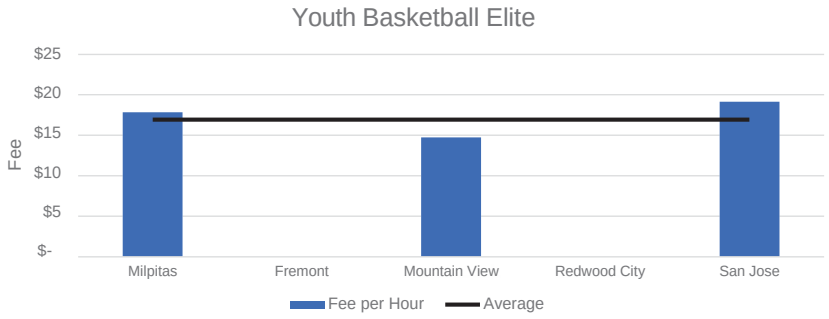
PROGRAM FEE ANALYSIS

Youth Basket all Elite	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 18	$ 20	1.00	7.00	$ 125
Fremont		$ 20	n/a		
Mountain View	$ 22	$ 20	1.50	9.00	$ 199
Redwood City		$ 20	n/a		
San Jose	$ 18	$ 20	0.92	9.00	$ 158



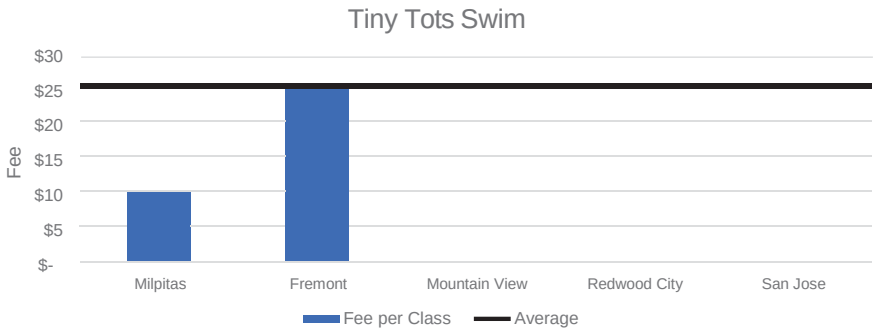
PROGRAM FEE ANALYSIS

Youth Basket all Elite	Fee per Hour	Average
Milpitas	$ 18	$ 17
Fremont		$ 17
Mountain View	$ 15	$ 17
Redwood City		$ 17
San Jose	$ 19	$ 17



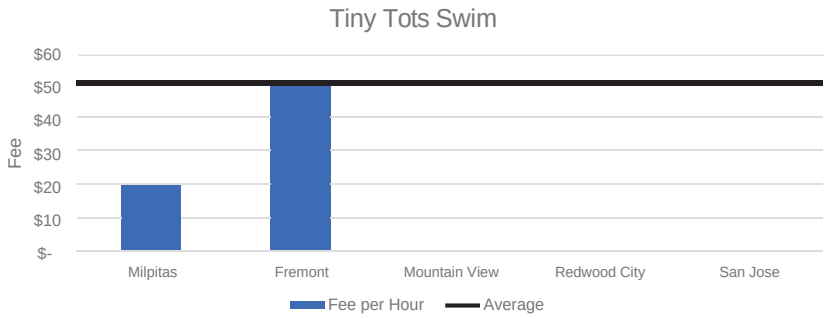
PROGRAM FEE ANALYSIS

Tiny Tots Swim	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 10	$ 25	0.50	4.00	$ 38
Fremont	$ 25	$ 25	0.50	10.00	$ 250
Mountain View		$ 25	n/a		
Redwood City		$ 25	n/a		
San Jose		$ 25	n/a		



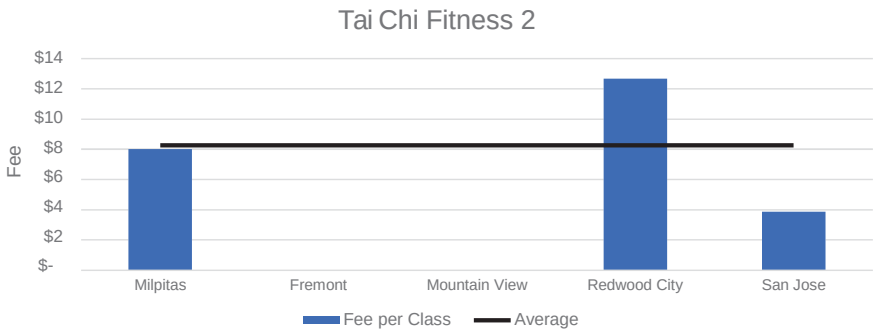
PROGRAM FEE ANALYSIS

Tiny Tots Swim	Fee per Hour	Average
Milpitas	$ 19	$ 50
Fremont	$ 50	$ 50
Mountain View		$ 50
Redwood City		$ 50
San Jose		$ 50



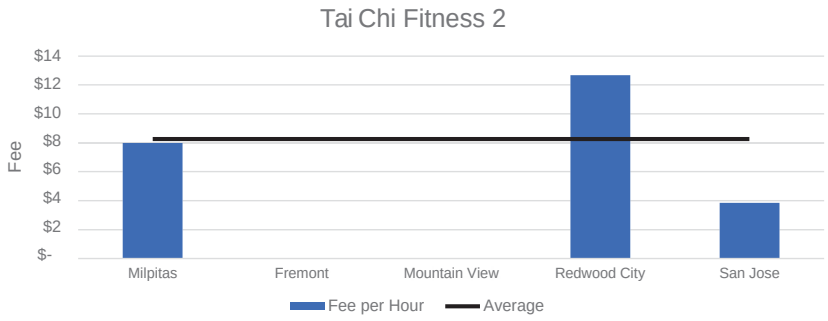
PROGRAM FEE ANALYSIS

Tai Chi Fitness 2	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 8	$ 8	1.00	22.00	$ 176
Fremont		$ 8	n/a		
Mountain View		$ 8	n/a		
Redwood City	$ 13	$ 8	1.00	9.00	$ 114
San Jose	$ 4	$ 8	1.00	7.00	$ 27



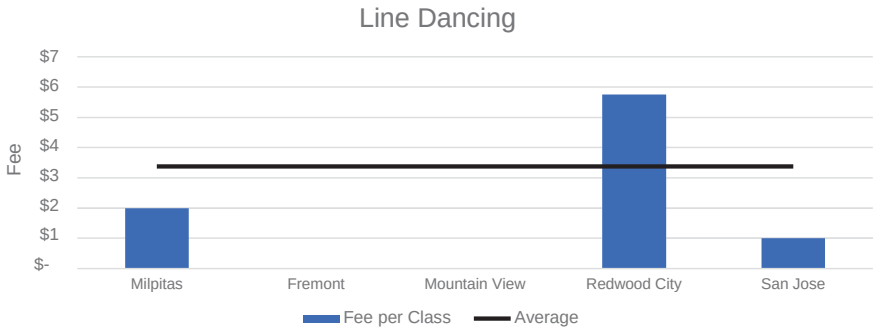
PROGRAM FEE ANALYSIS

Tai Chi Fitness 2	Fee per Hour	Average
Milpitas	$ 8	$ 8
Fremont		$ 8
Mountain View		$ 8
Redwood City	$ 13	$ 8
San Jose	$ 4	$ 8



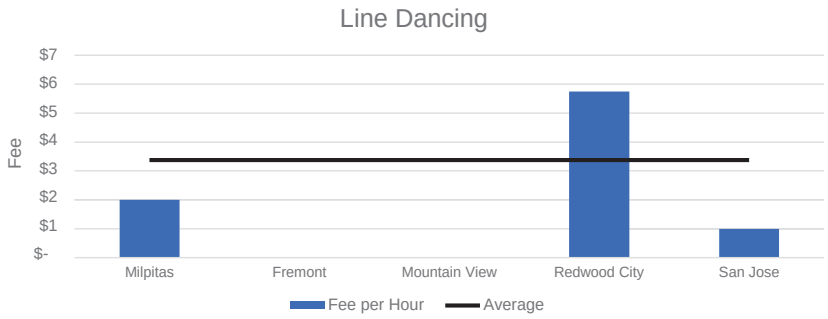
PROGRAM FEE ANALYSIS

Line Dancing	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 2	$ 3	1.00	8.00	$ 16
Fremont		$ 3	n/a		
Mountain View		$ 3	n/a		
Redwood City	$ 6	$ 3	1.00	8.00	$ 46
San Jose	$ 1	$ 3	1.00	8.00	$ 8



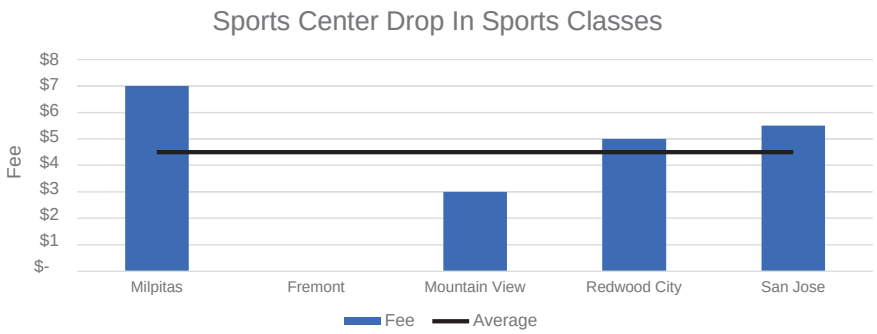
PROGRAM FEE ANALYSIS

Line Dancing	Fee per Hour	Average
Milpitas	$ 2	$ 3
Fremont		$ 3
Mountain View		$ 3
Redwood City	$ 6	$ 3
San Jose	$ 1	$ 3



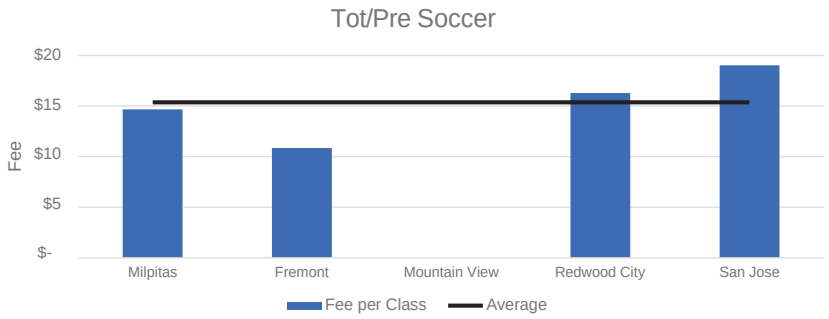
PROGRAM FEE ANALYSIS

Sports Center Drop in Sports Class	Fee	Average			
Milpitas	$ 7	$ 4.5			
Fremont		$ 4.5	n/a		
Mountain View	$ 3	$ 4.5			
Redwood City	$ 5	$ 4.5	adult		
San Jose	$ 5.5	$ 4.5			



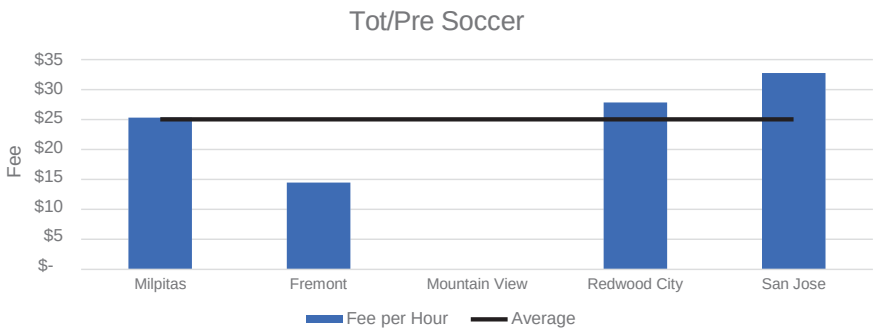
PROGRAM FEE ANALYSIS

Tot/Pre Soccer	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 15	$ 15	0.58	6.00	$ 88
Fremont	$ 11	$ 15	0.75	6.00	$ 65
Mountain View		$ 15	-	-	$ -
Redwood City	$ 16	$ 15	0.58	8.00	$ 130
San Jose	$ 19	$ 15	0.58	5.00	$ 95



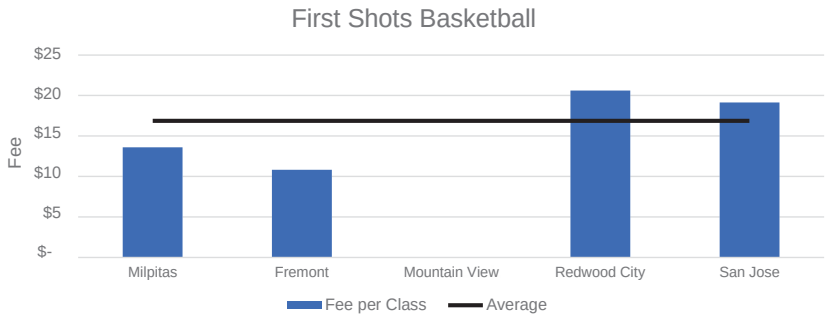
PROGRAM FEE ANALYSIS

Tot/Pre Soccer	Fee per Hour	Average
Milpitas	$ 25	$ 25
Fremont	$ 14	$ 25
Mountain View		$ 25
Redwood City	$ 28	$ 25
San Jose	$ 33	$ 25



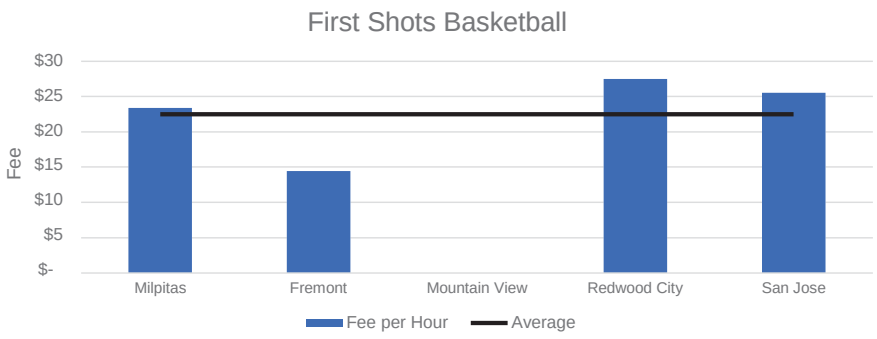
PROGRAM FEE ANALYSIS

First Shots Basket all	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 14	$ 17	0.58	7.00	$ 95
Fremont	$ 11	$ 17	0.75	6.00	$ 65
Mountain View		$ 17	-	-	$ -
Redwood City	$ 21	$ 17	0.75	10.00	$ 206
San Jose	$ 19	$ 17	0.75	6.00	$ 115



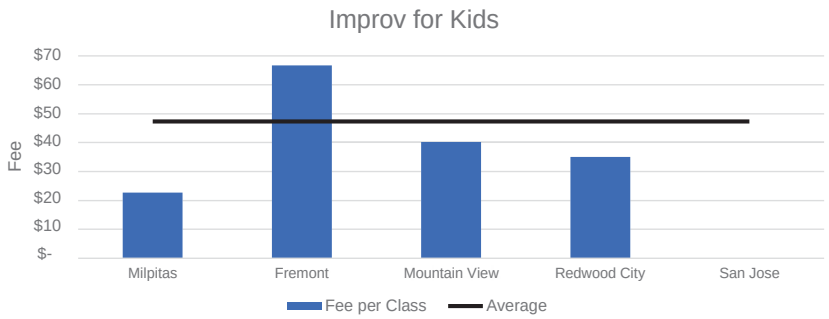
PROGRAM FEE ANALYSIS

First Shots Basket all	Fee per Hour	Average
Milpitas	$ 23	$ 22
Fremont	$ 14	$ 22
Mountain View		$ 22
Redwood City	$ 27	$ 22
San Jose	$ 26	$ 22



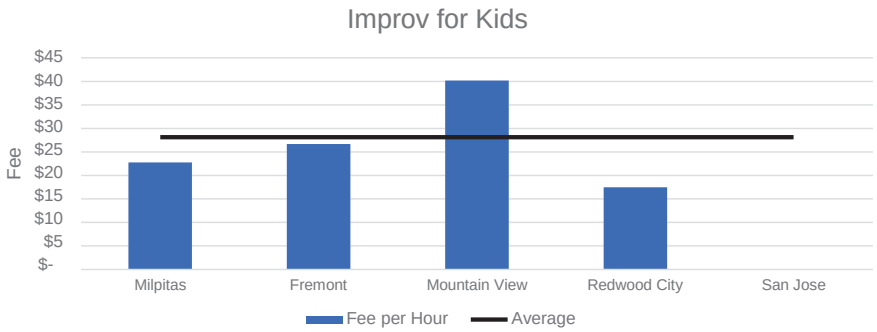
PROGRAM FEE ANALYSIS

Improv for Kids	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 23	$ 47	1.00	7.00	$ 159
Fremont	$ 67	$ 47	2.50	3.00	$ 200
Mountain View	$ 40	$ 47	1.00	5.00	$ 201
Redwood City	$ 35	$ 47	2.00	6.00	$ 210
San Jose		$ 47	-	-	$ -



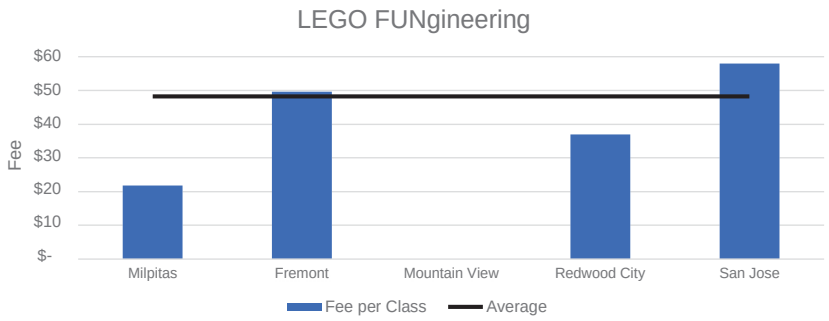
PROGRAM FEE ANALYSIS

Improv for Kids	Fee per Hour	Average
Milpitas	$ 23	$ 28
Fremont	$ 27	$ 28
Mountain View	$ 40	$ 28
Redwood City	$ 18	$ 28
San Jose		$ 28



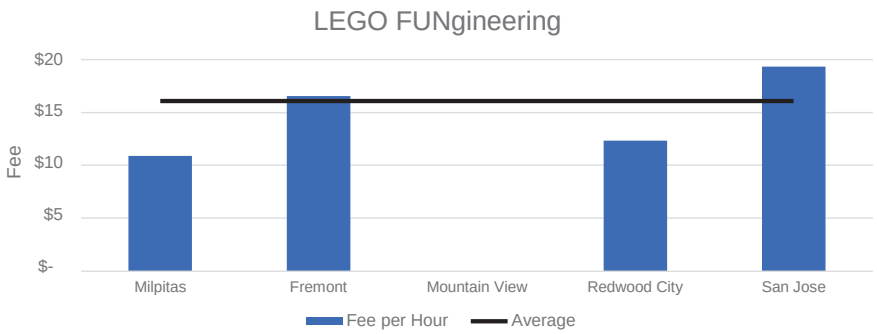
PROGRAM FEE ANALYSIS

LEGO FUNgineering	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 22	$ 48	2.00	5.00	$ 109
Fremont	$ 50	$ 48	3.00	3.00	$ 149
Mountain View		$ 48	-	-	$ -
Redwood City	$ 37	$ 48	3.00	5.00	$ 185
San Jose	$ 58	$ 48	3.00	1.00	$ 58



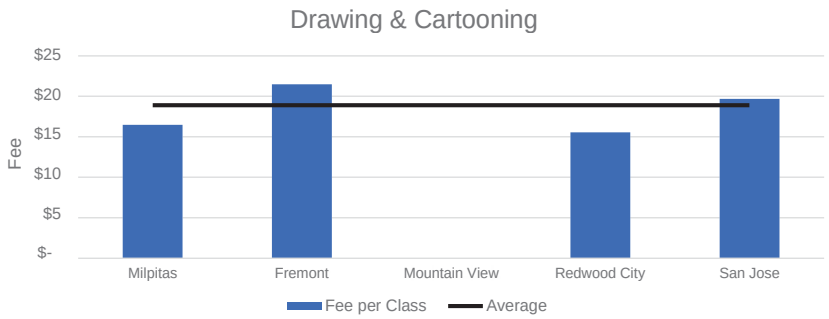
PROGRAM FEE ANALYSIS

LEGO FUNgineering	Fee per Hour	Average
Milpitas	$ 11	$ 16
Fremont	$ 17	$ 16
Mountain View		$ 16
Redwood City	$ 12	$ 16
San Jose	$ 19	$ 16



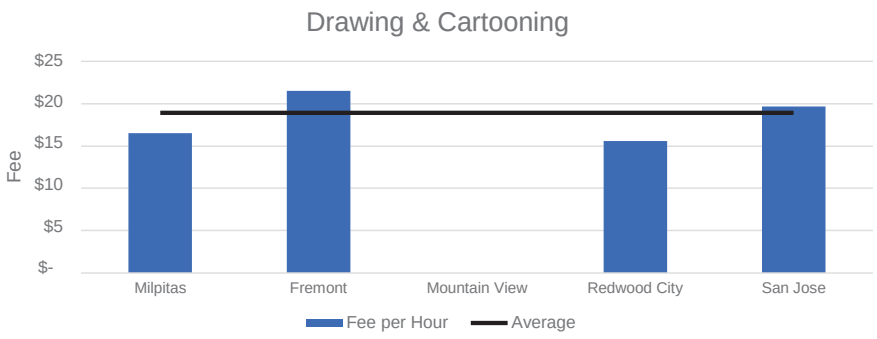
PROGRAM FEE ANALYSIS

Drawing & Cartooning	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 17	$ 19	1.00	6.00	$ 99
Fremont	$ 22	$ 19	1.00	6.00	$ 129
Mountain View		$ 19	-	-	$ -
Redwood City	$ 16	$ 19	1.00	11.00	$ 171
San Jose	$ 20	$ 19	1.00	6.00	$ 118



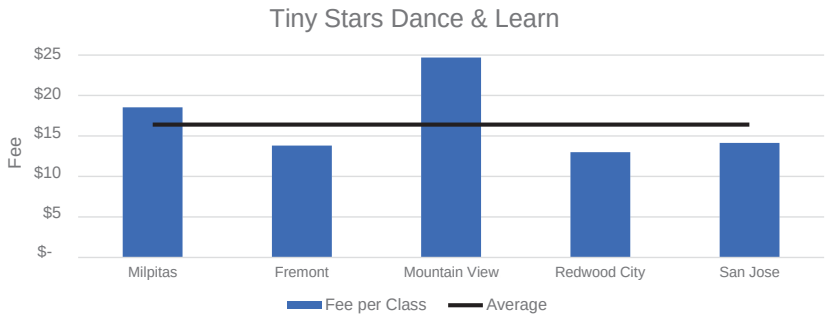
PROGRAM FEE ANALYSIS

Drawing & Cartooning	Fee per Hour	Average
Milpitas	$ 17	$ 19
Fremont	$ 22	$ 19
Mountain View		$ 19
Redwood City	$ 16	$ 19
San Jose	$ 20	$ 19



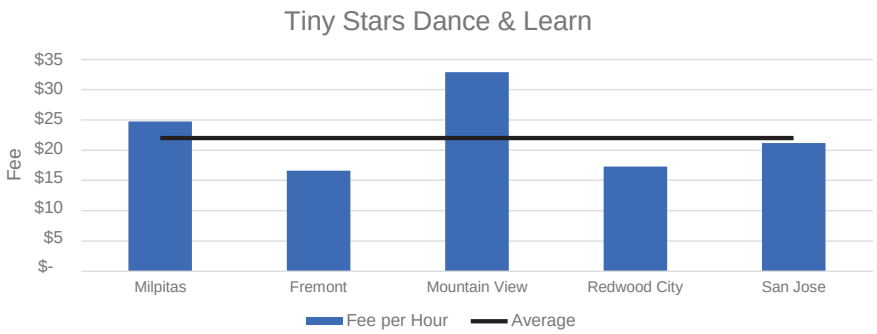
PROGRAM FEE ANALYSIS

Tiny Stars Dance & Learn	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 19	$ 16	0.75	7.00	$ 130
Fremont	$ 14	$ 16	0.83	5.00	$ 69
Mountain View	$ 25	$ 16	0.75	10.00	$ 247
Redwood City	$ 13	$ 16	0.75	6.00	$ 78
San Jose	$ 14	$ 16	0.67	8.00	$ 113



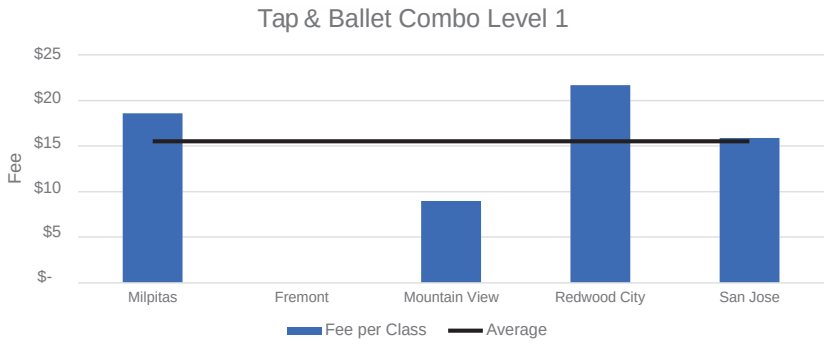
PROGRAM FEE ANALYSIS

Tiny Stars Dance & Learn	Fee per Hour	Average
Milpitas	$ 25	$ 22
Fremont	$ 17	$ 22
Mountain View	$ 33	$ 22
Redwood City	$ 17	$ 22
San Jose	$ 21	$ 22



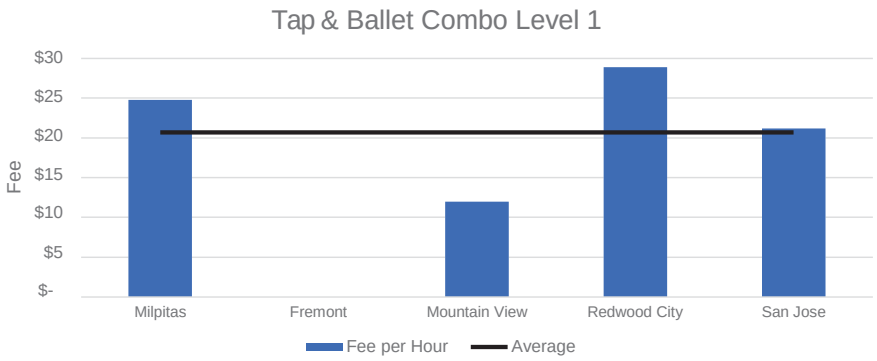
PROGRAM FEE ANALYSIS

Tap & Ballet Com o Level 1	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 19	$ 16	0.75	7.00	$ 130
Fremont		$ 16	-	-	$ -
Mountain View	$ 9	$ 16	0.75	8.00	$ 72
Redwood City	$ 22	$ 16	0.75	9.00	$ 195
San Jose	$ 16	$ 16	0.75	8.00	$ 127



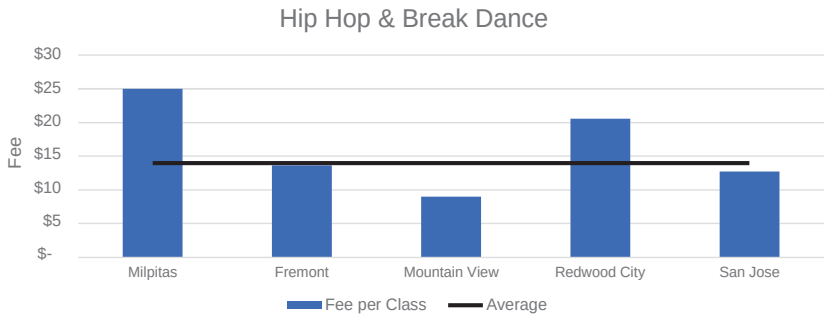
PROGRAM FEE ANALYSIS

Tap & Ballet Com o Level 1	Fee per Hour	Average
Milpitas	$ 25	$ 21
Fremont		$ 21
Mountain View	$ 12	$ 21
Redwood City	$ 29	$ 21
San Jose	$ 21	$ 21



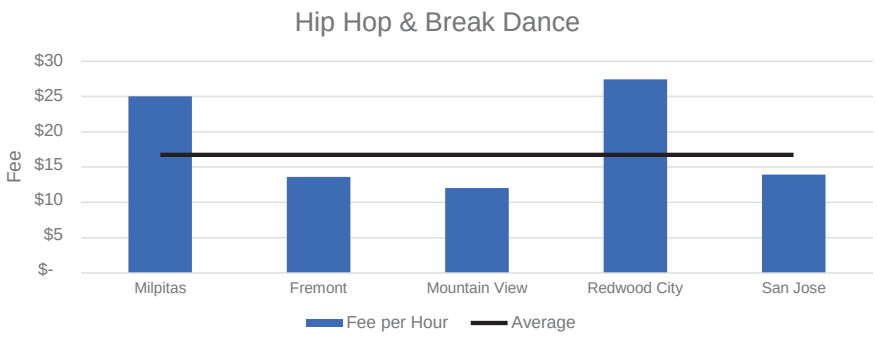
PROGRAM FEE ANALYSIS

Hip Hop & Break Dance	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 25	$ 14	1.00	8.00	$ 200
Fremont	$ 14	$ 14	1.00	8.00	$ 109
Mountain View	$ 9	$ 14	0.75	8.00	$ 72
Redwood City	$ 21	$ 14	0.75	9.00	$ 185
San Jose	$ 13	$ 14	0.92	8.00	$ 102



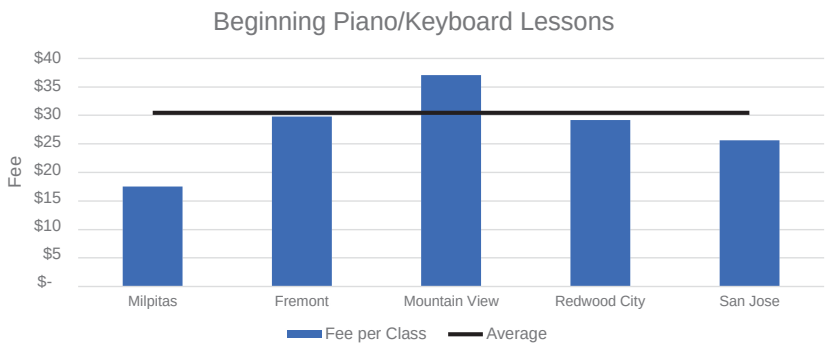
PROGRAM FEE ANALYSIS

Hip Hop & Break Dance	Fee per Hour	Average
Milpitas	$ 25	$ 17
Fremont	$ 14	$ 17
Mountain View	$ 12	$ 17
Redwood City	$ 27	$ 17
San Jose	$ 14	$ 17



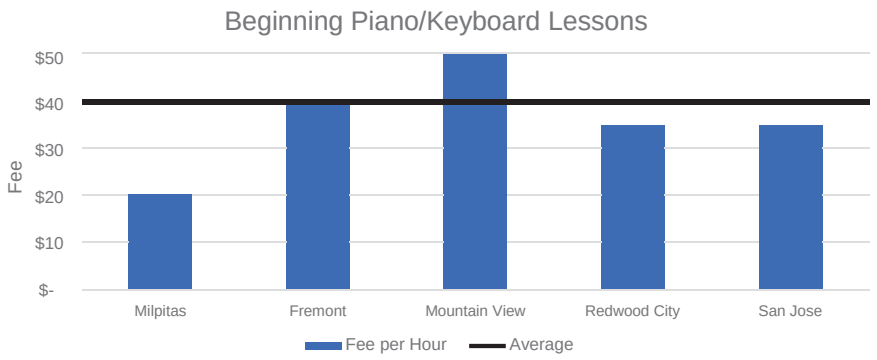
PROGRAM FEE ANALYSIS

Beginning Piano/Key oard Lessons	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 18	$ 30	0.83	12.00	$ 210
Fremont	$ 30	$ 30	0.75	6.00	$ 179
Mountain View	$ 37	$ 30	0.75	10.00	$ 371
Redwood City	$ 29	$ 30	0.83	9.00	$ 263
San Jose	$ 26	$ 30	0.75	6.00	$ 154



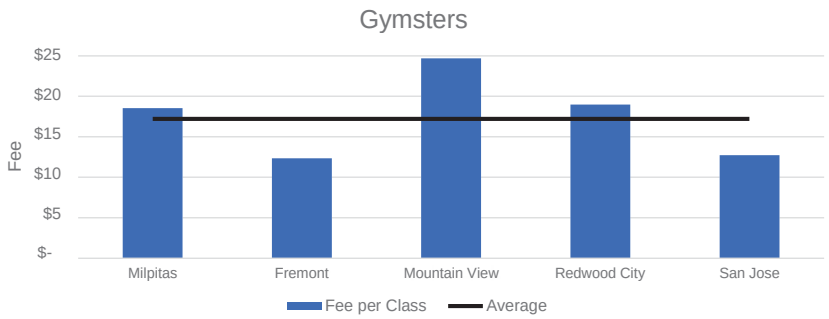
PROGRAM FEE ANALYSIS

Beginning Piano/Key oard Lessons	Fee per Hour	Average
Milpitas	$ 21	$ 40
Fremont	$ 40	$ 40
Mountain View	$ 49	$ 40
Redwood City	$ 35	$ 40
San Jose	$ 34	$ 40



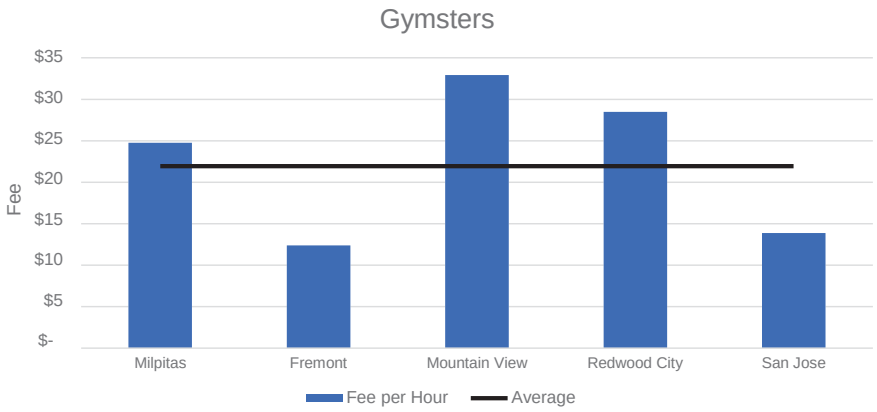
PROGRAM FEE ANALYSIS

Gymsters	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 19	$ 17	0.75	7.00	$ 130
Fremont	$ 12	$ 17	1.00	8.00	$ 99
Mountain View	$ 25	$ 17	0.75	10.00	$ 247
Redwood City	$ 19	$ 17	0.67	6.00	$ 114
San Jose	$ 13	$ 17	0.92	8.00	$ 102



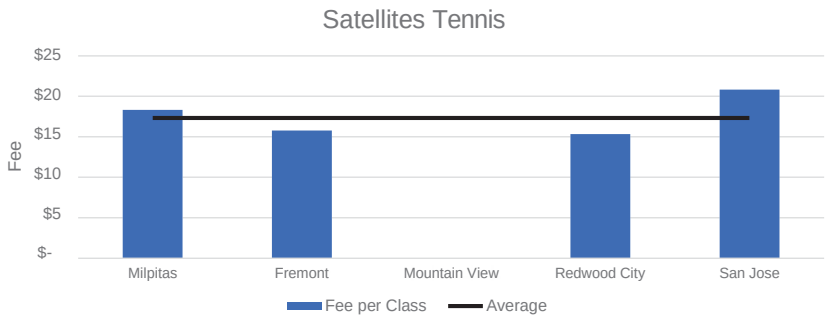
PROGRAM FEE ANALYSIS

Gymsters	Fee per Hour	Average
Milpitas	$ 25	$ 22
Fremont	$ 12	$ 22
Mountain View	$ 33	$ 22
Redwood City	$ 29	$ 22
San Jose	$ 14	$ 22



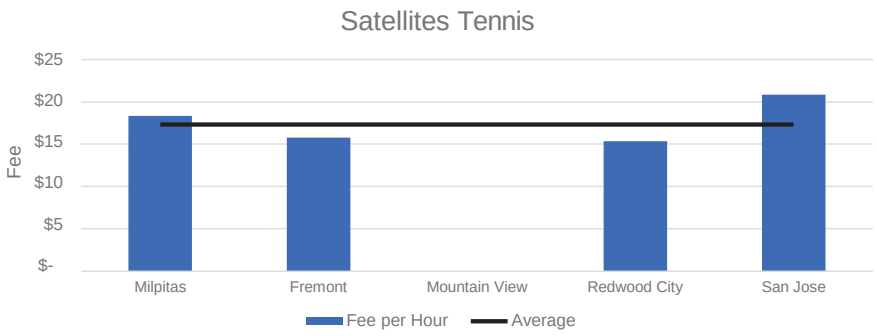
PROGRAM FEE ANALYSIS

Satellites Tennis	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 18	$ 17	1.00	6.00	$ 110
Fremont	$ 16	$ 17	1.00	5.00	$ 79
Mountain View		$ 17	-	-	$ -
Redwood City	$ 15	$ 17	1.00	6.00	$ 92
San Jose	$ 21	$ 17	1.00	6.00	$ 125



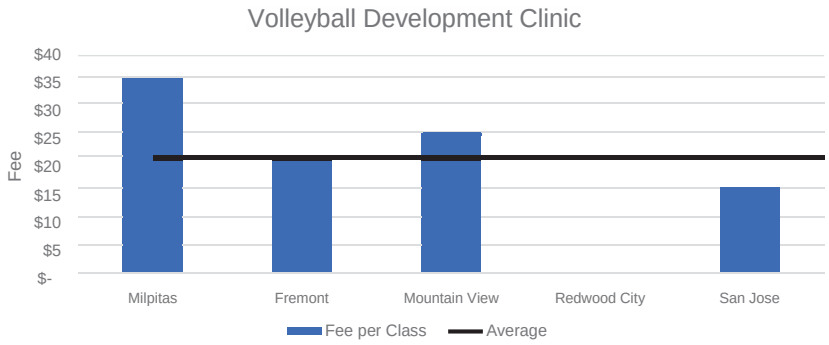
PROGRAM FEE ANALYSIS

Satellites Tennis	Fee per Hour	Average
Milpitas	$ 18	$ 17
Fremont	$ 16	$ 17
Mountain View		$ 17
Redwood City	$ 15	$ 17
San Jose	$ 21	$ 17



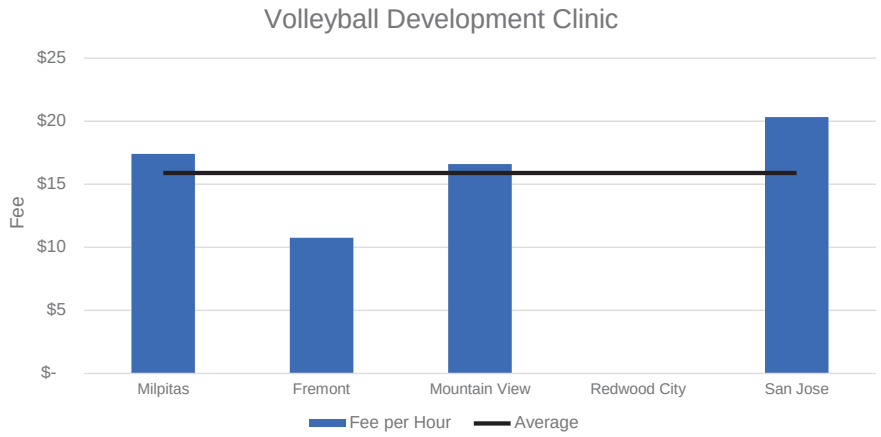
PROGRAM FEE ANALYSIS

Volley all Development Clinic	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 35	$ 21	2.00	6.00	$ 209
Fremont	$ 22	$ 21	2.00	6.00	$ 129
Mountain View	$ 25	$ 21	1.50	8.00	$ 199
Redwood City		$ 21	-	-	$ -
San Jose	$ 15	$ 21	0.75	8.00	$ 122



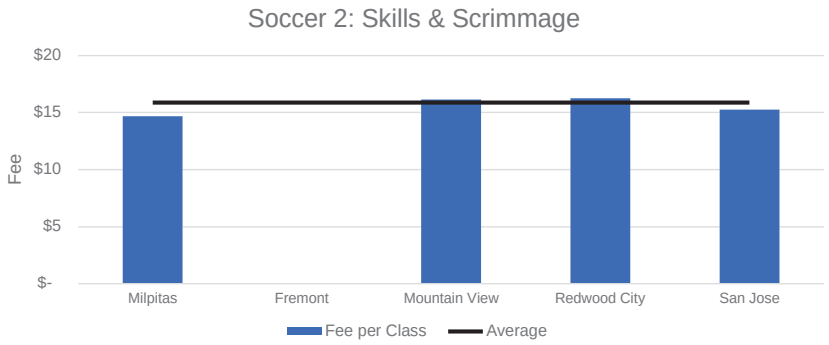
PROGRAM FEE ANALYSIS

Volley all Development Clinic	Fee per Hour	Average
Milpitas	$ 17	$ 16
Fremont	$ 11	$ 16
Mountain View	$ 17	$ 16
Redwood City		$ 16
San Jose	$ 20	$ 16



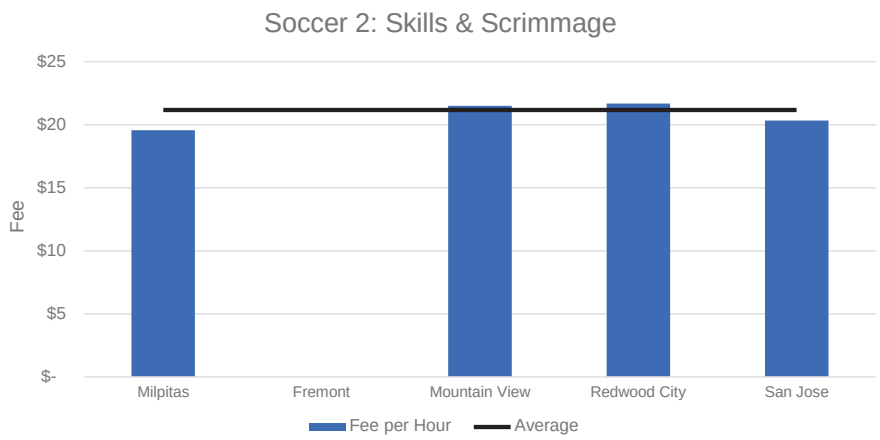
PROGRAM FEE ANALYSIS

Soccer 2: Skills & Scrimmage	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 15	$ 16	0.75	6.00	$ 88
Fremont		$ 16	-	-	$ -
Mountain View	$ 16	$ 16	0.75	8.00	$ 129
Redwood City	$ 16	$ 16	0.75	8.00	$ 130
San Jose	$ 15	$ 16	0.75	8.00	$ 122



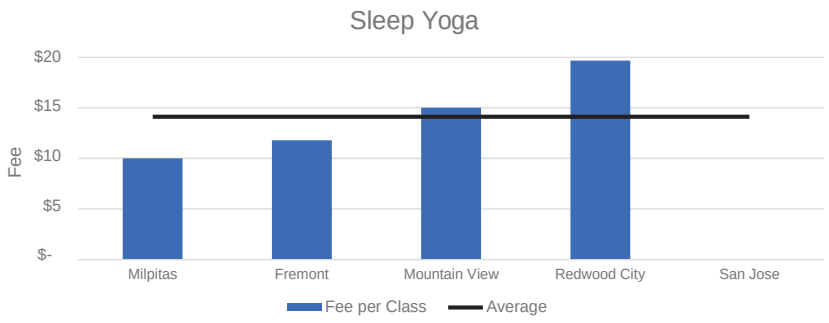
PROGRAM FEE ANALYSIS

Soccer 2: Skills & Scrimmage	Fee per Hour	Average
Milpitas	$ 20	$ 21
Fremont		$ 21
Mountain View	$ 22	$ 21
Redwood City	$ 22	$ 21
San Jose	$ 20	$ 21



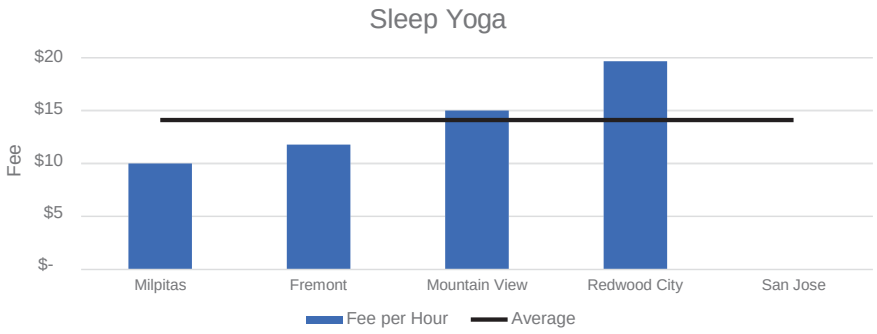
PROGRAM FEE ANALYSIS

Sleep Yoga	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 10	$ 14	1.00	4.00	$ 40
Fremont	$ 12	$ 14	1.00	5.00	$ 59
Mountain View	$ 15	$ 14	1.00	10.00	$ 150
Redwood City	$ 20	$ 14	1.00	9.00	$ 177
San Jose		$ 14	-	-	$ -



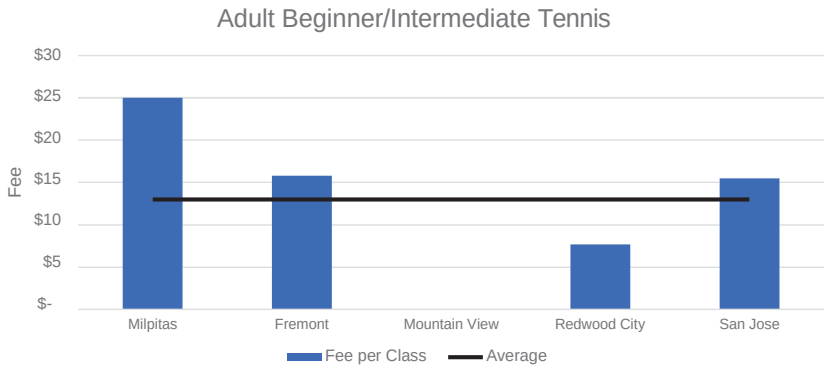
PROGRAM FEE ANALYSIS

Sleep Yoga	Fee per Hour	Average
Milpitas	$ 10	$ 14
Fremont	$ 12	$ 14
Mountain View	$ 15	$ 14
Redwood City	$ 20	$ 14
San Jose		$ 14



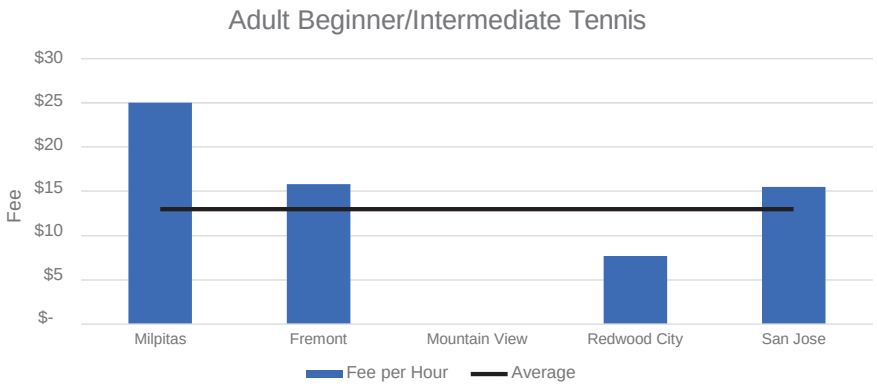
PROGRAM FEE ANALYSIS

Adult Beginner/Intermediate Tennis	Fee per Class	Average	Length of Class	# of Classes	Cost per Session
Milpitas	$ 25	$ 13	1.00	8.00	$ 200
Fremont	$ 16	$ 13	1.00	5.00	$ 79
Mountain View		$ 13	-	-	$ -
Redwood City	$ 8	$ 13	1.00	6.00	$ 46
San Jose	$ 16	$ 13	1.00	8.00	$ 124



PROGRAM FEE ANALYSIS

Adult Beginner/Intermediate Tennis	Fee per Hour	Average
Milpitas	$ 25	$ 13
Fremont	$ 16	$ 13
Mountain View		$ 13
Redwood City	$ 8	$ 13
San Jose	$ 16	$ 13



The market assessment conducted was utilized in the following chapter for identifying specific market adjustments to programs.

PROGRAM FEE ANALYSIS

Local Market Fee Comparison:

In addition to comparing fees to other communities a small sample of programs and services were compared to local providers within the City of Milpitas to conduct a "reasonableness" test against costs for similar programs conducted by the private sector. While it is difficult to develop a completely equitable comparison between the City s services and those of other providers due to differences in facilities and gym offerings this information provides at least an approach to gauging whether or not fees are aligning with market conditions. In general this analysis supports the conclusion that the City is charging appropriate fees for programs but may have some capacity to increase rental rates for meeting and banquet facilities if desired.

The specific programs and services were identified in consultation with city staff and then outreach conducted to the providers to ascertain the costs they were charging for the similar services. The results are shown in the following table.

Banquet Halls and Meeting Rooms:

- India Community Center: $3 500 per day weekdays and $8 000 per day weekends - includes 10 hours per day with set up tables chairs and linens included. Anything else is extra.
- Spring Valley Golf Course: Indoor facility for 165 people. Patio seating for a total of 300 guests. Room rental fee of $500 which is waived if total cost is over $7 500. Required minimum $4 300 in food and beverage not including service charge of 17% or applicable taxes.
- School District: 76 person community meeting room at Mattos Elementary School is $95 per hour or $1 520 per day.
- Summit Pointe Golf Clu : 150 person inside and 50 outside banquet room/patio. Includes full banquet staff buffet menu set up/clean up tables and chairs coffee water and tea. 4 hour minimum. 15-59 people $800. 60-119 people $1 200. 120-200 people $1 800. $200 per hour after initial 4. $100 cleaning fee.

PROGRAM FEE ANALYSIS

Gym Mem ership:

- India Community Center: $10 initiation. $45/monthly or $449 annually. Family $69 monthly or $699 annually. Student $29 or $299. Senior $15-25 month or $160-$249 annually (basic or full access membership difference).
- YMCA of Silicon Valley: Adult join $90/Monthly $73. Senior 90/66. Youth 45/37. Family (max) 165/161.
- Fitness 19 Milpitas: Monthly rates from $10-30 depending on access to features. 1-year commitment required.
- Milpitas Star Aquatics and Fitness: $40 annual maintenance fee. Gym $50 sign up and $20 monthly (first person $15 second person and $10 each third+). Gym and pool membership is $50 sign up and $40 monthly. $30 second person and 3rd+ each $20 per month. 25 yard heated 7 lane pool for laps. 20 yard heated shallow pool for family swim.
- City of Milpitas: Sports Center Unlimited Membership of $60/monthly or $480/year with reduced rates for seniors of $235/year.

While services and offerings between these facilities are not entirely consistent the cost comparison does indicate that the City is in line with the rates being charged by other local service providers.

When considering additional programs or expanded programming the following local market information may be useful in ensuring that the rates charged by the City are in alignment with fees in the local market.

Yoga:

- Bikram Yoga: Intro $69/mo. Auto pay $99/mo. 1 month $140. 3 month. $375. 6 months $650. 1 year / $1200.
- Worlds Yoga: $25 initiation. Yearly - $79/mo. 6 months $89/mo. 3 months $99/mo. Drop in $20. Class package 5 = $75. 10=$130. 20=$240. 30=$330.

PROGRAM FEE ANALYSIS

Programming/events/tutoring:

- Christ Community Church – programs offered and costs. ESL $50/year and free child care kids 0-9. Classes held about 28 days per month.
- Kuman Math: Reading and Math programs. $140 per month per program. Each class is 20-30 minutes long and classes are held 2x each week. $50 initial registration fee.
- The Tutoring Center – $279 1 child 2 sessions per week. $359 3 sessions per week.
- PEL Learning Center, Inc. 1 x registration $50-$100 (not sure why the range). Private tutoring $35-$40/hr. After school "homework help" $100-$150/month.
- Science Nature La s at Pump it up Milpitas –science classes for kids aged 9-12. $30/day.
- KidzToPros: Introducing to "Python Programming". Grades 6-8. June 15-19 from 9 am – 3 pm. $595. Computer programming skills held at Curtner Elementary School.
- KidzToPros: Digital Arts Camp. Grades 6-8. June 29 – July 3. 9 am – 3 pm. $595. Students learn how to use a graphics tablet with a digital pen transforming their creative ideas with digital effects held at Curtner Elementary School.

PROGRAM FEE ANALYSIS

3. Cost Recovery Overview and Program Offering Assessment

This chapter provides a high level assessment of cost recovery and a more detailed assessment of program offerings between the City of Milpitas and the comparative entities regarding programs provided.

1 Recreation and Community Services Cost Recovery

In FY 2019-20 the Recreation and Community Services Department (Recreation) has an adopted budget of almost $6.5 million. This year s adopted budget represents a 12% increase from FY 2018-19 ($5.7 million) and a 44% increase when compared to FY 2016-17 actual expenditures ($4.5 million). A summary of expenditures of the last three fiscal years is presented in the following table.

Recreation Expenditures y Fiscal Year

Expenditures	FY 2017-18 Actual	FY 2018-19 Budget	FY 2019-20 Adopted
Personnel	$3 198 223	$4 184 394	$4 954 145
Supplies/Services	$1 278 654	$1 564 149	$1 507 593
Capital Outlay	$20 000	$0	$1 489
Total	4,496,877	5,748,543	6,463,227
Annual Change	-	28%	12%

Source: City of Milpitas 2019-20 Budget & Financial Plan page 238

Annual revenues by department are not presented in the City s budget book but Recreation and Finance staff were able to provide high level summaries for the department s revenues which are comprised primarily of recreation fees and rent and concession revenues. Overall revenues increased about 4% over the last two years as shown in the following table.

Recreation Revenues y Fiscal Year

Revenues	FY 2017-18 Actual	FY 2018-19 Actual	Change
Rent & Concession	$238 529	$183 380	-23%
Recreation Fees	$2 252 234	$2 413 833	7%
Total Revenue	2,490,763	2,597,213	4%

Source: City of Milpitas Finance Department

PROGRAM FEE ANALYSIS

When expenditures and revenues are compared over the last two years Recreation recovered 55% of its costs in FY 2017-18 and about 45% of its costs in FY 2018-19. The decrease in cost recovery correlates with the fact that expenditures increased by 28% between those two years while revenues only increased by 4%. Annual cost recovery estimates are presented in the following table.

Recreation Cost Recovery y Fiscal Year

Finances	FY 2017-18	FY 2018-19
Expenditures	$4 496 877	$5 748 543
Revenues	$2 490 763	$2 597 213
Cost Recovery	55%	45%

Source: MCG calculations based on Finance Department data and the annual budget.

The City is developing a data source through better tracking of costs through the use of work orders that will enable a more detailed and refined cost recovery assessment in the future that includes all costs associated with the provision of programs and rentals beyond only the costs of the Recreation and Community Services Department. Public Works provides significant support to the Recreation and Community Services Department including the following:

- Athletic field maintenance is approximately $74 052 per month or $888 624 annually.
- Facilities support for setups in PD Comm Room City Hall Committee Room Council Chambers and Adobe is about 50 hours per week (assuming 30 minutes for setup and 30 minutes for breakdown). Estimated fully loaded hourly rate for FY20-21 for a MCII is $67.10 and for a MCIII is $78.15.
  - Facilities setups/breakdowns at Senior Ctr Community Ctr and Sports Ctr are generally performed by Recreation s Building Attendant staff.
  - Sal Cracolice Building is closed but upon its eventual reopening PW staff will be responsible for setups/breakdowns.
- Pool maintenance is approximately 40 hours per week at MSC (20 for EMWIII and 20 for MWII). Estimated fully loaded hourly rate for FY20-21 for EMWIII is approximately $91.64 and for MWII is approximately $65.23. This would equate to costs of approximately $3 137.40/week or $163 145 annually.

These readily identifiable Public Work costs demonstrate that total expenses are in excess of a million additional dollars only for those known costs. Including those costs into the cost recovery calculation would result in a city-wide cost recovery level of approximately 38% for FY2018-19.

PROGRAM FEE ANALYSIS

(1) Detailed Program Financials

Recreation staff were able to provide a detailed breakout of rental revenues as well as program fees for FY 2018-19 which aligned within a minor margin of the revenue data provided by the Finance Department. However expenditures are not tracked by specific program or function within the Recreation Department to calculate cost recovery at a more granular level at this time.

(2) Cost Recovery Target.

Typical recreation functions nationally are achieving cost recovery for recreational programming activities in the range of 40 – 60%. Experience with other Bay Area communities indicates that more communities in this region are typically at the lower end of that range for direct costs only. In comparison the City of Milpitas is achieving a reasonable level of cost recovery at the level of analysis that could be conducted with available data. This level of overall recovery is in alignment with both national best practices and exceeds the levels typically being achieved by other Bay Area communities. However the rate of cost recovery will drop when all internal service costs (overhead per the cost allocation plan and direct Public Works services).

Notwithstanding this level of performance the City of Milpitas should adopt a formal cost recovery target for recreational programs. This is important as a guiding policy document so that staff has a target to focus on when developing program offerings and setting program fees. Based on historical levels achieved it would be appropriate for an initial cost recovery target to be set between 45% and 55%. It will be important that the City and Department develop the appropriate reporting mechanisms that enable the easy monitoring and calculation of the cost recovery rates moving forward so that it can be tracked on an on-going basis and utilized by management in making decisions regarding both service offerings and individual fees.

Recommendation: The City of Milpitas should adopt a formal cost recovery target for Recreational Program.

2 Evaluation of Programs Offered

A comprehensive assessment was made of the programs offered by the City of Milpitas Department of Recreation and Community Services against those offered by comparative municipalities. For the purposes of the fee and program offering assessment the following communities were utilized as comparatives: Fremont Mountain View Redwood City and San Jose.

The following table shows a summary of the most frequently offered classes that other communities provide that are not currently provided by the City of Milpitas. This listing

PROGRAM FEE ANALYSIS

shows only those programs where two or more of the comparable entities provide the class. A detailed listing is provided in Appendix C that shows the entire comparison and highlights classes that only one other entity offered.

This information is useful as one tool to evaluate new potential courses or programs that the City of Milpitas should consider in the future.

RECREATION CLASSES (From Fall & Winter 2019 Activity Guide)	Fremont	Mountain View	Redwood City	San Jose
Chess Beginner (ages 5-13)	$99 1 day/wk 1 hr class 7 classes	Not Offered	$231 1 day/wk 1.33 hr class 9 classes	Not Offered
Chess Advanced (ages 5-13)	$99 1 day/wk 1 hr class 7 classes	Not Offered		Not Offered
Math Olympiad (ages 6-8 9-11)	$449 1 day/wk 2.25 hr class 9 classes	Not Offered	$180 1 day/wk 1 hr class 4 classes	Not Offered
Children s Little Theater (ages 4-6)	$189 1 day/wk 1 hr class 9 classes	$170 Res/$213 1 day/wk .75 hr class 5 classes	$330 1 day/wk 1.5 hr class 8 classes	Not Offered
Young Rembrandts: FUNdamental Drawing (ages 4-6)	$129 1 day/wk 1 hr class 6 classes	Not Offered	Not Offered	$118 1 day/wk 1 hr class 6 classes
Adult Ballet (ages 16+)	$139 1 day/wk 1 hr class 10 classes	Not Offered	$199 1 day/wk 1 hr class 11 classes	Not Offered
Adult Beginning Tap (ages 16+)	$139 1 day/wk 1 hr class 10 classes	Not Offered	$78 1 day/wk 1 hr class 6 classes	Not Offered
umba Dance Fusion (ages 18+)	$69 1 day/wk .67 hr class 6 classes	Not Offered	$126 1 day/wk 1 hr class 10 classes	$43 Res/$47 NR 1 day/wk 1 hr class 6 classes
Beginner Belly Dancing (ages 18+)	Not Offered	$198 Res/$248 NR 1 day/wk 1 hr class 12 classes	$62 1 day/wk 1 hr class 7 classes	Not Offered
Karate for Kids (ages 7-12)	$109 1 day/wk .5 hr class 10 classes	$135 Res/$169 NR .83 hr class 7 classes	98 2 days/wk .92 hr class 7 classes	Not Offered

PROGRAM FEE ANALYSIS

(1) Detailed Program Financials

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Notwithstanding this level of performance the City of Milpitas should adopt a formal cost recovery target for recreational programs. This is important as a guiding policy document so that staff has a target to focus on when developing program offerings and setting program fees. Based on historical levels achieved it would be appropriate for an initial cost recovery target to be set between 45% and 55%. It will be important that the City and Department develop the appropriate reporting mechanisms that enable the easy monitoring and calculation of the cost recovery rates moving forward so that it can be tracked on an on-going basis and utilized by management in making decisions regarding both service offerings and individual fees.

Recommendation: The City of Milpitas should adopt a formal cost recovery target for Recreational Program.

2 Evaluation of Programs Offered

A comprehensive assessment was made of the programs offered by the City of Milpitas Department of Recreation and Community Services against those offered by comparative municipalities. For the purposes of the fee and program offering assessment the following communities were utilized as comparatives: Fremont Mountain View Redwood City and San Jose.

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PROGRAM FEE ANALYSIS

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Chess Advanced (ages 5-13)	$99 1 day/wk 1 hr class 7 classes	Not Offered		Not Offered
Math Olympiad (ages 6-8 9-11)	$449 1 day/wk 2.25 hr class 9 classes	Not Offered	$180 1 day/wk 1 hr class 4 classes	Not Offered
Children s Little Theater (ages 4-6)	$189 1 day/wk 1 hr class 9 classes	$170 Res/$213 1 day/wk .75 hr class 5 classes	$330 1 day/wk 1.5 hr class 8 classes	Not Offered
Young Rembrandts: FUNdamental Drawing (ages 4-6)	$129 1 day/wk 1 hr class 6 classes	Not Offered	Not Offered	$118 1 day/wk 1 hr class 6 classes
Adult Ballet (ages 16+)	$139 1 day/wk 1 hr class 10 classes	Not Offered	$199 1 day/wk 1 hr class 11 classes	Not Offered
Adult Beginning Tap (ages 16+)	$139 1 day/wk 1 hr class 10 classes	Not Offered	$78 1 day/wk 1 hr class 6 classes	Not Offered
umba Dance Fusion (ages 18+)	$69 1 day/wk .67 hr class 6 classes	Not Offered	$126 1 day/wk 1 hr class 10 classes	$43 Res/$47 NR 1 day/wk 1 hr class 6 classes
Beginner Belly Dancing (ages 18+)	Not Offered	$198 Res/$248 NR 1 day/wk 1 hr class 12 classes	$62 1 day/wk 1 hr class 7 classes	Not Offered
Karate for Kids (ages 7-12)	$109 1 day/wk .5 hr class 10 classes	$135 Res/$169 NR .83 hr class 7 classes	98 2 days/wk .92 hr class 7 classes	Not Offered

PROGRAM FEE ANALYSIS

RECREATION CLASSES (From Fall & Winter 2019 Activity Guide)	Fremont	Mountain View	Redwood City	San Jose
Tae Kwon Do (ages 5-19)	Not Offered	$125 Res/$157 NR 2 days/wk 1.5 hr class 24 classes	$162 2 days/wk 1 hr class 12 classes	Not Offered
Guitar (ages 6-16)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk .83 hr class 13 classes	Not Offered	$154 +$10 material fee 1 day/wk .75 hr class 6 classes
Adult Guitar (ages 17+)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk .83 hr class 12 classes	Not Offered	$110 Res/$114 NR 1 day/wk .75 hr class 7 classes
Ukulele for Fun (ages 4+)	$175 1 day/wk .75 hr class 6 classes	Not Offered	$25 1 day/wk 2 hr class 1 class	$154 +$10 material fee 1 day/wk .75 hr class 6 classes
Violin Study (ages 4+)	$175 1 day/wk .83 hr class 6 classes	$396 Res/$496 NR 1 day/wk .83 hr class 12 classes	Not Offered	Not Offered
Skateboarding Lessons - Beginning Level (ages 6-12)	$169 1 day/wk .75 hr class 4 classes	Not Offered	$131 1 day/wk 1 hr class 5 classes	$171 Res/$175 NR 1 day/wk 2.5 hr class 6 classes
Skateboarding Lessons - Intermediate Level (ages 6-12)	$169 1 day/wk .75 hr class 4 classes	Not Offered		
Tennis: Red Ball (ages 5-6 7-8)	$79 1 day/wk 1 hr class 5 classes	Not Offered	$92 1 day/wk .67 hr class 6 classes	$125 1 day/wk 1 hr class 6 class
Tennis: Orange Ball (ages 9-10)	$79 1 day/wk 1 hr class 5 classes	Not Offered	$92 1 day/wk 1 hr class 6 classes	$125 1 day/wk 1 hr class 6 class
Tennis: Fremont Tennis Academy (ages 11-17)	$79 1 day/wk 1 hr class 5 classes	Not Offered		Not Offered
Tennis: Adults beginner (ages 18+)	$75 1 day/wk 1 hr class 5 classes	Not Offered	$92 1 day/wk 1 hr class 6 classes	Not Offered

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PROGRAM FEE ANALYSIS

RECREATION CLASSES (From Fall & Winter 2019 Activity Guide)	Fremont	Mountain View	Redwood City	San Jose
Tennis: Adults Intermediate (ages 18+)	$75 1 day/wk 1 hr class 5 classes	Not Offered		Not Offered

There are multiple opportunities based on demand for classes seen in other communities to explore the addition of additional programs within the City of Milpitas portfolio of classes. Additional opportunities are likely to be identified as part of the larger Parks Master planning process once information becomes available from the community input phase and the project teams have developed recommended park and facility improvements.

Recommendation: Continue to explore the expansion of recreational programs ased upon community input and successful programs provided y other compara le communities' recreation programs.

2 Recommended Fee Ad ustments

Based upon the comparative assessment it is recommended that fees for comparable recreation programs be adjusted to match the average of the comparative assessment unless there is specific information available that warrants maintaining a rate below market rate. At the present time the project team is not aware of any specific data that would warrant charging a below market rate. The detailed program assessment is included in Appendix B. For programs where market adjustments are not required the City of Milpitas should consider implementing fee increases to cover cost of living increases to ensure that annual internal cost increases (personnel contractual utilities etc.) do not impact the cost recovery of the department.

Based upon the market assessment the following table summarizes the types of market adjustments that are warranted based upon the comparative assessment. Where no change is recommended for market adjustment the City may still consider a small cost of living adjustment to account for increased operating costs year over year attributable to internal cost increases.

Program	Ad ustment
Sleep Yoga	Increase from $10/class to $14 / class
Phonics Level 1/2	Increase from $13/class to $25 / class
Soccer 2: Skills and Scrimmage	Increase from $15/class to $16 / class
Drawing & Cartooning	Increase from $17/class to $19/class
Beginning Piano/Keyboard Lessons	Increase from $18/class to $30/class
Non-Resident Use of Soccer Field with Lights for 2 hour rental	Increase from $180 to $200

PROGRAM FEE ANALYSIS

Program	Ad ustment
Line Dancing	Increase from $2/class to $3/class
Lego FUNGineering	Increase from $22/class to $40/class
Improv for Kids	Increase from $23/class to $40/class
Resident use of gymnasium for 3 hours – peak hours	Increase from $260 to $400
Winter Break Camp	Increase from $4 / hour to $9 /hour
Small picnic rental for Residents (50 Saturday)	Increase from $60 to $90
Non-primetime 1 hour Adult Resident Tennis Court Rental	Increase from $8 to $15
Mommy/Daddy & Me Soccer Class	No change
Ballet Level 1	No change
Youth Basketball Elite	No change
Tai Chi Fitness 2	No change
Sports Center Drop in Sports Class	No change
Tot/Pre Soccer	No change
First Shots Basketball	No change
Tiny Stars Dance & Learn	No change
Tap & Ballet Combo Level 1	No change
Hip Hop & Break Dance	No change
Gymsters	No change
Satellites Tennis	No change
Volleyball Development Clinic	No change
Adult Beg/Int Tennis	No change
Adult Use Artificial Turf (2 hour rental)	No change
Community Center Conference Room	No change

The assessment showed that of the programs reviewed 55% warranted no change in fees based solely upon market competitiveness. The remaining 45% had market adjustments recommended with some being very minor but some being significantly below the market rate. At a minimum a cost of living adjustment should be applied to each program to address internal cost increases year over year.

PROGRAM FEE ANALYSIS

Recommendation: The City of Milpitas should ad ust program fees y at least a cost of living ad ustment to address internal cost increases associated with providing services with additional market ad ustments made, as outlined and identified, to ring program costs into alignment with the market rates and to ensure cost recovery is not impacted.

PROGRAM FEE ANALYSIS

Appendix A – Milpitas Recreation Fee Schedule

The following table outlines the current fee structure adopted by the City of Milpitas.

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Adult Recreation	Adult Enrichment Fees	Sports League (full season)	$500 per team + $10 per non-resident player per season	$500 per team + $10 per non-resident player per season
Adult Recreation	Adult Enrichment Fees	Garden Plots (Residents Only)	$60/per year	$60/per year
Aquatics	Miscellaneous	Recreational Swim	$2	$2 - $5 per person
Aquatics	Swimming	Swimming Lessons Group	$75 - $85 residents	$75 - $85 residents
Aquatics	Swimming	Swimming Lessons Group	$950 - $105 non-residents	$950 - $105 non-residents
Aquatics	Swimming	Semi-Private/Private Swimming Lessons	$38 residents – per half hour lesson	$38 residents – per half hour lesson
Aquatics	Swimming	Semi-Private/Private Swimming Lessons	$58 non-resident - per half hour lesson	$58 non-resident - per half hour lesson
Aquatics	Swimming	Parent-Tot Drop-in swim pass – 5 visits	$15 plus $20 non-resident fee if applicable	$15 plus $20 non-resident fee if applicable
Aquatics	Swimming	Monthly Swim Club Fee Development Group	Resident- $68-$88/month	Resident- $68-$88/month
Aquatics	Swimming	Monthly Swim Club Fee Development Group	Non-resident- $108-$128/month	Non-resident- $108-$128/month
Aquatics	Swimming	Monthly Swim Club Juniors/Intermediate	Resident- $78-$98/month	Resident- $78-$98/month
Aquatics	Swimming	Monthly Swim Club Juniors/Intermediate	Non-resident- $118-$138/month	Non-resident- $118-$138/month
Aquatics	Swimming	Monthly Swim Club-Senior	Resident- $88-$108/month	Resident- $88-$108/month
Aquatics	Swimming	Monthly Swim Club-Senior	Non-resident- $128-$148/month	Non-resident- $128-$148/month
Classes			Instructor: hrs. hourly rate	Instructor: hrs. hourly rate
Membership	Senior Enrichment Fees(50+ years of age)	Senior Center Membership	$12/year resident	$12/year resident
Membership	Senior Enrichment Fees(50+ years of age)	Senior Center Membership	$30/year non-resident	$30/year non-resident
Membership	Sports Center Membership	Fitness Passes- Per Visit Packages	5 visits: $20	5 visits: $25
Membership	Sports Center Membership	Fitness Passes- Per Visit Packages	10 visits: $40	10 visits: $50
Membership	Sports Center Membership	Fitness Passes- Per Visit Packages	15 visits: $60	15 visits: $75
Membership	Sports Center Membership	Fitness Passes- Per Visit Packages	20 visits: $80	20 visits: $100
Membership	Sports Center Membership	Fitness Passes Senior (50+)- Per Visit Packages	5 visits: $10	5 visits: $15

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Membership	Sports Center Membership	Fitness Passes Senior (50+)- Per Visit Packages	10 visits: $20	10 visits: $30
Membership	Sports Center Membership	Fitness Passes Senior (50+)- Per Visit Packages	15 visits: $30	15 visits: $45
Membership	Sports Center Membership	Fitness Passes Senior (50+)- Per Visit Packages	20 visits: $40	20 visits: $60
Membership	Sports Center Membership	Drop-In Fee	$7/visit	$7-$12 per visit
Membership	Sports Center Membership	Sports Center Unlimited Packages	Monthly: $50	Monthly: $60
Membership	Sports Center Membership	Sports Center Unlimited Packages	3 Months: $150	3 Months: $180
Membership	Sports Center Membership	Sports Center Unlimited Packages	6 Months: $250	6 Months: $280
Membership	Sports Center Membership	Sports Center Unlimited Packages	12 Months: $450	12 Months: $480
Membership	Sports Center Membership	Sports Center Unlimited Packages - Senior (50+)	Monthly: $25	Monthly: $35
Membership	Sports Center Membership	Sports Center Unlimited Packages - Senior (50+)	3 Months: $75	3 Months: $85
Membership	Sports Center Membership	Sports Center Unlimited Packages - Senior (50+)	6 Months: $125	6 Months: $135
Membership	Sports Center Membership	Sports Center Unlimited Packages - Senior (50+)	12 Months: $225	12 Months: $235
Membership	Sports Center Membership	Annual Non-Resident Fee	$50/year	$50-$100 per year
Misc.	Department General Fees	General Internal Class Program Fees	new	Staff time + Materials
Misc.	Department General Fees	Membership Card replacement fee	$5	$5
Misc.	Department General Fees	Transaction Fee	$1 - $3 per receipt	$1 - $3 per receipt
Misc.	Department General Fees	Trips	Actual cost to City + Trip Admission Fee	Actual cost to City + Trip Admission Fee
Misc.	Department General Fees	General Non-Resident Fees	$20/person/class / month program or trip.	$20-$30/person/class / month program or trip.
Rentals	Artificial Turf Field	Deposit (Football/Soccer)	Priority II & III-N/A	Priority II & III-N/A
Rentals	Artificial Turf Field	Deposit (Football/Soccer)	Priority IV & V-$1 000	Priority IV & V-$1 000
Rentals	Artificial Turf Field	Deposit (Soccer/Volleyball)	Priority II & III-N/A	Priority II & III-N/A
Rentals	Artificial Turf Field	Deposit (Soccer/Volleyball)	Priority IV & V-$750	Priority IV & V-$750
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/o lights	Priority II & III-N/A	Priority II & III-N/A
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/o lights	Priority IV-$150/hr	Priority IV-$150/hr
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/o lights	Priority V-$300/hr	Priority V-$300/hr

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/ lights	Priority II & III- N/A	Priority II & III- N/A
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/ lights	Priority IV- $160/hr	Priority IV- $160/hr
Rentals	Artificial Turf Field	Artificial Turf Football/Soccer w/ lights	Priority V- $320/hr	Priority V- $320/hr
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/o lights	Priority II & III- N/A	Priority II & III- N/A
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/o lights	Priority IV- $100/hr	Priority IV- $100/hr
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/o lights	Priority V- $200/hr	Priority V- $200/hr
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/ lights	Priority II & III- N/A	Priority II & III- N/A
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/ lights	Priority IV- $110/hr	Priority IV- $110.00/hr
Rentals	Artificial Turf Field	Artificial Turf Volleyball/Soccer w/ lights	Priority V- $220/hr	Priority V- $220/hr
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Football)	new	Priority II & III- N/A
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Football)	new	Priority IV- $210/hr
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Football)	new	Priority V- $315/hr
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Football)	new	Priority II & III- N/A
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Football)	new	Priority IV- $220/hr
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Football)	new	Priority V- $330/hr
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Small)	new	Priority II & III- N/A
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Small)	new	Priority IV- $160/hr
Rentals	Artificial Turf Field	Tournament: Field w/o lights (Small)	new	Priority V- $240/hr
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Small)	new	Priority II & III- N/A
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Small)	new	Priority IV- $170/hr
Rentals	Artificial Turf Field	Tournament: Field w/ lights (Small)	new	Priority V- 255/hr
Rentals	Community Center Rentals	Application Fee (non-refundable)	$20	$20 - $30
Rentals	Community Center Rentals	Rental Deposits: Auditorium	$750	$500
Rentals	Community Center Rentals	Auditorium (3 hr. minimum)	Priority II- No Fee	Priority II- No Fee
Rentals	Community Center Rentals	Auditorium (3 hr. minimum)	Priority III- $100/hr	Priority III- $100/hr
Rentals	Community Center Rentals	Auditorium (3 hr. minimum)	Priority IV- $200/hr	Priority IV- $200/hr
Rentals	Community Center Rentals	Auditorium (3 hr. minimum)	Priority V- $260/hr	Priority V- $260/hr

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Community Center Rentals	Conference Room (2 hr. minimum)	Priority II- No Fee	Priority II- No Fee
Rentals	Community Center Rentals	Conference Room (2 hr. minimum)	Priority III- $35/hr	Priority III- $35/hr
Rentals	Community Center Rentals	Conference Room (2 hr. minimum)	Priority IV- $70/hr	Priority IV- $70/hr
Rentals	Community Center Rentals	Conference Room (2 hr. minimum)	Priority V- $130/hr	Priority V- $130/hr
Rentals	Community Center Rentals	Dance Studio. Craft Classroom (2 hr. minimum)	Priority II- No Fee	Priority II- No Fee
Rentals	Community Center Rentals	Dance Studio. Craft Classroom (2 hr. minimum)	Priority III- $20/hr	Priority III- $20/hr
Rentals	Community Center Rentals	Dance Studio. Craft Classroom (2 hr. minimum)	Priority IV- $40/hr	Priority IV- $40/hr
Rentals	Community Center Rentals	Dance Studio. Craft Classroom (2 hr. minimum)	Priority V- $100/hr	Priority V- $100/hr
Rentals	Community Center Rentals	Facility Attendant Fees	Priority II III IV- $30/hr	Priority II III IV- $30/hr
Rentals	Community Center Rentals	Facility Attendant Fees	Priority V- $60/hr	Priority V- $60/hr
Rentals	Community Center Rentals	Piano	Priority III IV- $20/day	Priority III IV- $20/day
Rentals	Community Center Rentals	Piano	Priority V- $80/day	Priority V- $80/day
Rentals	Community Center Rentals	Auditorium Screen Deposit	$250	$250
Rentals	Community Center Rentals	Auditorium Sound System (includes staff time)	$50/hr.	$50/hr.
Rentals	Field Rentals	Application Fee (non-refundable)2	$20	$20 - $30
Rentals	Field Rentals	Cricket Pitch	new	Priority II & III- N/A
Rentals	Field Rentals	Cricket Pitch	new	Priority IV- $30/hr
Rentals	Field Rentals	Cricket Pitch	new	Priority V- $60/hr
Rentals	Field Rentals	Rental Deposits	Priority II & III- N/A	Priority II & III- N/A
Rentals	Field Rentals	Rental Deposits	Priority IV & V- $750	Priority IV & V- $750
Rentals	Field Rentals	Soccer Field w/o lights (2hr. Minimum) (grass)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Field Rentals	Soccer Field w/o lights (2hr. Minimum) (grass)	Priority IV- $30/hr	Priority IV- $30/hr
Rentals	Field Rentals	Soccer Field w/o lights (2hr. Minimum) (grass)	Priority V- $60/hr	Priority V- $60/hr
Rentals	Field Rentals	Soccer Field w/ lights (2hr. Minimum) (grass)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Field Rentals	Soccer Field w/ lights (2hr. Minimum) (grass)	Priority II & IV- $40/hr	Priority II & IV- $40/hr
Rentals	Field Rentals	Soccer Field w/ lights (2hr. Minimum) (grass)	Priority V- $80/hr	Priority V- $80/hr
Rentals	Field Rentals	Softball/ Baseball Field w/o lights (2hr minimum)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Field Rentals	Softball/ Baseball Field w/o lights (2hr minimum)	Priority IV- $20/hr	Priority IV- $20/hr

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Field Rentals	Softball/ Baseball Field w/o lights (2hr minimum)	Priority V- $40/hr	Priority V- $40/hr
Rentals	Field Rentals	Softball/ Baseball Field w/ lights (2hr minimum)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Field Rentals	Softball/ Baseball Field w/ lights (2hr minimum)	Priority IV- $30/hr	Priority IV- $30/hr
Rentals	Field Rentals	Softball/ Baseball Field w/ lights (2hr minimum)	Priority V- $60/hr	Priority V- $60/hr
Rentals	Field Rentals	Tournaments: Field w/o lights	new	Priority II & III- N/A
Rentals	Field Rentals	Tournaments: Field w/o lights	new	Priority IV- $60/hr
Rentals	Field Rentals	Tournaments: Field w/o lights	new	Priority V- $120/hr
Rentals	Field Rentals	Tournaments: Field w/ lights	new	Priority II & III- N/A
Rentals	Field Rentals	Tournaments: Field w/ lights	new	Priority II & IV- $80/hr
Rentals	Field Rentals	Tournaments: Field w/ lights	new	Priority V- $160/hr
Rentals	Gym Fields Courts & Pool Rentals	Application Fee (non-refundable)	$20	$20 - $30
Rentals	Gym Fields Courts & Pool Rentals	Rental Deposit	Priority II & III- N/A	Priority II & III- N/A
Rentals	Gym Fields Courts & Pool Rentals	Rental Deposit	Priority IV & V- $750	Priority IV & V- $750
Rentals	Gym Fields Courts & Pool Rentals	Large Gymnasium (3 hr. minimum)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Gym Fields Courts & Pool Rentals	Large Gymnasium (3 hr. minimum)	Priority IV - $80	Priority IV - $80
Rentals	Gym Fields Courts & Pool Rentals	Large Gymnasium (3 hr. minimum)	Priority V- $160	Priority V- $160
Rentals	Gym Fields Courts & Pool Rentals	Tournaments: Large Gymnasium (3 hr. Minimum)	new	Priority II & III- N/A
Rentals	Gym Fields Courts & Pool Rentals	Tournaments: Large Gymnasium (3 hr. Minimum)	new	Priority IV- $140
Rentals	Gym Fields Courts & Pool Rentals	Tournaments: Large Gymnasium (3 hr. Minimum)	new	Priority V- $220
Rentals	Gym Fields Courts & Pool Rentals	Training Pool (2hr. minimum)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Gym Fields Courts & Pool Rentals	Training Pool (2hr. minimum)	Priority IV- $50/hr + 2 guards	Priority IV- $50/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Training Pool (2hr. minimum)	Priority V- $100/hr + 2 guards	Priority V- $100/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Yard Pool (2 hr. minimum)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Gym Fields Courts & Pool Rentals	Yard Pool (2 hr. minimum)	Priority IV- $60/hr + 2 guards	Priority IV- $60/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Yard Pool (2 hr. minimum)	Priority V- $120/hr + 2 guards	Priority V- $120/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Meter Pool (2 hr. minimum)	Priority II & III- N/A	Priority II & III- N/A

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Gym Fields Courts & Pool Rentals	Meter Pool (2 hr. minimum)	Priority IV- $70/hr + 2 guards	Priority IV- $70/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Meter Pool (2 hr. minimum)	Priority V- $140/hr + 2 guards	Priority V- $140/hr + 2 guards
Rentals	Gym Fields Courts & Pool Rentals	Facility Attendant/Scorekeeper (per attendant)2	Priority II & IV- $30/hr	Priority II & IV- $30/hr
Rentals	Gym Fields Courts & Pool Rentals	Facility Attendant/Scorekeeper (per attendant)2	Priority V- $60/hr	Priority V- $60/hr
Rentals	Gym Fields Courts & Pool Rentals	Lifeguard Fees (per Lifeguard)2	Priority II & IV- $15/hr	Priority II & IV- $15/hr
Rentals	Gym Fields Courts & Pool Rentals	Lifeguard Fees (per Lifeguard)2	Priority V- $30/hr	Priority V- $30/hr
Rentals	Higuera Adobe	Application Fee (non-refundable)1	$20	$20 - $30
Rentals	Higuera Adobe	Rental Deposit1	$750	$750
Rentals	Higuera Adobe	Auditorium	Priority II- No Fee	Priority II- No Fee
Rentals	Higuera Adobe	Auditorium	Priority III- $50/hr	Priority III- $50/hr
Rentals	Higuera Adobe	Auditorium	Priority IV- $100/hr	Priority IV- $100/hr
Rentals	Higuera Adobe	Auditorium	Priority V- $160/hr	Priority V- $160/hr
Rentals	Higuera Adobe	Facility Attendant Fees (per attendant)	Priority II III & IV- $30/hr	Priority II III & IV- $30/hr
Rentals	Higuera Adobe	Facility Attendant Fees (per attendant)	Priority V- $60/hr	Priority V- $60/hr
Rentals	Mobile Stage Rental	Rental (Actual Cost of towing plus hours of staff time each way for 2 staff) (within City of Milpitas city limits minimum 4 hours of use)	Priority V- N/A	Priority V- N/A
Rentals	Mobile Stage Rental	Deposit	Priority II & IV- $1 000	All Priorities- $1 000
Rentals	Mobile Stage Rental	Deposit	Priority III & V - N/A	Priority III & V - N/A
Rentals	Mobile Stage Rental	Rental	Priority II III IV- Actual cost of towing $400/day plus 2 hours of staff time each way or 2 staff	All Priorities - $1250 - $2500/per day
Rentals	Mobile Stage Rental	Light Package	new	$100 - $1000per rental based on needs and packages
Rentals	Mobile Stage Rental	Light Mixer	new	$100 - $400 per rental based on needs and days
Rentals	Mobile Stage Rental	Light Tech	new	$30 - $100 per hour based on cost of tech
Rentals	Mobile Stage Rental	Stage Extentions/Stage Risers	new	$100 - $500 per rental based on needs and packages

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Mobile Stage Rental	Staff Fee	new	$30 - $100 per hour based on needs actual costs of staff used in rental time for load in/out and transportation
Rentals	Mobile Stage Rental	Sound Package	new	$100 - $2500 per rental based on needs and packages
Rentals	Mobile Stage Rental	Sound Tech	new	$30 - $100 per hour based on cost of tech
Rentals	Mobile Stage Rental	Audio Mixer	new	$100 - $400 per rental based on needs and Days
Rentals	Mobile Stage Rental	Mileage	new	$0.30 - $2.00 per mile outside city limits based on current gas prices
Rentals	Mobile Stage Rental	ADA Ramp	new	$250
Rentals	Mobile Stage Rental	Truss Roof Cover/ Banner Support	new	$100 - $400 per rental based on needs and packages
Rentals	Picnic Area Rentals	Application Fee (non-refundable)	$20	$20 - $30
Rentals	Picnic Area Rentals	Rental Deposit: Large Picnic Area	$250	$250
Rentals	Picnic Area Rentals	Small Parks with Restrooms (50 or less capacity)1	Priority III & IV- $80/day/area	Priority III & IV- $80/day/area
Rentals	Picnic Area Rentals	Small Parks with Restrooms (50 or less capacity)1	Priority V- $140/day/area	Priority V- $140/day/area
Rentals	Picnic Area Rentals	Small Parks without Restrooms (50 or less capacity)1	Priority III & IV- $60/day/area	Priority III & IV- $60/day/area
Rentals	Picnic Area Rentals	Small Parks without Restrooms (50 or less capacity)1	Priority V- $120/day/area	Priority V- $120/day/area
Rentals	Picnic Area Rentals	Medium Parks - 50 to 100 or less capacity1	Priority III & IV- $140/day/area	Priority III & IV- $140/day/area
Rentals	Picnic Area Rentals	Medium Parks - 50 to 100 or less capacity1	Priority V- $200/day/area	Priority V- $200/day/area
Rentals	Picnic Area Rentals	Large Parks- More than 100+ capacity1	Priority III & IV- $320/day/area	Priority III & IV- $320/day/area
Rentals	Picnic Area Rentals	Large Parks- More than 100+ capacity1	Priority V- $380.00/day/area	Priority V- $380.00/day/area
Rentals	Sal Cracolice Facility Rental	Application Fee (non-refundable)	$20	$20 - $30
Rentals	Sal Cracolice Facility Rental	Rental Deposits	$750	$750
Rentals	Sal Cracolice Facility Rental	Auditorium w/kitchenette (3hr. Minimum)	Priority II- No Fee	Priority II- No Fee
Rentals	Sal Cracolice Facility Rental	Auditorium w/kitchenette (3hr. Minimum)	Priority III- $80/hr.	Priority III- $80/hr.

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Sal Cracolice Facility Rental	Auditorium w/kitchenette (3hr. Minimum)	Priority IV- $160/hr.	Priority IV- $160/hr.
Rentals	Sal Cracolice Facility Rental	Auditorium w/kitchenette (3hr. Minimum)	Priority V- $220/hr.	Priority V- $220/hr.
Rentals	Sal Cracolice Facility Rental	Facility Attendant Fees (per attendant)	Priority II III & IV- $30/hr.	Priority II III & IV- $30/hr.
Rentals	Sal Cracolice Facility Rental	Facility Attendant Fees (per attendant)	Priority V- $60/hr	Priority V- $60/hr
Rentals	Sal Cracolice Facility Rental	Amphitheatre	Priority II III & IV- $120/day	Priority II III & IV- $120/day
Rentals	Sal Cracolice Facility Rental	Amphitheatre	Priority V- $180/day	Priority V- $180/day
Rentals	Sal Cracolice Facility Rental	Meeting Room	Priority II- No Fee	Priority II- No Fee
Rentals	Sal Cracolice Facility Rental	Meeting Room	Priority III- $45/hr	Priority III- $45/hr
Rentals	Sal Cracolice Facility Rental	Meeting Room	Priority IV- $90/hr	Priority IV- $90/hr
Rentals	Sal Cracolice Facility Rental	Meeting Room	Priority V- $150/hr	Priority V- $150/hr
Rentals	Senior Center Rentals	Application Fee (non-refundable)	$20	$20 - $30
Rentals	Senior Center Rentals	Rental Deposits: Auditorium1	$750	$750
Rentals	Senior Center Rentals	Rental Deposits: Classrooms	Priority II- No Fee	Priority II- No Fee
Rentals	Senior Center Rentals	Rental Deposits: Classrooms	Priority III- $75/hr	Priority III- $75/hr
Rentals	Senior Center Rentals	Rental Deposits: Classrooms	Priority IV- $150/hr	Priority IV- $150/hr
Rentals	Senior Center Rentals	Rental Deposits: Classrooms	Priority V- $240/hr	Priority V- $240/hr
Rentals	Senior Center Rentals	Community Room Auditorium (3hr. Minimum)	Priority II- No Fee	Priority II- No Fee
Rentals	Senior Center Rentals	Community Room Auditorium (3hr. Minimum)	Priority III- $90/hr	Priority III- $90/hr
Rentals	Senior Center Rentals	Community Room Auditorium (3hr. Minimum)	Priority IV- $180/hr	Priority IV- $180/hr
Rentals	Senior Center Rentals	Community Room Auditorium (3hr. Minimum)	Priority V- $240/hr	Priority V- $240/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Full)	Priority II- No Fee	Priority II- No Fee
Rentals	Senior Center Rentals	Classroom 140 and 141 (Full)	Priority III- $45/hr	Priority III- $45/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Full)	Priority IV- $90/hr	Priority IV- $90/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Full)	Priority V- $150/hr	Priority V- $150/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Half)	Priority II- No Fee	Priority II- No Fee
Rentals	Senior Center Rentals	Classroom 140 and 141 (Half)	Priority III- $25/hr	Priority III- $25/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Half)	Priority IV- $50/hr	Priority IV- $50/hr
Rentals	Senior Center Rentals	Classroom 140 and 141 (Half)	Priority V- $110/hr	Priority V- $110/hr
Rentals	Senior Center Rentals	Facility Attendant Fees (per attendant)	Priority II III & IV- $30/hr	Priority II III & IV- $30/hr

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Rentals	Senior Center Rentals	Facility Attendant Fees (per attendant)	Priority V- $60/hr	Priority V- $60/hr
Rentals	Senior Center Rentals	Dance Studio	Priority II- No Fee	Priority II- No Fee
Rentals	Senior Center Rentals	Dance Studio	Priority III- $20/hr	Priority III- $20/hr
Rentals	Senior Center Rentals	Dance Studio	Priority IV- $40/hr	Priority IV- $40/hr
Rentals	Senior Center Rentals	Dance Studio	Priority V- $100/hr	Priority V- $100/hr
Rentals	Senior Enrichment Fees(50+ years of age)	Garden Plots (Residents Only)	$15/year	$15/year
Rentals	Tennis Court Rentals	Deposit1	$250	$250
Rentals	Tennis Court Rentals	Tennis Courts w/o lights (per court)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Tennis Court Rentals	Tennis Courts w/o lights (per court)	Priority IV - $8/hr.	Priority IV - $8/hr.
Rentals	Tennis Court Rentals	Tennis Courts w/o lights (per court)	Priority V- $10/hr	Priority V- $10/hr
Rentals	Tennis Court Rentals	Tennis Courts w/ lights (per court)	Priority II & III- N/A	Priority II & III- N/A
Rentals	Tennis Court Rentals	Tennis Courts w/ lights (per court)	Priority IV- $10/hr	Priority IV- $10/hr
Rentals	Tennis Court Rentals	Tennis Courts w/ lights (per court)	Priority V- $12/hr	Priority V- $12/hr
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/o lights	new	Priority II & III- N/A
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/o lights	new	Priority IV- $26/hr
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/o lights	new	Priority V- $52/hr
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/ lights	new	Priority II & III- N/A
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/ lights	new	Priority IV- $30/hr
Rentals	Tennis Court Rentals	Tournament: Tennis Courts w/ lights	new	Priority V- $60/hr
Rentals		Rental Deposits: All other rooms1	$200	$200
Sales	Department General Fees	Recreation Services Merchandise	Actual cost to City + appropriate market % mark-up	Actual cost to City + appropriate market % mark-up
Seniors	Department General Fees	Milpitas Resident Senior Citizen Discount (50 years+)	25% off any non-senior center based class	25% off any non-senior center based class
Seniors	Senior Enrichment Fees(50+ years of age)	Senior Center Programs-Classes	$2 - $5/hour per hr. of instruction	$2 - $5/hour per hr. of instruction
Seniors	Senior Enrichment Fees(50+ years of age)	Senior Center Citizen Trip Admin Fee	$5- 10/avity (depending upon trip costs)	$5 - 10/activity (depending upon trip costs)
Seniors	Senior Enrichment Fees(50+ years of age)	Misc. Senior Center staff-run Programs/Events (e.g. Holiday Dinner Tea Parties Cooking Classes Dances Misc. Activities)	$0.00 - $15	$0.00 - $15
Seniors	Senior Enrichment Fees(50+ years of age)	Senior Center Program/Class Non-Resident Fee	$10/class	$10/class

PROGRAM FEE ANALYSIS

Fee Type	Department Su category	Description	2018-19 (Current) Fee	2019-20 Proposed Fee
Seniors	Senior Enrichment Fees(50+ years of age)	Senior Center Fitness Room	$1.50/visit	$1.50/visit
Special Events	Special Event Fees	Special Event Entrance Fee	$0.00 - $50	$0.00 - $50
Special Events	Special Event Fees	Special Events Activity Fee	$0.00 - $15	$0.00 - $15
Special Events	Special Event Fees	Special Event Vendor Fees	$30-$275 per space OR 5% - 20% net sales	$100-$500 per space OR 5% - 20% net sales
Special Events	Special Event Fees	Special Event Non-Profit Vendor Fees	$30 - $125 per space OR 0% - 10% net sales	$0.00 - $250 per space OR 0% - 10% net sales
Youth	Youth Enrichment Fees	Youth Sports User Fee (Outdoor)	$10/per player per season	$10/per player per season
Youth	Youth Enrichment Fees	Youth Sport User Fee (Indoor)	$20/per player per season	$20/per player per season
Youth	Youth Enrichment Fees	Junior Warriors Basketball League	new	$129 - $160/per player per season
Youth	Youth Enrichment Fees	After School Program	$8- $12/day for residents	$8- $12/day for residents
Youth	Youth Enrichment Fees	After School Program	$8 - $12/day for non-residents with additional $20/year	$8 - $12/day for non-residents with additional $20/year
Youth	Youth Enrichment Fees	Late fee for After-School/Day Camp Programs	$10/10 minutes – 1st offense & 2nd offense $25/10 minutes – after 3rd offense	$10/10 minutes – 1st offense & 2nd offense $25/10 minutes – after 3rd offense
Youth	Youth Enrichment Fees	Day Camp (Regular Day) – Staff Run	$175 - $195/week	$175 - $195/week
Youth	Youth Enrichment Fees	Trip Week Day Camp	new	$299 - $350/week
Youth	Youth Enrichment Fees	Extended Care Day Camp	$40.00/week	$40 week
Rentals	Special Event Venue/Open Space	Application Fee (non-refundable	New	$30/application
Rentals	Special Event Venue/Open Space		New	$1000/day
Rentals	Special Event Venue/Open Space		New	Priority II & III - $990 day
Rentals	Special Event Venue/Open Space		New	Priority IV - $1 980/day
Rentals	Special Event Venue/Open Space		New	Priority V - $2 970/day
Rentals	Special Event Venue/Open Space		New	$30/hour

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PROGRAM FEE ANALYSIS

Appendix B – Comparative Assessment of Program Offerings

The following table shows a comparative assessment of the other comparative communities and indicates whether or not they offer the same course or a similar program to that provided by the City of Milpitas. Programs highlighted in green are ones where three or more of the comparative entities offered a similar program. These common programs were utilized in the detailed fee comparison to understand how the programming fees for the City of Milpitas compared to the comparable communities.

Comparative Assessment of Recreation Programs

Classes offered	Milpitas	Fremont	Mountain View	Redwood City	San Jose
Parent & Me:					
Music Together (ages 0-4)		X		X	
Music Together Family Favorites (ages 0-4)		X			
Dramatic Art Class (ages 1.5-3)					
Mommy/Daddy & Me Soccer (ages 2-3.5)		X		X	X
Parent & Me Basketball (ages 2-3.5)		X			
Parent & Me Tennis (ages 4+)					
Little Ranchers (ages 2-5)				X	
Pre-K Enrichment:					
Little Stars Learning Academy 1 (ages 3-4)		X			X
Little Stars Learning Academy 2 (ages 4-5)		X			X
Phonics Level 1 (ages 4-5)		X			
Phonics Level 2 (ages 5-6)					
Tot/Pre Soccer (ages 3.5-5)		X		X	X
Little Artist (ages 3.5-5)					X
First Shots Basketball (ages 3.5-5)		X		X	X
Camps:					
Winter Breaks Camps (ages 5-12)					
Penguins (ages 5-6)					
Polar Bears (ages 7-12)					
Extended Care (ages 5-12)		X			
Camp Connector (ages 5-12)					
Presidents Week Camp (ages 5-12)					

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PROGRAM FEE ANALYSIS

Classes offered				
Milpitas	Fremont	Mountain View	Redwood City	San Jose
Camp Washington (ages 5-6)				
Camp Lincoln (ages 7-12)				
Extended Care (ages 5-12)	X			
Camp Connector (ages 5-12)				
Thanksgiving Horse Camp (ages 7+)				
Christmas Holiday Horse Camp (ages 7+)			X	
New Year s Basketball Camp (ages 7-13)				
Holiday Break Basketball Camp (ages 7-13)		X		
Youth:				
Clay Sculpture (ages 5-12)	X			
3D Pen Doodling (ages 6-12)				
Multi Media Arts (ages 5-12)				X
Improv for Kids (ages 6-12)	X	X	X	
Advanced English: Persuasive Writer (ages 6-11)	X			
Advanced English: Creative Writer (ages 6-11)	X			
Public Speaking: Informative Speech (ages 6-11)	X			X
Public Speaking: Impromptu (ages 6-11)	X			
Public Speaking & Advanced English (ages 6-11)	X			
FREE Open House (ages 6-11)				
LEGO FUNgineering (ages 4-9)	X		X	X
LEGO EV3 Robotics (ages 7-13)		X		
Food Explorers Club (ages 8-13)				
Create - Cook - Learn with Junios Chef Stars (ages 6-12)	X		X	
Cartoon Anime (ages 7-13)				X
Drawing and Cartooning (ages 6-11)	X		X	X
Mobile App Development (ages 9-13)				
Youth: Programming				
Scratch Coding (ages 7-12)				
Junior Programmers (ages 6-8)				
My First Code with Python (Beginner Python Programming ages 9-13)				
Fun Art with Scratch (ages 7-10)				
Computer Coding: Python for Kids: Part 1 (ages 10-15)				
Computer Coding: Python for Kids: Part 2 (ages 10-15)				
Computer Coding: Web Design: JavaScript (ages 10-15)				

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PROGRAM FEE ANALYSIS

Classes offered				
Milpitas	Fremont	Mountain View	Redwood City	San Jose
Computer Coding: Web Design: HTML/CSS (ages 10-15)				
Youth: Dance and Music				
Tiny Stars Dance and Learn (ages 2.5-4)	X	X	X	X
Ballet Level 1 (ages 4-7)	X			X
Tap and Ballet Combo Level 1 (ages 3-5)		X	X	X
Hip Hop & Break Dance (ages 6-13)	X	X	X	X
Beginning Piano/Keyboard Lessons (ages 6-10)	X	X	X	X
Junior Warriors Basketball League:				
Grades 1st - 2nd				
Grades 3rd - 4th				
Grades 5th - 6th				
Youth: Sports				
Small Basketball Games (ages 5-7)	X			
Basketball Skills and Scrimmage (ages 8-14)		X		X
Brain Sport: Double Wicket Cricket (ages 5-12)				
Hoop Group Basketball Club (ages 7-13)		X		X
Beginner/Advanced Beginner Tennis (ages 6-10)			X	X
Peewee Tennis (ages 4-6)	X		X	
Floor Gym (ages 7-12)	X	X		
Gymsters (ages 3.5-6)	X	X	X	X
Quick Start Slams Tennis (ages 4-6)	X			
Satellites Tennis (ages 8-10)	X		X	X
Junior Star Tennis (ages 10-18)	X			X
USTA Tournament Training Program (TTP ages 10-18)				
Volleyball Development Clinic (ages 7-13)	X	X		X
Futsal (ages 3.5-12)		X		X
Soccer 1: Techniques & Teamwork (ages 5-6)		X	X	X
Soccer 2: Skill & Scrimmages (ages 7-10)		X	X	X
Capoeira (ages 5-12)				
Shotokan Karate (ages 5+)	X	X		
Horseback Riding Lessons (ages 8+)			X	
Horseback Trail Rides (ages 8+)			X	
Saddle Club (ages 7+)			X	
Teens:				
SAT Prep -Reading & Writing (ages 13+)	X			
SAT Prep - Math (ages 13+)	X			
Food Explorers Club (ages 14-18)	X		X	
Art for Teens (ages 13-18)				
Taiko (ages 15+)				
Youth Basketball Elite (ages 15-18)				
Improv for Teens (ages 13-18)				

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PROGRAM FEE ANALYSIS

Classes offered				
Milpitas	Fremont	Mountain View	Redwood City	San Jose
Online Driver Education Course (ages 15+)				
Bolly Beats Teens (ages 13-18)	X			
CPR/AED/First Aid Training (ages 9+)				
Web Design (ages 11-17)				
Game Design with Python (ages 11-17)				
Bootstrap - Data Science (ages 14-17)				
Bootstrap - Algebra (ages 11-17)				
Introduction to Photoshop (ages 13+)				
Beginning Digital Photography (ages 13+)	X			
Intermediate Digital Photography (ages 13+)	X			
Aquatics:				
Tiny Tots Swim (ages 3-5)	X			
Beginner Swim (ages 6-14)	X			
Adult Swim (ages 15+)	X	X		
Adult Classes:				
Tai Chi for Fitness 2 (ages 18+)				
Tai Chi for Fitness - Modified (ages 18+)				
Sleep Yoga (ages 18+)	X	X	X	
Taiko (ages 15+)				
Capoeira (ages 13-50)				
Enjoy Singing (ages 18+)				
Bolly Beats Adults (ages 18+)	X	X		
Adult Basic Tennis (ages 18+)	X		X	X
Adult Beginner/Intermediate Tennis (ages 18+)	X		X	X
Ikebana Flower Arrangement (ages 18+)				
CPR/AED/First Aid Training (ages 18+)				
Portrait Photography Basics (ages 18+)	X			
Night Scene Photography (ages 18+)				
Adults 50+ Classes:				
Chinese Brush Painting (age 50+)				X
Spring Chickens Exercise (ages 50+)				
AARP Smart Driver (ages 50+)				X
Senior Oil Painting (ages 50+)				
Line Dance (ages 50+)				X

In addition to evaluating which programs offered by Milpitas were provided by other communities an assessment was also undertaken to identify programs that other communities are offering that are not currently provided by the City of Milpitas. This assessment is summarized in the following table. Those programs where multiple entities provide the course and which may be suitable for the City of Milpitas to consider implementing fees in the future are highlighted in green for ease of identification.

PROGRAM FEE ANALYSIS

Classes Not Offered y Milpitas:	Fremont	Mountain View	Redwood City	San Jose
Academic Enrichment Camps:				
Essay Writing: Focus and Accuracy (ages 8-11)	X			
Mad Science:				
Energy Forces & Flight (ages 6-11)	X			
Earth Wind & Inspire (ages 6-11)	X			
Essay Writing: Student Publication (ages 8-11)	X			
Public Speaking: Student Leadership (ages 8-11)	X			
Camp Max Holiday Fun (ages 5-8 9-12) (building stuff)	X			
Winter Skate Camp (ages 7-13)	X			
Mad Science:				
Movin and Groovin (ages 6-11) (non-renewable resources for power)	X			
Torres Chess & Music Academy:				
Chess Beginner (ages 5-13)	X		X	
Chess Advanced (ages 5-13)	X		X	
Warm Springs After School Care and Homework (ages 5-12)	X			
Communication Academy:				
Advanced English & Public Speaking (ages 11-14)	X			
Math Olympiad & Public Speaking (ages 9-11)	X			
Public Speaking & Math Olympiad (ages 6-8)	X			
Art:				
Ceramics:				
Beginner s Pottery (ages 7-15)	X			
Advanced Pottery (ages 8-15)	X			
Ceramics for Adults (ages 15+)	X			
Cooking:				
ChocolatBella: Decadent Desserts Workshop (ages 15+)	X			
Dancing:				
Adult Ballet (ages 16+)	X		X	
Adult Beginning Tap (ages 16+)	X		X	
Adult Advanced Tap (ages 16+)	X			
Adult Tap for Seniors (ages 55+)	X			
Hula Hawaiian Style (ages 16+)	X			

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PROGRAM FEE ANALYSIS

Classes Not Offered y Milpitas:	Fremont	Mountain View	Redwood City	San Jose
umba:				
umba Dance Fusion (ages 18+)	X		X	X
umba Sweat (ages 16+)	X			
Belly Dancing		X	X	
Martial Arts:				
Beginning Aikido for Kids (ages 6-12)	X			
KENDO - The Way of the Sword (ages 7+)	X			
Tiny Tigers (ages 5-7)	X			
Krav Maga for Kids (ages 8-13)	X			
Krav Maga / Self Defense Training (ages 18-50)	X			
Tae Kwon Do (ages 5-19)		X	X	
Music:				
Guitar (ages 6-16)	X	X		X
Adult Guitar (ages 17+)	X	X		X
Violin Study (ages 4+)	X	X		
Group Guitar Beginners (ages 7-13)	X			
Group Violin Class (ages 6-10)	X			
Badminton:				
Beginner Level (ages 5-8)	X			
Level I (ages 8+)	X			
Level II (ages 8+)	X			
Level III (ages 11+)	X			
Badminton for Adults (ages 18+)	X			
Golf:				
Introduction to Golf (ages 18+)	X			
Junior Academy (ages 7-17)	X			
Skating:				
Skate Clinics (ages 6-12)	X			
Skateboarding Lessons - Beginning Level (ages 6-12)	X		X	X
Skateboarding Lessons - Intermediate Level (ages 6-12)	X			X
Tennis:				
Red Ball (ages 5-6 7-8)	X		X	X
Orange Ball (ages 9-10)	X		X	X
Fremont Tennis Academy (ages 11-17)	X		X	
Adults beginner (ages 18+)	X		X	
Adults Intermediate (ages 18+)	X		X	
Ice Skating (ages 15+)		X	X	

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RECREATION VALUE SYSTEM

The following section contains the Recreational Value System Matrix, a City-developed tool to assess park amenities in the Milpitas Park and Recreation system. This matrix is intended to provide a method for quantifying current park offeringws and prioritizing future improvements.

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RECREATIONAL VALUE SYSTEM *(RVS)*

To maximize the recreation opportunities for the Milpitas community, the City has developed a recreation experience matrix to guide existing and future park improvements. Using this measurement tool, all classification of parks are required to provide a diversity of active, contemplative and social gathering experiences.

ACTIVE EXPERIENCES

- Play sports or games: run, walk or bicycle; climb or mountain bike; other outdoor exercise
- Use trails, athletic fields, open spaces/lawns, sport courts, playgrounds, interactive elements

CONTEMPLATIVE EXPERIENCES

- Enjoy nature, read a book, or learn something; relax/meditate/reflect; escape chaos
- Use natural areas, community garden, eating, shade trees, small green spaces, public art, habitat/sensory gardens

SOCIAL GATHERING EXPERIENCES

- Festivals, concerts, outdoor movies, parades; visit farmers' markets, historic sites; meet friends, have a picnic, see neighbors
- Use plazas with seating, small sport courts, amphitheaters/stages, picnic tables, game areas, reservable picnic spaces, dog parks

Under this system, each park amenity is assigned a point value. Each park classification has a target range of required points in each experience category.

RECREATIONAL VALUE SYSTEM - REQUIRED POINTS

PARK TYPE	ACTIVE	CONTEMPLATIVE	SOCIAL	SUPPORT FACILITIES	TOTAL
Community Park					
Neighborhood Park - Level 1					
Neighborhood Park - Level 2					
Special Use Park					
Urban Park					
Linear Park					

RECREATIONAL VALUE SYSTEM - CHECKLIST

	Points Possible	Points Received
A. ACTIVE USES		
Sport Courts *(basketball, volleyball, tennis, pickleball, handball)*	2	
Sport Fields *(soccer, baseball, softball, cricket, football)*	4	
Interactive Water Feature *(pool, splash pad, water play)*	6	
Playground		
• *Large with parent seating*	3	
• *Small with parent seating*	2	
• *Destination/All-Abilities/Inclusive*	4	
Teen Focused Area *(ping pong, climbing wall)*	2	
Special Interest *(basketball, volleyball, tennis, pickleball, handball)*		
• *Off-leash dog area*	2	
• *Pump track/bike park*	4	
• *Skate park*	4	
• *Fitness stations/area*	2	
TOTAL:		
B. CONTEMPLATIVE USES		
Loop Trail	1	
Nature Area *(tree grove, pollinator garden)*	2	
Community Garden	2	
Open Multi-use Lawn	1	
Drop-in Picnic Areas (5-10 tables)	1	
Art Element/Fountain	1	
Interpretive Signage System	1	
TOTAL:		

	Points Possible	Points Received
C. SOCIAL USES		
Large Amphitheater *(>50 person capacity)*	4	
Small Amphitheater *(<50 person capacity)*	2	
Plaza Area *(15-50 person capacity)*	2	
Seating Area *(6-12 person capacity)*	1	
Large Sheltered Group Picnic Area *(>30 person capacity)*	4	
Small Sheltered Group Picnic Area *(<30 person capacity)*	3	
Concession Facility	4	
Meeting Rooms	2	
Host Community Event *(festival, farmers market)*	4	
Host Neighborhood Event *(festival, farmers market)*	4	
TOTAL:		
D. SUPPORT FACILITIES		
Restrooms	6	
Small Parking Lot *(<10 car capacity)*	2	
Large Parking Lot *(>10 car capacity)*	4	
Event Power	2	
WIFI	1	
Connection to Trail(s)	2	
TOTAL:		
E. REQUIRED AMENITIES		
Bike Racks		
Drinking Fountain		
Security Lighting		
Benches/Seating		

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E APPENDIX

FACILITY CONDITION ASSESSMENT

The following section contains the Facility Condition Assessment, which was prepared by EMG for the City of Milpitas in 2018. The assessment includes all park restrooms and snack shacks in the City's park system.

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FACILITY CONDITION ASSESSMENT

FACILITY CONDITION ASSESSMENT

Prepared for:

City of Milpitas
1265 North Milpitas Boulevard
Milpitas, California 95035
Tony Ndah

FACILITY CONDITION ASSESSMENT

Park Restrooms and Snack Shacks

Milpitas, Califonria 95053

PREPARED BY:
EMG
10461 Mill Run Circle, Suite 1100
Owings Mills, Maryland 21117
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EMG CONTACT:
Matthew Anderson
Program Manager
800.733.0660 x7613
mfanderson@emgcorp.com

EMG Project Number: 131644.18R000-017.017

Date of Report: December 27, 2018

On Site Date: September 23-24, 2018 and October 3-4, 2018

engineering | environmental | capital planning | project management

FACILITY CONDITION ASSESSMENT

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FACILITY CONDITION ASSESSMENT

1 Executive Summary

1.1 Property Summary and Assessment Details

General Information	
Addresses	Dixon Landing Park Restroom: 1771 Milmont Drive Russel Middle School : 1500 Escuela Parkway, Milpitas Cardoza Park: 1356 Kennedy Drive, Milpitas Augustine Memorial Park: Cortex and Coelho, Milpitas Gill Memorial Park Restroom: 611 Paseo Refugio, Milpitas Jose Higuera Adobe: Wessex Place/North Park Victoria, Milpitas Starlight Park: 450 Rudyard Drive, Milpitas John McDermott Park: Alvarez Court / Abel, Milpitas Hall Memorial Park: 398 La Honda Drive, Milpitas Parc Metro Easts: Curtis Avenue, Milpitas Bob McGuire Park: Garden Street/South Milpitas Blvd. Pinewood Park : 298 Lonetree Court, Milpitas Alviso Adobe Park Restrooms: 2087 Alviso Adobe Court, Milpitas Foothill Park : 400 Roswell, Milpitas Murphy Park : 1588 Saratoga Drive, Milpitas Cerano Park : 751-823 Murphy Ranch Road, Milpitas Sinnott Park : 1501 Clearlake Avenue, Milpitas
Management Point of Contact	City of Milpitas, Mr. Tony Ndah 408.586.2602 phone tndah@ci.milpitas.ca.gov email
Property Type	Restroom and Snack Shacks
Number of Buildings	17
Date(s) of Visit	September 23 - 24, October 3 - 4, 2018
On-site Point of Contact (POC)	John McCarthy
Assessment & Report Prepared By	Kay van der Have & Adrian Reth

FACILITY CONDITION ASSESSMENT

Reviewed By	Kathleen Sullivan for Matthew Anderson Program Manager manderson@emgcorp.com 800.733.0660 x7613

Building Name	Gross Square Footage	Built/Renovated
Dixon Landing Park Restroom	1200	1970/2012
Russell Middle School	800	1999
Cardoza Park	280	1960s
Augustine Memorial Park	280	1960s
Gill Memorial Park Restroom	240	1960s
Jose Higuera Adobe Park	500	1960s/2017
Starlight Park	280	1960s
John McDermott Park	280	2014
Hall Memorial Park	240	1800
Parc Metro East	280	2000s
Bob McGuire Park	240	2016
Pinewood Park	280	1960s
Alviso Adobe Park Restroom	500	2013
Foothill Park	280	1960s
Murphy Park	280	1960s
Cerano Park	600	2012
Sinnott Park	280	1960s
Total SF	**6,840**	

FACILITY CONDITION ASSESSMENT

Areas Observed

The interior spaces were observed in order to gain a clear understanding of the properties overall condition. Other areas accessed included the exterior of the property, and the accessible roofs.

Key Spaces Not Observed

Areas of note that were either inaccessible or not observed for other reasons are listed here:

- Russell Middle School, Roof, Lack of Ladder
- Mechanical Space, Bob McGuire. The mechanical space is in the adjoining community center, the community center was locked.

FACILITY CONDITION ASSESSMENT

1.2 Significant/Systemic Findings or Deficiencies

Historical Summary

Most of the restrooms appear to have been built in the 1960s. A few have been renovated in the past 10 years, but most appear to be very much as they were when originally built.

Architectural

Most of the restrooms have concrete masonry unit (CMU) wall construction and wood framed roof construction. Most of the CMU walls look good, two restrooms, Hall and Foothill, were noted to have significant vertical cracking. All the modified bituminous roofs are nearing the end of their lives and will need replacement within the next three years. Termite damage and or dry rot were seen in approximately half of the restrooms. Interior and exterior painting is budgeted and anticipated.

Mechanical, Electrical, Plumbing & Fire (MEPF)

Many distribution panels appear to be original, and replacement is recommended. Much of the plumbing also appears to be original, and appears to be in serviceable condition. Heat is supplied only in the Thomas Russel Middle School Restroom; no others are conditioned.

Site

The sites were not reviewed.

Recommended Additional Studies

Termite damage and/or dry rot were noted in several restrooms. A professional consultant must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The cost of this study is included in the cost tables. A budgetary cost allowance to replace the roof structure is also included.

There is possible structural damage at Foothill Park. A professional engineer must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The cost of this study is included in the cost tables. Due to the ambiguity of the required repair scope at the time of this assessment, the cost for any possible subsequent repairs is not included.

Many of the restrooms were identified as having major or moderate accessibility issues. EMG recommends a study be performed to take measurements, provide additional itemized details, research local requirements, and, if necessary, estimate the scope and cost of any required improvements. The cost of this study is included in the cost tables. Due to the lack of measurements and itemized findings at this point in time, the costs for any possible subsequent repairs or improvements are not currently included.

FACILITY CONDITION ASSESSMENT

1.3 Facility Condition Index (FCI)

One of the major goals of the FCA is to calculate the FCI, which gives an indication of a building's overall condition. Two FCI ratios are calculated and presented, the Current Year and Ten-Year. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value. Similarly, the Ten-Year FCI is the ratio of anticipated Capital Reserve Needs over the next ten years to the Current Replacement Value.

FCI Ranges & Description	
0 – 5%	In new or well-maintained condition, with little or no visual evidence of wear or other deficiencies.
5 – 10%	Subjected to wear but is still in a serviceable and functioning condition.
10 – 60%	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
60% and above	Has reached the end of its useful or serviceable life. Renewal is now necessary.

The graphs above and tables below represent summary-level findings for the FCA. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall strategy that can serve as the basis for a portfolio-wide capital improvement funding strategy. Key findings from the assessment include:

FACILITY CONDITION ASSESSMENT

PARK RESTROOMS AND SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

Facility	Cost/SF	Total SF	Replacement Value	Current	3-Year	5-Year	10-Year
Park Restrooms - Snack Shacks	$530	6,840	$3,625,200	3.0%	7.0%	12.0%	19.0%
Park Restrooms - Snack Shacks / Alviso Adobe Park Restroom	$530	500	$265,000	0.0%	1.0%	3.0%	3.0%
Park Restrooms - Snack Shacks / Augustine Memorial Park	$530	280	$148,400	3.0%	8.0%	13.0%	30.0%
Park Restrooms - Snack Shacks / Bob Mcguire Park	$530	240	$127,200	0.0%	0.0%	0.0%	15.0%
Park Restrooms - Snack Shacks / Cardoza Park	$530	280	$148,400	5.0%	10.0%	11.0%	18.0%
Park Restrooms - Snack Shacks / Cerano Park	$530	600	$318,000	0.0%	0.0%	1.0%	4.0%
Park Restrooms - Snack Shacks / Dixon Landing Park Restroom	$530	1,200	$636,000	0.0%	0.0%	1.0%	5.0%
Park Restrooms - Snack Shacks / Foothill Park	$530	280	$148,400	0.0%	6.0%	21.0%	25.0%
Park Restrooms - Snack Shacks / Gill Memorial Park Restroom	$530	240	$127,200	0.0%	8.0%	21.0%	38.0%
Park Restrooms - Snack Shacks / Hall Memorial Park	$530	240	$127,200	5.0%	16.0%	23.0%	24.0%
Park Restrooms - Snack Shacks / John McDermott Park	$530	280	$148,400	0.0%	0.0%	0.0%	0.0%
Park Restrooms - Snack Shacks / Jose Higuera Adobe	$530	500	$265,000	0.0%	0.0%	5.0%	13.0%
Park Restrooms - Snack Shacks / Murphy Park	$530	280	$148,400	0.0%	4.0%	12.0%	18.0%
Park Restrooms - Snack Shacks / Park Metro East	$530	280	$148,400	0.0%	6.0%	15.0%	21.0%
Park Restrooms - Snack Shacks / Pinewood Park	$530	280	$148,400	22.0%	25.0%	32.0%	42.0%
Park Restrooms - Snack Shacks / Sinnott Park Restroom	$530	280	$148,400	4.0%	14.0%	30.0%	36.0%
Park Restrooms - Snack Shacks / Starlight Park	$530	280	$148,400	0.0%	17.0%	27.0%	37.0%
Park Restrooms - Snack Shacks / Thomas Russell middle school	$530	800	$424,000	2.0%	12.0%	15.0%	28.0%

FACILITY CONDITION ASSESSMENT

1.4 Immediate Repairs

Immediate Repairs Report

11/12/2018

Location Name	Cost Description	Quantity	Unit	Unit Cost	Subtotal	Deficiency Repair Estimate *
Park Restrooms - Snack Shacks / Alviso Adobe Park Restroom	Fire Alarm System, Office Building, Install	500	SF	$2.36	$1,180	$1,390
Park Restrooms - Snack Shacks / Augustine Memorial Park	Drinking Fountain, Vitreous China, Replace	1	EA	$1,938.99	$1,939	$2,284
Park Restrooms - Snack Shacks / Augustine Memorial Park	Floor Drain, , Replace	1	EA	$406.91	$407	$479
Park Restrooms - Snack Shacks / Augustine Memorial Park	Distribution Panel, 100 AMP, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Augustine Memorial Park	ADA, Restroom, Hand Dryer, Modify	2	EA	$850.00	$1,700	$2,003
Park Restrooms - Snack Shacks / Cardoza Park	Exterior Door, Steel, Replace	2	EA	$950.12	$1,900	$2,238
Park Restrooms - Snack Shacks / Cardoza Park	Interior Floor Finish, Elastomeric Coating, Prep & Paint	240	SF	$12.95	$3,108	$3,661
Park Restrooms - Snack Shacks / Cardoza Park	Distribution Panel, 100 AMP, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Cardoza Park	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	1	EA	$85.88	$86	$101
Park Restrooms - Snack Shacks / Cardoza Park	ADA, Restroom, Hand Dryer, Modify	2	EA	$850.00	$1,700	$2,003
Park Restrooms - Snack Shacks / Cerano Park	Fire Extinguisher, , Replace	1	EA	$356.54	$357	$420
Park Restrooms - Snack Shacks / Dixon Landing Park Restroom	Kitchen Counter, Ceramic Tile, Replace	18	LF	$85.12	$1,532	$1,805
Park Restrooms - Snack Shacks / Gill Memorial Park Restroom	Interior Floor Finish, Epoxy Coating, Prep & Paint	220	SF	$8.74	$1,923	$2,265
Park Restrooms - Snack Shacks / Gill Memorial Park Restroom	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	1	EA	$85.88	$86	$101
Park Restrooms - Snack Shacks / Gill Memorial Park Restroom	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	1	EA	$85.88	$86	$101
Park Restrooms - Snack Shacks / Hall Memorial Park	Interior Floor Finish, Epoxy Coating, Prep & Paint	240	SF	$8.74	$2,098	$2,471
Park Restrooms - Snack Shacks / Hall Memorial Park	Distribution Panel, 100 AMP, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Hall Memorial Park	Distribution Panel, 225 AMP, Replace	1	EA	$7,951.00	$7,951	$9,366
Park Restrooms - Snack Shacks / Park Metro East	Roof Structure, Pitched, Heavy Timber Framing, Replace	30	SF	$31.32	$940	$1,107
Park Restrooms - Snack Shacks / Park Metro East	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	700	SF	$2.87	$2,009	$2,367
Park Restrooms - Snack Shacks / Park Metro East	Exterior Door, Steel, Replace	1	EA	$950.12	$950	$1,119
Park Restrooms - Snack Shacks / Park Metro East	Roof, Clay/Concrete Tile, Replace	310	SF	$15.23	$4,722	$5,562
Park Restrooms - Snack Shacks / Park Metro East	Interior Wall Finish, Generic Surface, Prep & Paint	800	SF	$1.45	$1,160	$1,366
Park Restrooms - Snack Shacks / Park Metro East	ADA, Restroom, Lavatory Pipe Wraps, Install	1	EA	$80.00	$80	$94
Park Restrooms - Snack Shacks	Architect/Engineer, Building Envelope, Masonry, Evaluate/Report	1	EA	$9,500.00	$9,500	$11,191
Park Restrooms - Snack Shacks	Licensed Inspector, Termite investigation, Evaluate/Report	1	EA	$7,000.00	$7,000	$8,246
Park Restrooms - Snack Shacks	ADA, Miscellaneous, Level III Study, Includes Measurements, Evaluate/Report	1	EA	$15,000.00	$15,000	$17,670
Park Restrooms - Snack Shacks / Pinewood Park	Roof Structure, Pitched, Heavy Timber Framing, Replace	280	SF	$31.32	$8,770	$10,331
Park Restrooms - Snack Shacks / Pinewood Park	Interior Floor Finish, Epoxy Coating, Prep & Paint	240	SF	$8.74	$2,098	$2,471
Park Restrooms - Snack Shacks / Pinewood Park	Sink/Lavatory, Stainless Steel, Replace	2	EA	$1,054.05	$2,108	$2,483
Park Restrooms - Snack Shacks / Pinewood Park	Hand Dryer, Restroom, Replace	2	EA	$1,581.00	$3,162	$3,725
Park Restrooms - Snack Shacks / Pinewood Park	Fire Extinguisher, , Replace	1	EA	$356.54	$357	$420
Park Restrooms - Snack Shacks / Pinewood Park	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Pinewood Park	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Pinewood Park	Lighting System, Interior, Upgrade	280	SF	$9.24	$2,588	$3,048
Park Restrooms - Snack Shacks / Sinnott Park Restroom	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	SF	$31.32	$1,566	$1,845
Park Restrooms - Snack Shacks / Sinnott Park Restroom	Interior Floor Finish, Elastomeric Coating, Prep & Paint	280	SF	$12.95	$3,626	$4,271
Park Restrooms - Snack Shacks / Sinnott Park Restroom	ADA, Restroom, Hand Dryer, Modify	2	EA	$850.00	$1,700	$2,003
Park Restrooms - Snack Shacks / Starlight Park	Hand Dryer, Restroom, Replace	2	EA	$1,581.00	$3,162	$3,725
Park Restrooms - Snack Shacks / Starlight Park	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	1	EA	$5,079.93	$5,080	$5,984
Park Restrooms - Snack Shacks / Starlight Park	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	1	EA	$85.88	$86	$101
Park Restrooms - Snack Shacks / Thomas Russell middle school	Exterior Wall, Fiber Cement Siding, 1-2 Stories, Replace	1200	SF	$6.24	$7,488	$8,821
Park Restrooms - Snack Shacks / Thomas Russell middle school	Exterior Door, Steel, Replace	2	EA	$950.12	$1,900	$2,238
Park Restrooms - Snack Shacks / Thomas Russell middle school	Interior Floor Finish, Vinyl Sheeting, Replace	500	SF	$7.01	$3,505	$4,128
Park Restrooms - Snack Shacks / Thomas Russell middle school	Sink/Lavatory, Enameled Steel, Replace	3	EA	$616.03	$1,848	$2,177
Park Restrooms - Snack Shacks / Thomas Russell middle school	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	1	EA	$85.88	$86	$101
Park Restrooms - Snack Shacks / Thomas Russell middle school	Commercial Kitchen, Refrigerator, 3-Door Reach-In, Replace	1	EA	$5,804.00	$5,804	$6,837
Immediate Repairs Total						**$174,043**

* Location Factor included in totals.

FACILITY CONDITION ASSESSMENT

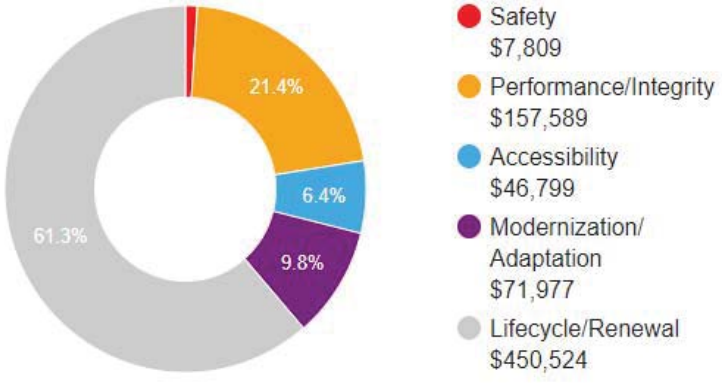
FACILITY CONDITION ASSESSMENT

Plan Types

Each line item in the cost database is assigned a Plan Type, which is the primary reason or rationale for the recommended replacement, repair, or other corrective action. This is the "why" part of the equation. A cost or line item may commonly have more than one applicable Plan Type; however, only one Plan Type will be assigned based on the "best" fit, typically the one with the greatest significance.

Plan Type Descriptions	
Safety	An observed or reported unsafe condition that if left unaddressed could result in an injury; a system or component that presents a potential liability risk.
Performance/Integrity	Component or system has failed, is almost failing, performs unreliably, does not perform as intended, and/or poses a risk to overall system stability.
Accessibility	Does not meet ADA, UFAS, and/or other handicap accessibility requirements.
Environmental	Improvements to air or water quality, including removal of hazardous materials from the building or site.
Retrofit/Adaptation	Components, systems, or spaces that are recommended for upgrades in in order to meet current standards, facility usage, or client/occupant needs.
Lifecycle/Renewal	Any component or system in which future repair or replacement is anticipated beyond the next several years or is of minimal substantial early-term consequence.

Plan Type Distribution (by Cost)



Ten year total: $901,676

FACILITY CONDITION ASSESSMENT

2 Dixon Landing Park RestroomSummary

Dixon Landing Park Restroom Information		
Address	1771 Milmont Drive, Milpitas, California	
Constructed/ Renovated	**1970/2012**	
Building Size	1,200 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Masonry bearing walls on concrete slab	Fair
Façade	Exposed CMU with aluminum windows	Fair
Roof	Primary: Hip construction with metal finish	Fair
Interiors	Walls: Painted CMU Floors: Concrete Ceilings: Painted plywood	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting Electric water heater in snack shack No hot water in restrooms	Fair

FACILITY CONDITION ASSESSMENT

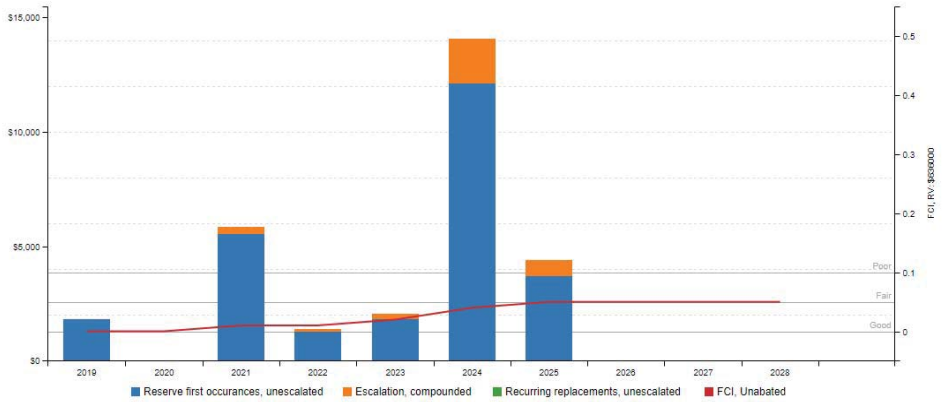
Dixon Landing Park Restroom Information		
HVAC	None	--
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-8, CFL, incandescent Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	Commercial kitchen equipment	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	ADA items	

FACILITY CONDITION ASSESSMENT

PARK RESTROOMS AND SNACK SHACKS EMG PROJECT NO.: 131644.18R000-017.017

FCI Analysis: Park Restrooms - Snack Shacks
Dixon Landing Park Restroom

Replacement Value: $ 636,000; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	$4,900	-	$6,585	$11,485
Roofing	-	-	$9,145	-	$48,289	$57,434
Interiors	-	$1,399	$2,054	-	$14,578	$18,031
Plumbing	-	$1,266	-	-	$24,825	$26,091
Fire Suppression	-	-	-	-	$2,395	$2,395
HVAC	-	$3,950	-	-	$5,309	$9,259
Electrical	-	-	-	$2,526	$2,285	$4,811
Equipment/Special	$1,804	$636	-	$4,410	$855	$7,705
Landscaping	-	-	-	$56,421	-	$56,421
TOTALS	**$1,804**	**$7,251**	**$16,099**	**$63,357**	**$105,121**	**$193,632**

Dixon Landing Park Restroom Information Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒
Kitchens/Kitchenettes	☐	☒	☐

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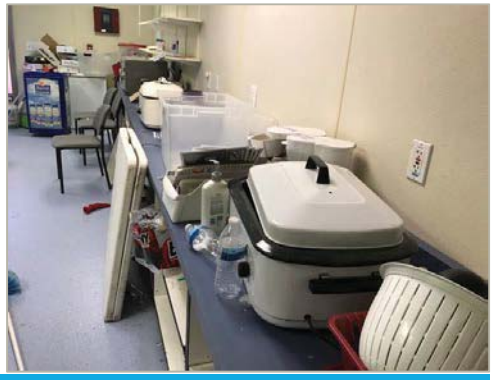
FACILITY CONDITION ASSESSMENT

FACILITY CONDITION ASSESSMENT

3 Russell Middle School Summary



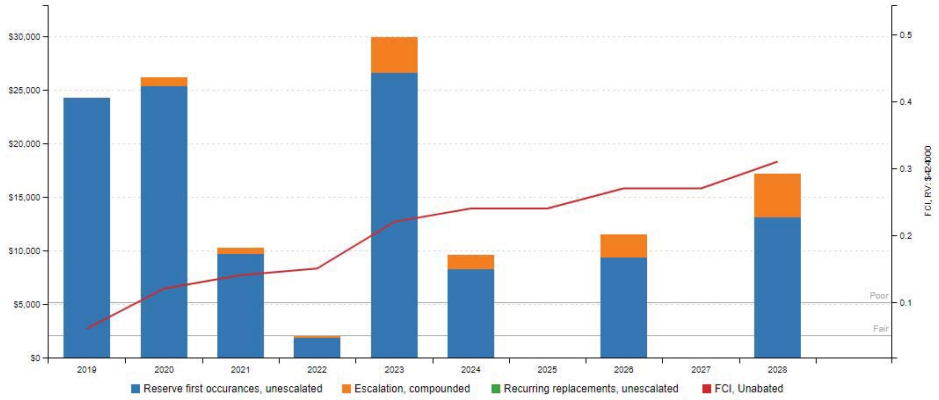
Russell Middle School Information		
Address	1500 Escuela Parkway, Milpitas, California	
Constructed/ Renovated	1999	
Building Size	800 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Portable restroom on T-footing	Fair
Façade	Painted hardboard with aluminum windows	Poor
Roof	Primary: Flat construction with metal finish	Fair
Interiors	Walls: Painted gypsum board & RFP Floors: Sheet vinyl Ceilings: ACT	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting Electric water heater No hot water in restrooms	Fair

FACILITY CONDITION ASSESSMENT

Russell Middle School Information		
HVAC	No cooling, electric wall heaters	Fair
Fire Suppression	Wet-pipe sprinkler system; fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-8, Emergency: None	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations	Fair
Equipment/Special	Commercial kitchen equipment	Fair
Site Pavement	Not reviewed	--
Site Development	Not Reviewed	--
Key Issues & Findings	Exterior hardboard siding is rotting, replacement recommended.	

FCI Analysis: Park Restrooms - Snack Shacks
Thomas Russell middle school

Replacement Value: $ 424,000; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	$11,058	-	$1,548	-	$3,594	$16,200
Roofing	-	-	-	-	-	-
Interiors	$4,128	$2,001	$15,219	-	$17,518	$38,866
Plumbing	$2,177	$1,525	$10,325	-	$7,811	$21,838
HVAC	-	-	$4,191	-	$11,488	$15,679
Electrical	$101	$1,243	$6,937	$28,678	-	$36,959
Fire Alarm & Comm	-	$27,757	-	-	$38,368	$66,125
Equipment/Special	$6,837	$5,874	$1,305	-	$19,569	$33,585
TOTALS	**$24,301**	**$38,400**	**$39,525**	**$28,678**	**$98,348**	**$229,252**

Russell Middle School Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒
Kitchens/Kitchenettes	☐	☒	☐

FACILITY CONDITION ASSESSMENT

4 Cardoza Park Summary

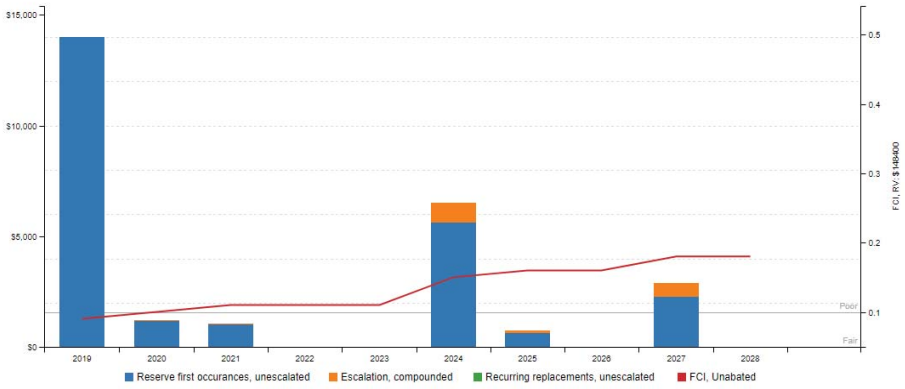
Cardoza Park Information		
Address	1356 Kennedy Drive, Milpitas, California	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete masonry unit structure on concrete slab with wood-framed roof	Good
Façade	Painted CMU with no windows	Good
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: CMU with skim coat Floors: Painted concrete Ceilings: Unfinished/exposed	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair

FACILITY CONDITION ASSESSMENT

Cardoza Park Information		
HVAC	None	--
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	ADA items	

FCI Analysis: Park Restrooms - Snack Shacks
Cardoza Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	$2,238	-	$2,821	-	$3,792	$8,851
Roofing	-	-	$3,685	-	-	$3,685
Interiors	$3,661	$1,087	-	$7,062	$2,772	$14,582
Plumbing	-	-	-	$2,893	$8,618	$11,511
Electrical	$6,085	-	-	-	$3,246	$9,331
Pavement	-	$1,213	-	-	-	$1,213
Site Development	-	-	-	-	-	-
Accessibility	$2,002	-	-	-	-	$2,002
TOTALS	**$13,986**	**$2,300**	**$6,506**	**$9,955**	**$18,428**	**$51,175**

Cardoza Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

5 Augustine Memorial Park Summary

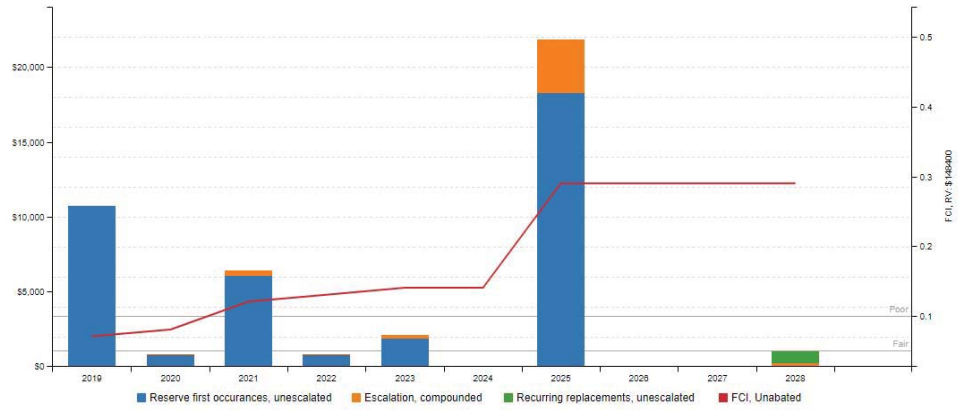
Augustine Memorial Park Information		
Address	Cortex and Coelho, Milpitas, California	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete masonry unit structure on concrete slab with wood-framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU Floors: Painted concrete Ceilings: Unfinished/exposed	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair

FACILITY CONDITION ASSESSMENT

Augustine Memorial Park Information		
HVAC	None	--
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Aged distribution panels, Failed drinking fountain and floor drain, ADA items	

FCI Analysis: Park Restrooms - Snack Shacks
Augustine Memorial Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

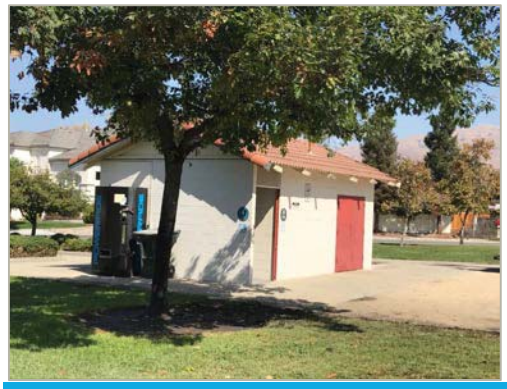
System Expenditure Forecast

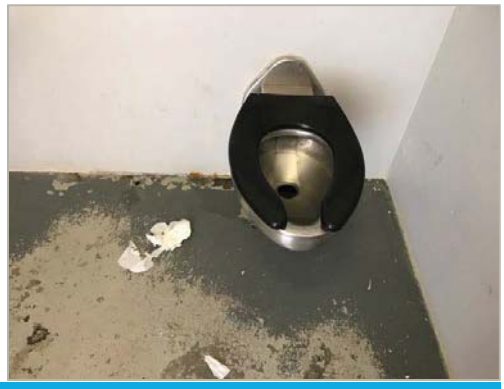
System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$1,255	-	$1,336	$13,040	$15,631
Roofing	-	-	-	$3,767	$9,169	$12,936
Interiors	-	$6,789	-	$1,003	$6,478	$14,270
Plumbing	$2,763	-	-	-	$6,995	$9,758
Electrical	$5,984	-	$2,115	-	$12,898	$20,997
Equipment/Special	-	-	-	-	-	-
Site Development	-	-	-	-	-	-
Landscaping	-	-	-	$16,709	-	$16,709
Accessibility	$2,002	-	-	-	-	$2,002
TOTALS	**$10,749**	**$8,044**	**$2,115**	**$22,815**	**$48,580**	**$92,303**

Augustine Memorial Park Restroom Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

6 Gill Memorial Park Restroom Summary





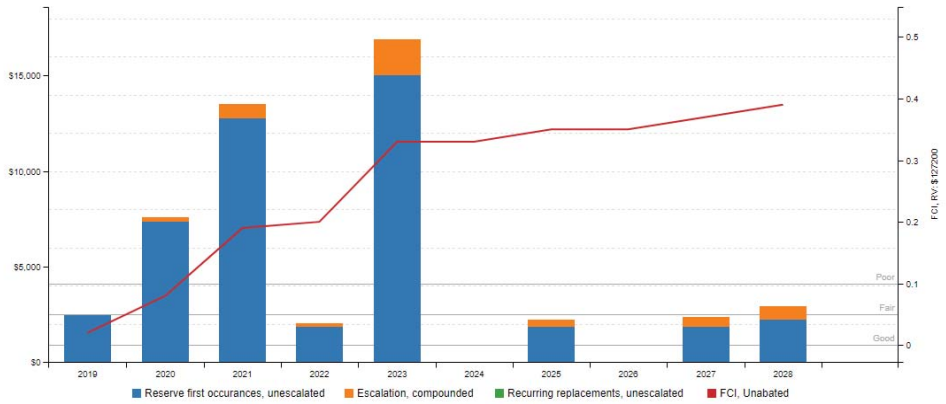
Gill Memorial Park Restroom Information		
Address	611 Paseo Refugio, Milpitas, California	
Constructed/ Renovated	1960s	
Building Size	240 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Masonry bearing walls on a slab with wood-framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Gable construction with clay/concrete tiles	Fair
Interiors	Walls: Painted CMU, unfinished Floors: Epoxy floor coating Ceilings: Painted underside of wood sheathing	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair

FACILITY CONDITION ASSESSMENT

Gill Memorial Park Restroom Information		
HVAC	None	--
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	The rafter tails have dry rot, the electric panel is aged, several receptacles should be waterproof & GFCI, ADA items	

FCI Analysis: Park Restrooms - Snack Shacks Gill Memorial Park Restroom

Replacement Value: $ 127,200; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	-	$7,599	-	-	-	$7,599
Facade	-	$2,031	-	$2,920	$2,730	$7,681
Roofing	-	-	-	-	-	-
Interiors	$2,265	$1,674	-	$4,374	$5,296	$13,609
Plumbing	-	-	-	-	$8,124	$8,124
Electrical	$202	$11,856	$1,133	$4,625	-	$17,816
Site Development	-	-	-	-	$1,246	$1,246
Landscaping	-	-	$15,750	-	$24,538	$40,288
TOTALS	**$2,467**	**$23,160**	**$16,883**	**$11,919**	**$41,934**	**$96,363**

Gill Memorial Park Restroom Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

7 Jose Higuera Adobe Summary

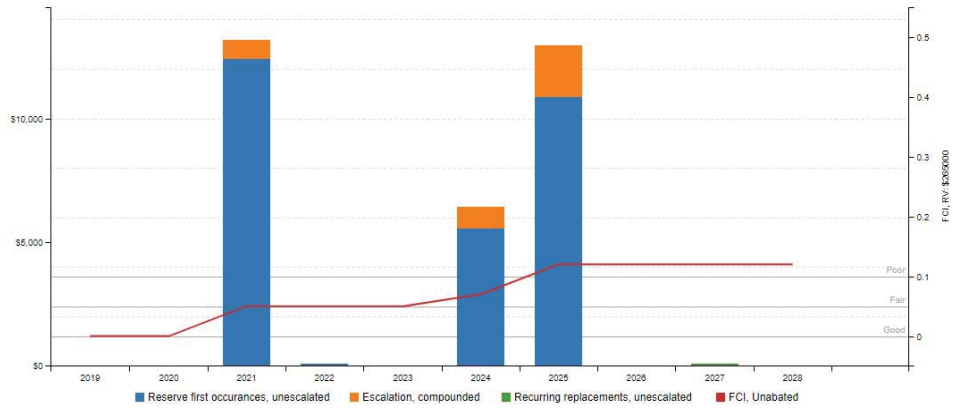
Jose Higuera Adobe Information		
Address	Wessex Place/ North Park Victoria, Milpitas, California	
Constructed/ Renovated	1960s / 2017	
Building Size	500 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Masonry bearing walls on a slab with wood-framed roof	Good
Façade	Concrete block with a skim coat and no windows	Good
Roof	Primary: Gable construction with clay/concrete tiles	Good
Interiors	Walls: Unfinished CMU Floors: Unfinished concrete Ceilings: Sealed/exposed	Good
Elevators	None	--
Plumbing	Copper supply and ABS waste & venting Electric water heater	Good

FACILITY CONDITION ASSESSMENT

Jose Higuera Adobe Information		
HVAC	None	--
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	None	

FCI Analysis: Park Restrooms - Snack Shacks Jose Higuera Adobe

Replacement Value: $ 265,000; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

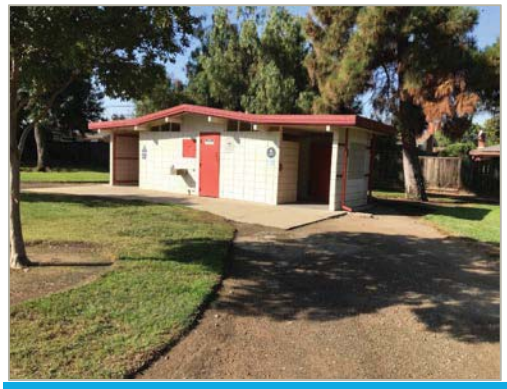
System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$896	-	$12,965	$6,358	$20,219
Roofing	-	-	-	-	-	-
Interiors	-	$91	$2,098	$106	$2,924	$5,219
Plumbing	-	$2,383	-	-	$11,091	$13,474
HVAC	-	-	$4,317	-	$5,801	$10,118
Electrical	-	$9,880	-	$2,526	$5,409	$17,815
TOTALS	**-**	**$13,250**	**$6,415**	**$15,597**	**$31,583**	**$66,845**

Jose Higuera Adobe Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

8 Starlight Park Summary



Starlight Park Information		
Address	450 Rudyard Drive, Milpitas , California	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete masonry unit structure on concrete slab with wood-framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU Floors: Epoxy on concrete Ceilings: Painted exposed wood	Fair

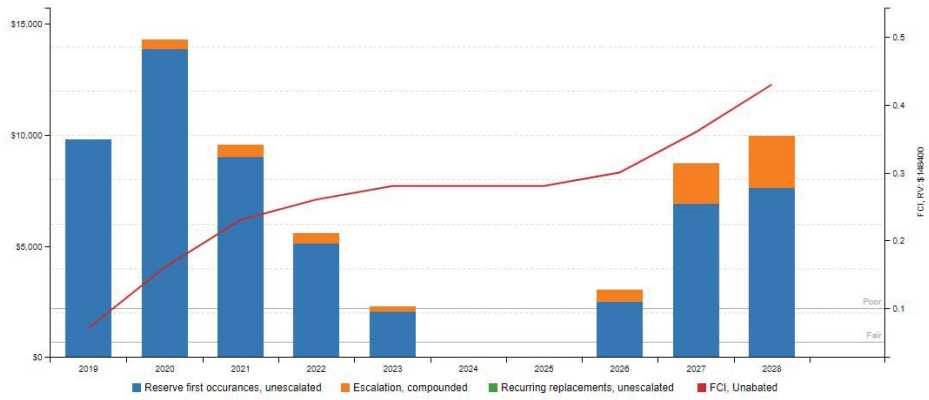
FACILITY CONDITION ASSESSMENT

Starlight Park Information		
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting	Fair
HVAC	None	--
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: CFL Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Termite damage	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks
Starlight Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	-	$14,285	-	-	-	$14,285
Facade	-	-	$2,283	-	$3,069	$5,352
Roofing	-	$4,284	-	-	-	$4,284
Interiors	-	$2,099	-	$9,951	$18,191	$30,241
Plumbing	-	$2,423	-	$3,053	$11,012	$16,488
HVAC	$3,724	-	-	$5,004	-	$8,728
Electrical	$6,085	$6,348	-	$8,738	$1,615	$22,786
Site Development	-	-	-	-	$1,424	$1,424
TOTALS	**$9,809**	**$29,439**	**$2,283**	**$26,746**	**$35,311**	**$103,588**

FACILITY CONDITION ASSESSMENT

Starlight Park Restrooms Accessibility Issues			
	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

9 Hall Memorial Park Summary

Hall Memorial Information		
Address	389 La Honda; Milpitas, California	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete block structure on concrete slab with wood framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU Floors: Epoxy Ceilings: Painted wood	Fair

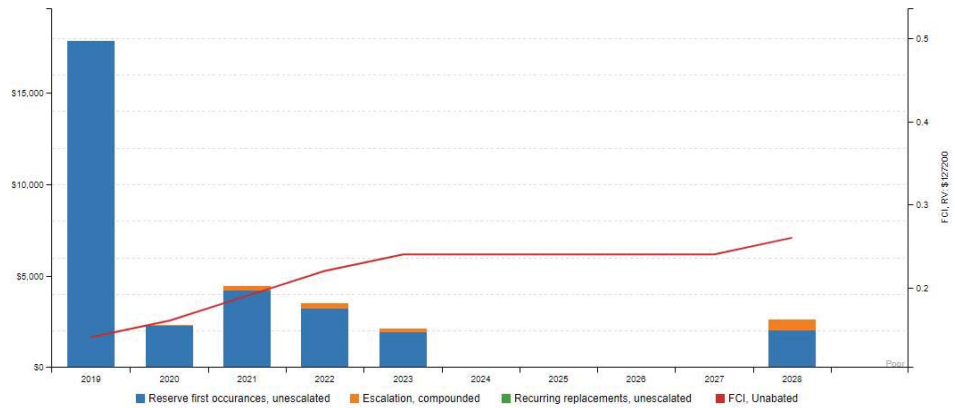
FACILITY CONDITION ASSESSMENT

Hall Memorial Information		
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair
HVAC	None	--
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Possible structural settlement	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks Hall Memorial Park

Replacement Value: $ 127,200; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$4,677	$2,130	-	$2,863	$9,670
Roofing	-	$3,473	-	-	-	$3,473
Interiors	$2,471	$2,057	-	$7,676	$3,122	$15,326
Plumbing	-	-	-	$3,336	$4,164	$7,500
Electrical	$15,350	-	-	-	-	$15,350
Site Development	-	-	-	-	-	-
TOTALS	**$17,821**	**$10,207**	**$2,130**	**$11,012**	**$10,149**	**$51,319**

Hall Memorial Park Restroom Accessibility Issues

	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

10 John McDermott Park Summary

John McDermott Park Information		
Address	Alverez Court / Abel	
Constructed/ Renovated	2014	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Conventional metal stud structure on concrete slab	Good
Façade	Stucco with no windows	Good
Roof	Primary: Gable construction with clay/concrete tiles	Good
Interiors	Walls: FRP Floors: Unfinished concrete Ceilings: Sealed wood	Good

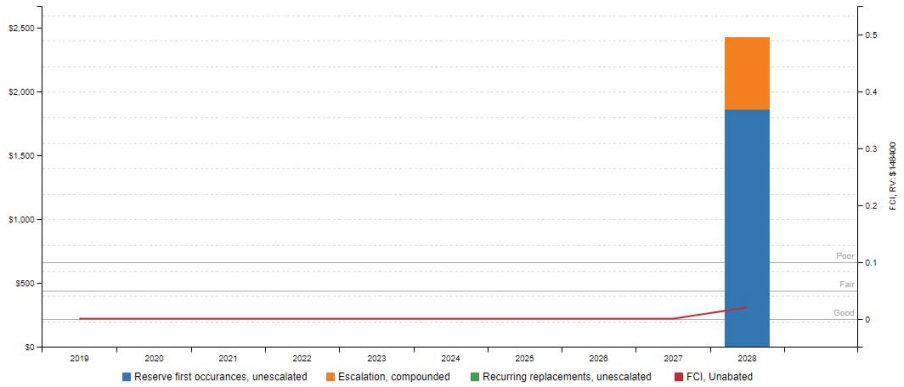
FACILITY CONDITION ASSESSMENT

John McDermott Park Information		
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Good
HVAC	No mechanical HVAC	--
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: CFL Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings		

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks John McDermott Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



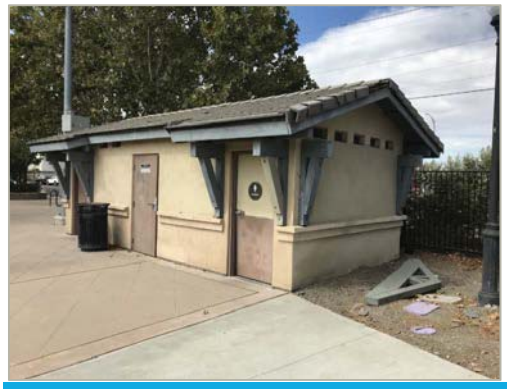
System Expenditure Forecast

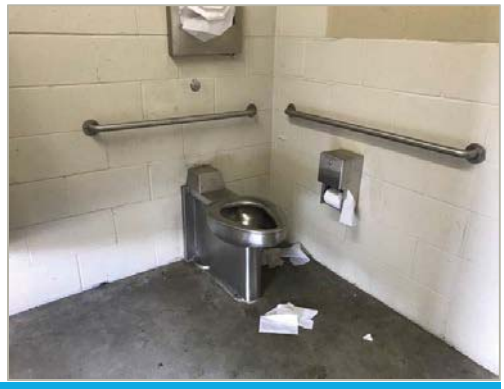
System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	-	$2,425	$3,259	$5,684
Roofing	-	-	-	-	-	-
Interiors	-	-	-	-	$17,977	$17,977
Plumbing	-	-	-	-	$7,623	$7,623
Fire Suppression	-	-	-	$564	-	$564
Electrical	-	-	-	-	$2,787	$2,787
TOTALS	**-**	**-**	**-**	**$2,989**	**$31,646**	**$34,635**

John McDermott Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

11 Parc Metro East Summary





Parc Metro East Information		
Address	330 E Curtis Ave, Milpitas, California	
Constructed	2000s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Conventional wood frame structure on concrete slab and wood-framed roof	Good
Façade	Stucco with no windows	Fair
Roof	Gable construction with clay/concrete tiles	Poor
Interiors	Walls: Painted CMU Floors: Unfinished Ceilings: Painted gypsum board	Fair
Elevators	None	--

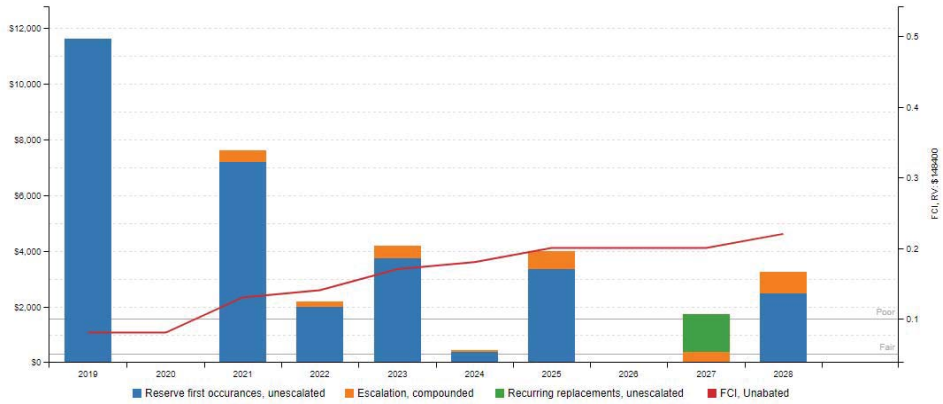
FACILITY CONDITION ASSESSMENT

Parc Metro East Information		
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair
HVAC	Natural air ventilation	Fair
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-8, incandescent Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Minor stucco damage near trash cans, large decorative truss has fallen from the right side, the maintenance door is damaged and difficult to open, many roof tiles are damaged, fire extinguisher needs to be mounted, LED lighting upgrade recommended, missing mirror above sink, wrapping sink drains for ADA is recommended.	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks Park Metro East

Replacement Value: $ 148,400; Inflation rate: 3.0%



System Expenditure Forecast

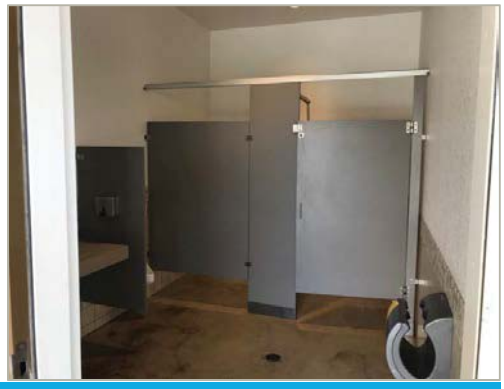
System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	$1,106	-	-	-	-	$1,106
Facade	$3,486	-	-	$7,189	-	$10,675
Roofing	$5,562	-	-	-	-	$5,562
Interiors	$1,366	$2,980	-	$1,730	$3,258	$9,334
Plumbing	-	$3,596	-	$3,239	-	$6,835
Fire Suppression	-	-	-	-	$581	$581
HVAC	-	-	$4,191	-	$5,632	$9,823
Electrical	-	$3,233	-	-	$8,283	$11,516
Fire Alarm & Comm	-	-	$437	-	-	$437
Accessibility	$94	-	-	-	-	$94
TOTALS	**$11,614**	**$9,809**	**$4,628**	**$12,158**	**$17,754**	**$55,963**

FACILITY CONDITION ASSESSMENT

Parc Metro East Accessibility Issues			
	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

12 Bob McGuire Park Summary



Bob McGuire Park Information		
Address	791 Garden St, Milpitas, CA	
Constructed	2016	
Building Size	240 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Conventional wood frame structure on concrete slab and wood-framed roofs	Good
Façade	Stucco with vinyl windows	Good
Roof	Gable construction with clay/concrete tiles	Good
Interiors	Walls: Painted gypsum board with ceramic tile wainscoting Floors: Stained concrete Ceilings: Painted gypsum board	Good
Elevators	None	--

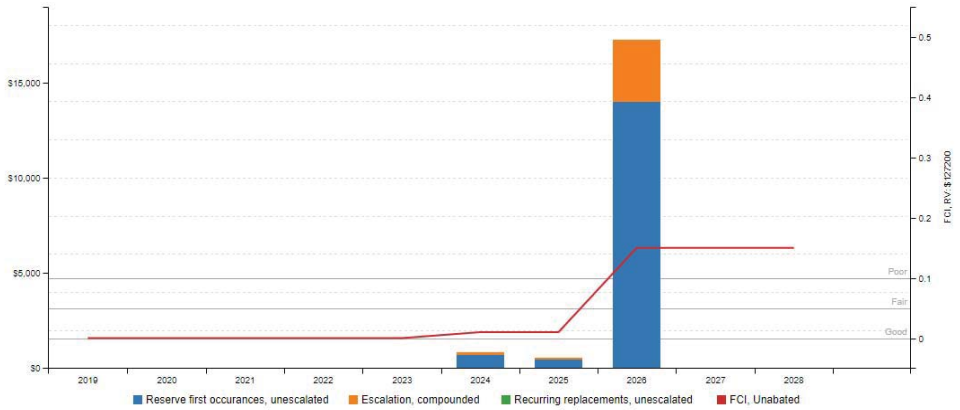
FACILITY CONDITION ASSESSMENT

Bob McGuire Park Information		
Plumbing	Copper supply and cast iron waste & venting Domestic water heating equipment was not reviewed	Good
HVAC	Not reviewed	--
Fire Suppression	Wet-pipe sprinkler system	Good
Electrical	Source & Distribution: Not reviewed Interior Lighting: LED Emergency: Not reviewed	Good
Fire Alarm	Smoke detectors, alarms, strobes, back-up emergency lights	Good
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Women's restroom has a hose coming through the ceiling and feeding into the sink, possibly a temporary condensate drain	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks Bob Mcguire Park

Replacement Value: $ 127,200; Inflation rate: 3.0%



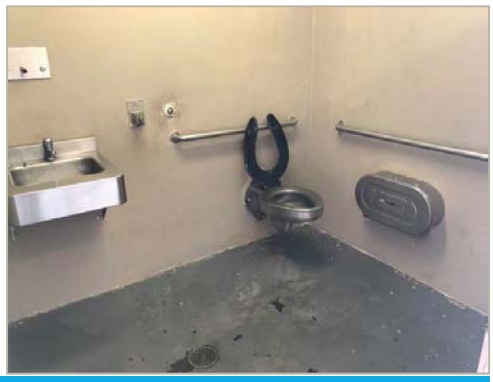
System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	-	$2,169	$754	$2,923
Roofing	-	-	-	-	-	-
Interiors	-	-	$831	$3,827	$8,910	$13,568
Plumbing	-	-	-	$3,642	$15,493	$19,135
HVAC	-	-	-	$4,580	$6,155	$10,735
Electrical	-	-	-	$3,556	$4,780	$8,336
TOTALS	**-**	**-**	**$831**	**$17,774**	**$36,092**	**$54,697**

Bob McGuire Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

13 Pinewood Park Summary



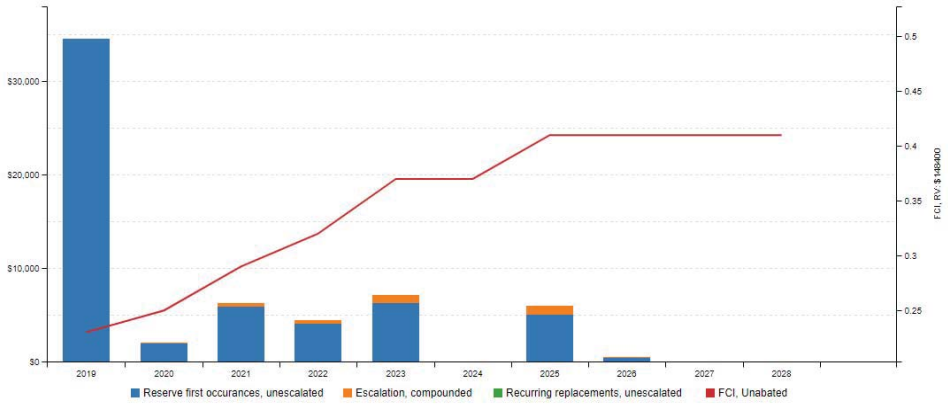
Pinewood Park Information		
Address	Starlight Drive and Lonetree Cout, Milpitas, California	
Constructed	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Masonry bearing walls on concrete slab	Good
Façade	Painted CMU with no windows	Fair
Roof	Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU with skim coat Floors: Epoxy paint Ceilings: Exposed, painted	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair

FACILITY CONDITION ASSESSMENT

Pinewood Park Information		
HVAC	None	Fair
Fire Suppression	Fire extinguisher	Missing
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12, incandescent Emergency: None	Poor
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Dry rot on roof beam tails, antiquated plumbing and electrical infrastructure, missing fire extinguisher, recommend replacement of sink faucets, replacement and relocation of hand driers and soap dispensers, sink drains need to be wrapped for ADA compliance.	

FCI Analysis: Park Restrooms - Snack Shacks
Pinewood Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	$10,330	-	-	-	-	$10,330
Facade	-	$2,586	$2,518	-	$3,476	$8,580
Roofing	-	$3,372	-	$484	$651	$4,507
Interiors	$2,471	$3,255	-	$5,041	$3,121	$13,888
Plumbing	$2,483	$3,616	-	-	$2,111	$8,210
Fire Suppression	$420	-	-	-	$654	$1,074
HVAC	$3,724	-	-	$5,004	-	$8,728
Electrical	$15,016	-	-	$12,737	-	$27,753
Fire Alarm & Comm	-	-	$424	-	$661	$1,085
Site Development	-	-	$4,161	-	-	$4,161
TOTALS	**$34,444**	**$12,829**	**$7,103**	**$23,266**	**$10,674**	**$88,316**

Pinewood Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

14 Alviso Adobe Park Restroom Summary

Alviso Adobe Park Restroom Information		
Address	2087 Alviso Adobe Court, Milpitas, California 95053	
Constructed/ Renovated	2013	
Building Size	500 SF	
Number of Stories	1	
System	*Description*	*Condition*
Structure	Conventional wood frame structure on concrete slab	Good
Façade	Wood siding and no windows	Good
Roof	Primary: Gable construction with wood shingles	Good
Interiors	Walls: Painted Drywall Floors: Unfinished Ceilings: Painted Drywall	Fair

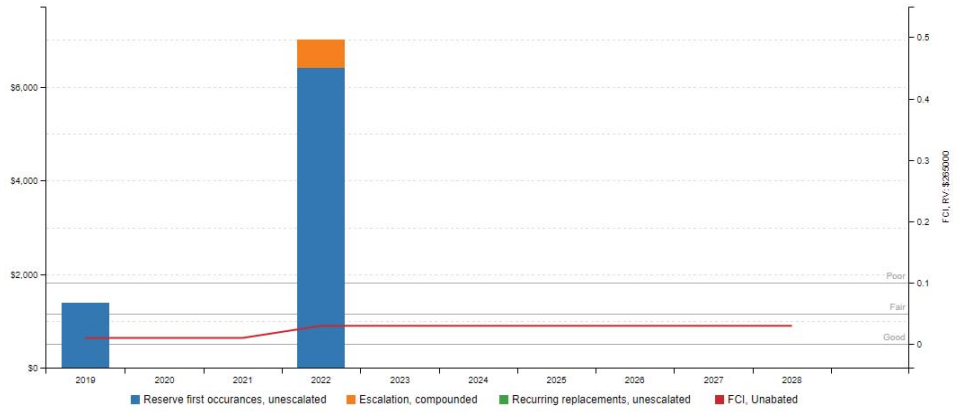
FACILITY CONDITION ASSESSMENT

Alviso Adobe Park Restroom Information		
Elevators	None	--
Plumbing	Copper pipe supply and cast iron waste & venting No hot water	Good
HVAC	None	--
Fire Suppression	Fire extinguishers	Failed
Electrical	Source & Distribution: Fed from Water Tower building with copper wiring Interior Lighting: CFL	Good
Fire Alarm	None	--
Equipment/Special	None	--
Key Issues & Findings	Expired fire extinguisher and building lacks fire alarm system	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks
Alviso Adobe Park Restroom

Replacement Value: $ 265,000; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$2,955	-	-	$9,687	$12,642
Roofing	-	-	-	-	$7,851	$7,851
Interiors	-	$2,425	-	-	$6,964	$9,389
Plumbing	-	$1,618	-	-	$13,372	$14,990
Fire Alarm & Comm	$1,389	-	-	-	-	$1,389
TOTALS	**$1,389**	**$6,998**	**-**	**-**	**$37,874**	**$46,261**

Alviso Adobe Park Restroom Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

15 Foothill Park Summary

Foothill Park Information		
Address	400 Roswell Drive, Milpitas	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete block (CMU) structure on concrete slab with wood-framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU Floors: Epoxy/Unfinished Ceilings: Painted wood	Fair

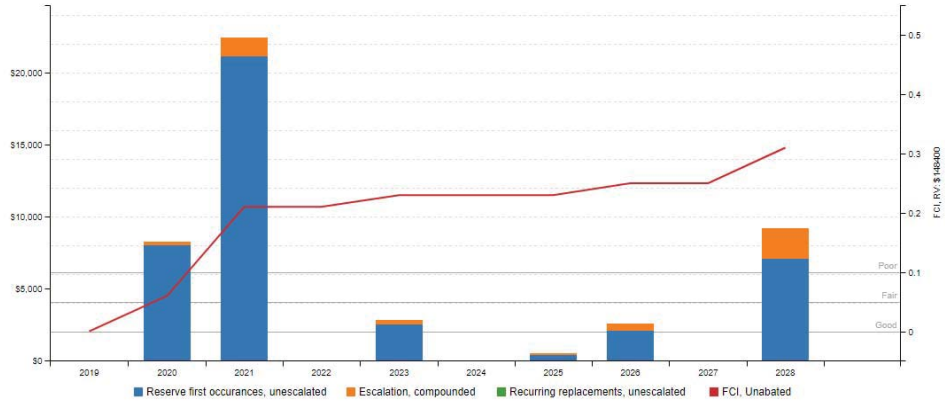
FACILITY CONDITION ASSESSMENT

Foothill Park Information		
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair
HVAC	None	--
Fire Suppression	Fire extinguishers	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Possible termite damage, possible structural damage (vertical crack in concrete block)	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks
Foothill Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$2,106	-	$4,327	$3,854	$10,287
Roofing	-	$3,372	-	-	-	$3,372
Interiors	-	$2,621	$721	$2,605	$6,087	$12,034
Plumbing	-	$1,571	-	$3,239	$6,154	$10,964
Fire Suppression	-	-	-	$501	-	$501
Electrical	-	$6,163	$2,115	$1,642	$11,579	$21,499
Site Development	-	-	-	-	$1,424	$1,424
Landscaping	-	$14,846	-	-	$23,129	$37,975
TOTALS	**-**	**$30,679**	**$2,836**	**$12,314**	**$52,227**	**$98,056**

Foothill Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

16 Murphy Park Summary

Murphy Park Information		
Address	1588 Saratoga Drive, Milpitas, California	
Constructed/ Renovated	1960s	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Concrete block structure on concrete slab with wood framed roof	Fair
Façade	Painted CMU with no windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU Floors: Epoxy Ceilings: Painted wood	Fair

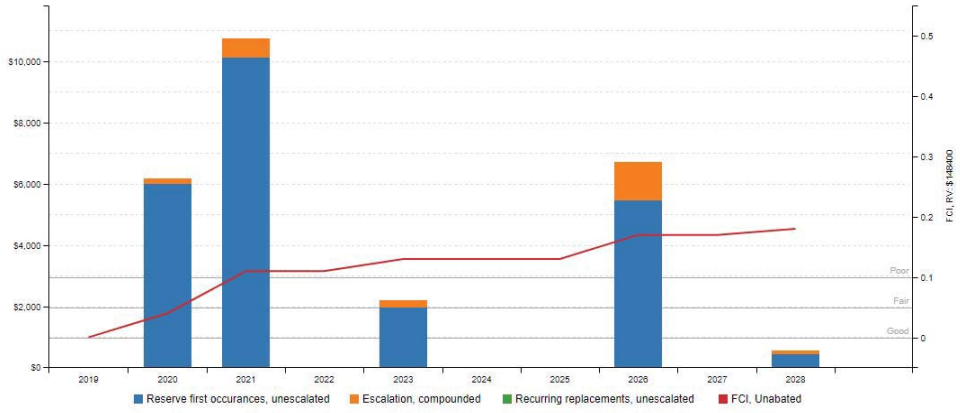
FACILITY CONDITION ASSESSMENT

Murphy Park Information		
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair
HVAC	None	--
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Rafter tails show dry rot and possibly termite damage	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks
Murphy Park

Replacement Value: $ 148,400; Inflation rate: 3.0%



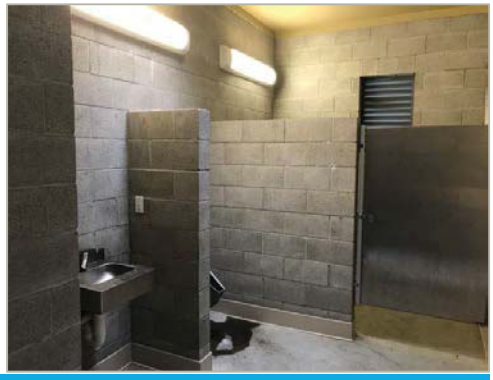
System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	$2,374	$2,207	-	$2,966	$7,547
Roofing	-	-	-	-	$5,202	$5,202
Interiors	-	$5,922	-	$3,067	$8,312	$17,301
Plumbing	-	$2,423	-	$3,053	$7,939	$13,415
Fire Suppression	-	-	-	$548	-	$548
Electrical	-	$6,163	-	$2,312	$1,142	$9,617
Site Development	-	-	-	-	$1,383	$1,383
TOTALS	**-**	**$16,882**	**$2,207**	**$8,980**	**$26,944**	**$55,013**

Murphy Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

17 Cerano Park Summary



Cerano Park Information		
Address	Murphy Ranch Road, Milpitas, California	
Constructed	2012, Estimated	
Building Size	600 SF	
Number of Stories	1	
System	*Description*	*Condition*
Structure	Conventional wood frame structure on concrete slab and wood-framed roof	Good
Façade	Stucco with steel vent windows	Good
Roof	Primary: Crossed hip construction with clay/concrete tiles	Good
Interiors	Walls: CMU, Unfinished Floors: Concrete, Unfinished Ceilings: Painted gypsum board	Good
Elevators	None	--

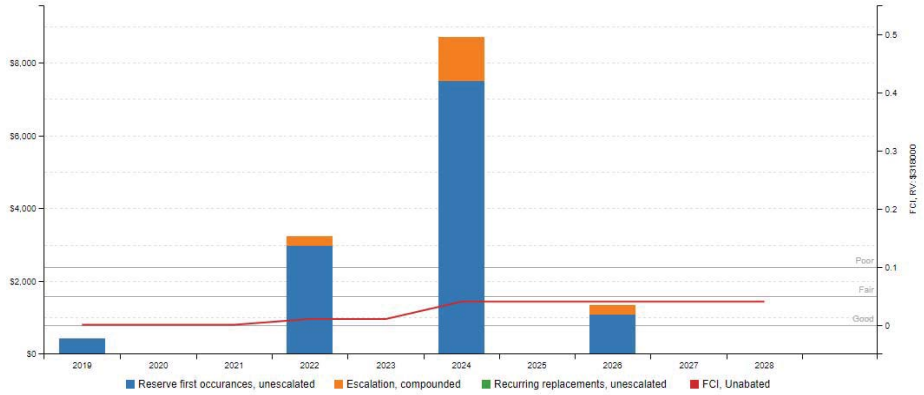
FACILITY CONDITION ASSESSMENT

Cerano Park Information		
Plumbing	Copper supply and cast iron waste & venting No hot water	Good
HVAC	None	Good
Fire Suppression	Fire extinguisher	Missing
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: LED, motion detectors Emergency: None	Good
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Missing fire extinguisher	

FACILITY CONDITION ASSESSMENT

FCI Analysis: Park Restrooms - Snack Shacks
Cerano Park

Replacement Value: $ 318,000; Inflation rate: 3.0%



System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Facade	-	-	$3,135	-	$13,739	$16,874
Roofing	-	-	-	$1,333	$1,791	$3,124
Interiors	-	-	$1,239	-	$4,605	$5,844
Plumbing	-	$3,236	-	-	$14,432	$17,668
Fire Suppression	$420	-	-	-	$654	$1,074
HVAC	-	-	$4,317	-	$5,801	$10,118
Electrical	-	-	-	-	$10,828	$10,828
TOTALS	**$420**	**$3,236**	**$8,691**	**$1,333**	**$51,850**	**$65,530**

Cerano Park Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☐	☒

FACILITY CONDITION ASSESSMENT

18 Sinnott Park Restrooms Summary

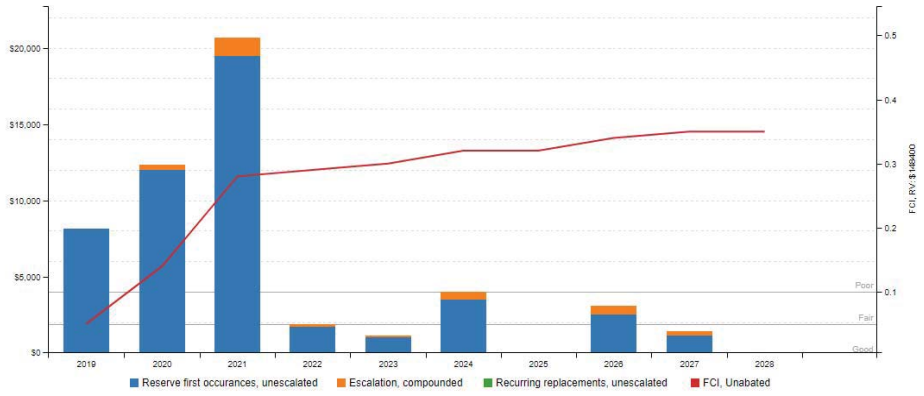
Sinnott Park Restrooms Information		
Address	1501 Clearlake Avenue, Milpitas	
Constructed/ Renovated	1960's	
Building Size	280 SF	
Number of Stories	One	
System	*Description*	*Condition*
Structure	Conventional wood frame structure on concrete slab and wood-framed roofs	Good
Façade	Painted CMU with no windows	Fair
Roof	Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted CMU with skim coat Floors: Epoxy paint Ceilings: Exposed, painted	Fair
Elevators	None	--
Plumbing	Copper supply and cast iron waste & venting No hot water	Fair

FACILITY CONDITION ASSESSMENT

Sinnott Park Restrooms Information		
HVAC	Natural air ventilation	Fair
Fire Suppression	Fire extinguisher	Fair
Electrical	Source & Distribution: Main panel with copper wiring Interior Lighting: T-12 Emergency: None	Fair
Fire Alarm	None	--
Equipment/Special	None	--
Site Pavement	Not reviewed	--
Site Development	Not reviewed	--
Key Issues & Findings	Antiquated plumbing and electrical infrastructure	

FCI Analysis: Park Restrooms - Snack Shacks
Sinnott Park Restroom

Replacement Value: $ 148,400; Inflation rate: 3.0%



FACILITY CONDITION ASSESSMENT

System Expenditure Forecast

System	Immediate	Short Term (3 yr)	Near Term (5 yr)	Med Term (10 yr)	Long Term (20 yr)	TOTAL
Structure	$1,844	-	-	-	-	$1,844
Facade	-	-	$3,135	$1,417	$4,214	$8,766
Roofing	-	$3,372	-	-	-	$3,372
Interiors	$4,271	$1,866	$867	$5,739	$8,443	$21,186
Plumbing	-	$2,423	-	$3,053	$7,939	$13,415
Fire Suppression	-	-	-	-	$581	$581
Electrical	-	$12,326	$1,133	-	-	$13,459
Site Development	-	-	-	-	-	-
Landscaping	-	$14,846	-	-	$23,129	$37,975
Accessibility	$2,002	-	-	-	-	$2,002
TOTALS	**$8,117**	**$34,833**	**$5,135**	**$10,209**	**$44,306**	**$102,600**

Sinnott Park Restroom Accessibility Issues	Major Issues *(ADA study recommended)*	Moderate Issues *(ADA study recommended)*	Minor/No Issues
Public Use Restrooms	☐	☒	☐

FACILITY CONDITION ASSESSMENT

19 Opinions of Probable Costs

Cost estimates are attached throughout this report, with the Replacement Reserves in the appendix.

These estimates are based on Invoice or Bid Document/s provided either by the Owner/facility and construction costs developed by construction resources such as *R.S. Means, CBRE Whitestone,* and *Marshall & Swift,* EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

Opinions of probable costs should only be construed as preliminary, order of magnitude budgets. Actual costs most probably will vary from the consultant's opinions of probable costs depending on such matters as type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing or bundling of the work (if applicable), quality of contractor, quality of project management exercised, market conditions, use of subcontractors, and whether competitive pricing is solicited, etc. Certain opinions of probable costs cannot be developed within the scope of this guide without further study. Opinions of probable cost for further study should be included in the FCA.

19.1 Methodology

Based upon site observations, research, and judgment, along with referencing Expected Useful Life (EUL) tables from various industry sources, EMG opines as to when a system or component will most probably necessitate replacement. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its *effective age*, whether explicitly or implicitly stated. Projections of Remaining Useful Life (RUL) are based on continued use of the Property similar to the reported past use. Significant changes in occupants and/or usage may affect the service life of some systems or components.

Where quantities could not be or were not derived from an actual construction document take-off or facility walk-through, and/or where systemic costs are more applicable or provide more intrinsic value, budgetary square foot and gross square foot costs are used. Estimated costs are based on professional judgment and the probable or actual extent of the observed defect, inclusive of the cost to design, procure, construct and manage the corrections.

19.2 Immediate Repairs

Immediate repairs are opinions of probable costs that require immediate action as a result of: (1) material existing or potential unsafe conditions, (2) failed or imminent failure of mission critical building systems or components, or (3) conditions that, if not addressed, have the potential to result in, or contribute to, critical element or system failure within one year or will most probably result in a significant escalation of its remedial cost.

19.3 Replacement Reserves

Replacement Reserves (more commonly referenced throughout AssetCALC as Lifecycle/Renewals) are for recurring probable renewals or expenditures, which are not classified as operation or maintenance expenses. The replacement reserves should be budgeted for in advance on an annual basis. Replacement Reserves are reasonably predictable both in terms of frequency and cost. However, Replacement Reserves may also include components or systems that have an indeterminable life but, nonetheless, have a potential for failure within an estimated time period.

Replacement Reserves generally exclude systems or components that are estimated to expire after the reserve term and are not considered material to the structural and mechanical integrity of the subject property. Furthermore, systems and components that are not deemed to have a material effect on the use of the Property are also excluded. Costs that are caused by acts of God, accidents, or other occurrences that are typically covered by insurance, rather than reserved for, are also excluded.

Replacement costs are solicited from ownership/property management, EMG's discussions with service companies, manufacturers' representatives, and previous experience in preparing such schedules for other similar facilities. Costs for work performed by the ownership's or property management's maintenance staff are also considered.

EMG's reserve methodology involves identification and quantification of those systems or components requiring capital reserve funds within the assessment period. The assessment period is defined as the effective age plus the reserve term. Additional information concerning system's or component's respective replacement costs (in today's dollars), typical expected useful lives, and remaining useful lives were estimated so that a funding schedule could be prepared. The Replacement Reserves Schedule presupposes that all required remedial work has been performed or that monies for remediation have been budgeted for items defined in the Immediate Repair Cost Estimate.

FACILITY CONDITION ASSESSMENT

20 Purpose and Scope

20.1 Purpose

EMG was retained by the client to render an opinion as to the Property's current general physical condition on the day of the site visit.

Based on the observations, interviews and document review outlined below, this report identifies significant deferred maintenance issues, existing deficiencies, and material code violations of record, which affect the Property's use. Opinions are rendered as to its structural integrity, building system condition and the Property's overall condition. The report also notes building systems or components that have realized or exceeded their typical expected useful lives.

CONDITIONS:

The physical condition of building systems and related components are typically defined as being in one of five conditions: Excellent, Good, Fair, Poor, Failed or a combination thereof. For the purposes of this report, the following definitions are used:

Excellent	=	New or very close to new; component or system typically has been installed within the past year, sound and performing its function. Eventual repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Good	=	Satisfactory as-is. Component or system is sound and performing its function, typically within the first third of its lifecycle. However, it may show minor signs of normal wear and tear. Repair or replacement will be required when the component or system either reaches the end of its useful life or fails in service.
Fair	=	Showing signs of wear and use but still satisfactory as-is, typically near the median of its estimated useful life. Component or system is performing adequately at this time but may exhibit some signs of wear, deferred maintenance, or evidence of previous repairs. Repair or replacement will be required due to the component or system's condition and/or its estimated remaining useful life.
Poor	=	Component or system is significantly aged, flawed, functioning intermittently or unreliably; displays obvious signs of deferred maintenance; shows evidence of previous repair or workmanship not in compliance with commonly accepted standards; has become obsolete; or exhibits an inherent deficiency. The present condition could contribute to or cause the deterioration of contiguous elements or systems. Either full component replacement is needed or repairs are required to restore to good condition, prevent premature failure, and/or prolong useful life.
Failed	=	Component or system has ceased functioning or performing as intended. Replacement, repair, or other significant corrective action is recommended or required.
Not Applicable	=	Assigning a condition does not apply or make logical sense, most commonly due to the item in question not being present.

DEFINITION OF EXCEEDINGLY AGED:

A fairly common scenario encountered during the assessment process, and a frequent source of debate, occurs when classifying and describing "very old" systems or components that are still functioning adequately and do not appear in any way deficient. To help provide some additional intelligence on these items, such components will be tagged in the database as *Exceedingly Aged*. This designation will be reserved for systems or components that have aged well beyond their industry standard lifecycles (typically at least 15 years beyond and/or twice their EUL) but are not otherwise apparently deficient. In tandem with this designation, these items will be assigned an RUL not less than 2 but not greater than 1/3 of their standard EUL. As such the recommended replacement time for these components will reside outside the typical *Immediate Repair* window but will not be pushed 'irresponsibly' (too far) into the future.

FACILITY CONDITION ASSESSMENT

20.2 Scope

The standard scope of the Facility Condition Assessment includes the following:

- Visit the Property to evaluate the general condition of the building and site improvements, review available construction documents in order to familiarize ourselves with, and be able to comment on, the in-place construction systems, life safety, mechanical, electrical, and plumbing systems, and the general built environment.
- Identify those components that are exhibiting deferred maintenance issues and provide cost estimates for Immediate Costs and Replacement Reserves based on observed conditions, maintenance history and industry standard useful life estimates. This will include the review of documented capital improvements completed within the last five-year period and work currently contracted for, if applicable.
- Provide a full description of the Property with descriptions of in-place systems and commentary on observed conditions.
- Provide a high-level categorical general statement regarding the subject Property's compliance to Title III of the Americans with Disabilities Act. This will not constitute a full ADA survey, but will help identify exposure to issues and the need for further review.
- Obtain background and historical information about the facility from a building engineer, property manager, maintenance staff, or other knowledgeable source. The preferred methodology is to have the client representative or building occupant complete a Pre-Survey Questionnaire (PSQ) in advance of the site visit. Common alternatives include a verbal interview just prior to or during the walk-through portion of the assessment.
- Review maintenance records and procedures with the in-place maintenance personnel.
- Observe a representative sample of the interior spaces/units, including vacant spaces/units, to gain a clear understanding of the property's overall condition. Other areas to be observed include the exterior of the property, the roofs, interior common areas, and the significant mechanical, electrical and elevator equipment rooms.
- Provide recommendations for additional studies, if required, with related budgetary information.
- Provide an Executive Summary at the beginning of this report, which highlights key findings and includes a Facility Condition Index as a basis for comparing the relative conditions of the buildings within the portfolio.

FACILITY CONDITION ASSESSMENT

21 ADA Accessibility

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of "areas of public accommodations" and "commercial facilities" on the basis of disability. Regardless of its age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Buildings completed and occupied after January 26, 1992 are required to comply fully with the ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of compliance to the extent allowed by structural feasibility and the financial resources available. As an alternative, a reasonable accommodation pertaining to barrier removal must be made.

During the FCA, EMG performed a limited high-level accessibility review of the facility non-specific to any local regulations or codes. The scope of the visual observation was limited to those areas and categories set forth in the tables throughout this report. It is understood by the Client that the limited observations described herein do not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's undertaking. Only a representative sample of areas was observed and actual measurements were not taken to verify compliance.

It appears that the restrooms were built between 1960 and 2014. Some, though not all of the restrooms have been subsequently renovated. It is unknown if there have been complaints about accessibility issues or if there have been prior or pending litigation related to existing barriers or previously removed barriers.

An accessibility study has not been performed at the site. A comprehensive ADA Compliance Survey will reveal specific aspects of the property that are not in compliance. Since some areas or categories above were identified as having major or moderate associated issues, EMG recommends such a study be performed to take measurements, provide additional itemized details, research local requirements, and, if necessary, estimate the scope and cost of any required improvements. The cost of this study is included in the cost tables. Due to the lack of measurements and itemized findings at this point in time, the costs for any possible subsequent repairs or improvements are not currently included.

Removal of barriers to accessibility should be addressed from a liability standpoint in order to comply with federal law, but the barriers may or may not be building code violations. The Americans with Disabilities Act Accessibility Guidelines are part of the ADA federal civil rights law pertaining to the disabled and are not a construction code. State and local jurisdictions have adopted the ADA Guidelines or have adopted other standards for accessibility as part of their construction codes.

FACILITY CONDITION ASSESSMENT

22 Certification

The City of Milpitas (the Client) retained EMG to perform this Facility Condition Assessment in connection with its continued operation of the following restrooms /snack shacks: Thomas Russel Middle School, Foothill Park, Starlight Park, Parc Metro East, Alviso Adobe Park, Jose Higuera Adobe Park, Pinewood Park, Cerano Park, Sinnott Park, Murphy Park, Cardoza Park, Gill Memorial Park, Dixon Landing Park, John McDermott Park, Bob McGuire Park, Augustine Memorial Park, Hall Memorial Park, all are in Milpitas, California, the "Property". It is our understanding that the primary interest of the Client is to locate and evaluate materials and building system defects that might significantly affect the value of the property and to determine if the present Property has conditions that will have a significant impact on its continued operations.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available property management personnel and maintenance contractors familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

No testing, exploratory probing, dismantling or operating of equipment or in-depth studies were performed unless specifically required under the *Purpose and Scope* section of this report. This assessment did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas may have been observed (see Section 1 for specific details). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by management personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

This report has been prepared on behalf of and exclusively for the use of the Client for the purpose stated within the *Purpose and Scope* section of this report. The report, or any excerpt thereof, shall not be used by any party other than the Client or for any other purpose than that specifically stated in our agreement or within the *Purpose and Scope* section of this report without the express written consent of EMG.

Any reuse or distribution of this report without such consent shall be at the Client and the recipient's sole risk, without liability to EMG.

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FACILITY CONDITION ASSESSMENT

23 Appendices

Appendix A: Photographic Record

Appendix B: Replacement Reserves

FACILITY CONDITION ASSESSMENT

PARK RESTROOMS AND SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

Appendix A: Photographic Record

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#1	DIXON LANDING

#2	DIXON LANDING

#3	DIXON LANDING

#4	DIXON LANDING KITCHEN COUNTER

#5	DIXON LANDING TOILET PARTITIONS,

#6	DIXON LANDING WATER HEATER, ELECTRIC

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

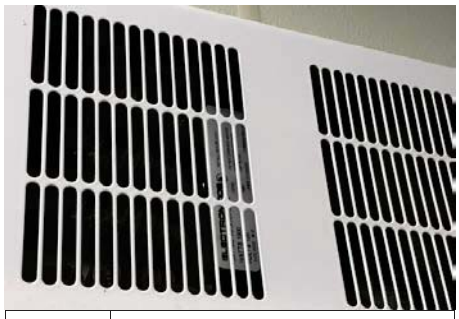
EMG PROJECT NO.: 131644.18R000-017.017

#7	RUSSELL MIDDLE RESTROOM, EXTERIOR

#8	RUSSELL MIDDLE, ROTTING EXTERIOR SIDING

#9	RUSSELL MIDDLE RESTROOM EXTERIOR STEEL DOOR

#10	RUSSELL MIDDLE RESTROOM TOILET PARTITIONS



#11	RUSSELL MIDDLE RESTROOM, HEATER

#12	RUSSELL MIDDLE RESTROOM, WATER HEATER

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#13	RUSSELL SECONDARY TRANSFORMER

#14	RUSSELL MIDDLE RESTROOM, DISTRIBUTION PANEL, 208 Y, 120 V, 100 AMP

#15	CARDOZA, EXTERIOR

#16	CARDOZA ROOF, MODIFIED BITUMINOUS

#17	CARDOZA PARK RESTROOMS - HAND DRYER

#18	CARDOZA PARK RESTROOMS

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#19	AUGUSTINE REAR ELEVATION

#20	AUGUSTINE PARK RESTROOM

#21	DETERIORATION AT AUGUSTINE

#22	AUGUSTINE, SINK

#23	AUGUSTINE DISTRIBUTION PANEL, 208 Y, 120 V, 100 AMP,

#24	AUGUSTINE DRINKING FOUNTAIN, DAMAGED

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#25	AUGUSTINE PLUMBING

#26	AUGUSTINE LIGHT DIMMING PANEL

#27	AUGUSTINE, GATES, METAL TUBE

#28	GILL MEMORIAL PARK

#29	GILL, DAMAGED RAFTER TAILS

#30	GILL, FLOOR COVERING

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#31	GILL, LIGHT DIMMING PANELS

#32	GILL, SWITCHBOARD

#33	JOSE HIGUERA FRONT ELEVATION

#34	JOSE HIGUERA INTERIOR WALL FINISH

#35	JOSE HIGUERA RESTROOM

#36	JOSE HIGUERA, CEILING

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#37	JOSE HIGUERA, EXTERIOR LIGHTING

#38	JOSE HIGUERA DISTRIBUTION PANEL

#39	STARLIGHT PARK RESTROOM

#40	STARLIGHT, TERMITE/ROT DAMAGE

#41	STARLIGHT

#42	STARLIGHT, DISTRIBUTION PANEL

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#43	JOHN MCDERMOTT, EXTERIOR

#44	JOHN MCDERMOTT, SINK

#45	JOHN MCDERMOTT, DISTRIBUTION PANEL

#46	JOHN MCDERMOTT, INTERIOR LIGHTING

#47	HALL MEMORIAL, EXTERIOR

#48	HALL MEMORIAL EXTERIOR DOOR

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#49	HALL MEMORIAL PARK, FASCIA DAMAGE

#50	HALL MEMORIAL, SINK/LAVATORY, STAINLESS STEEL

#51	PARC METRO EAST, FRONT AND RIGHT ELEVATION

#52	METRO PARC EAST, LEFT AND REAR ELEVATION

#53	PARC METRO EAST, MANY DAMAGED ROOF TILES

#54	PARC METRO EAST, TANKLESS TOILET

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#55	BOB MCGUIRE PARK RESTROOM

#56	BOB MCGUIRE RESTROOM

#57	BOB MCGUIRE PARK TOILET PARTITIONS

#58	BOB MCGUIRE PARK, STAINED CONCRETE

#59	PINEWOOD PARK RESTROOM FRONT AND LEFT ELEVATION

#60	PINEWOOD, WATER FOUNTAIN

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#61	PINEWOOD SINK

#62	PINEWOOD EPOXY FLOOR COATING DEGRADATION

#63	FOOTHILL PARK RESTROOM

#64	FOOTHILL PARK TOILET

#65	FOOTHILL PARK, STRUCTURAL CRACK

#66	MURPHY PARK RESTROOM

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FACILITY CONDITION ASSESSMENT

PARK RESTROOMS - SNACK SHACKS

EMG PROJECT NO.: 131644.18R000-017.017

#67	MURPHY PARK ROOF

#68	CERANO PARK RESTROOM

#69	CERANO PARK REAR ELEVATION

#70	SINNOTT PARK RESTROOM

#71	SINNOTT PARK ROOF, MODIFIED BITUMINOUS

#72	SINNOTT DISTRIBUTION PANEL

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FACILITY CONDITION ASSESSMENT

Appendix B:
Replacement Reserves

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FACILITY CONDITION ASSESSMENT

Replacement Reserves Report

12/27/2018

Location	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total Escalated Estimate
Park Restrooms - Snack Shacks	$44,343	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$44,343**
Park Restrooms - Snack Shacks / Alviso Adobe Park Restroom	$1,661	$0	$0	$8,366	$0	$0	$0	$0	$0	$0	$0	$3,673	$0	$14,687	$0	$0	$0	$0	$22,152	$4,653	$3,000	**$58,192**
Park Restrooms - Snack Shacks / Augustine Memorial Park	$12,772	$823	$7,694	$851	$2,530	$0	$25,861	$0	$0	$1,043	$0	$9,018	$6,928	$1,144	$0	$4,253	$31,093	$1,321	$0	$3,941	$0	**$109,271**
Park Restrooms - Snack Shacks / Bob Maguire Park	$0	$0	$0	$0	$0	$865	$584	$20,457	$0	$0	$0	$0	$0	$1,096	$0	$0	$784	$40,822	$0	$0	$0	**$64,607**
Park Restrooms - Snack Shacks / Cardoza Park	$16,700	$1,262	$1,131	$0	$0	$7,778	$797	$0	$3,458	$0	$7,312	$3,880	$0	$4,358	$0	$4,532	$1,071	$0	$7,758	$0	$8,092	**$68,128**
Park Restrooms - Snack Shacks / Cerano Park	$437	$0	$0	$3,869	$0	$10,197	$0	$1,387	$0	$0	$0	$0	$0	$33,709	$0	$14,384	$0	$1,864	$11,385	$0	$0	**$77,231**
Park Restrooms - Snack Shacks / Dixon Landing Park Restroom	$2,157	$0	$6,900	$1,673	$2,459	$16,782	$5,272	$0	$0	$0	$70,446	$2,119	$22,543	$0	$15,014	$31,874	$0	$2,340	$0	$51,601	$25,636	**$256,836**
Park Restrooms - Snack Shacks / Foothill Park	$0	$9,884	$26,785	$0	$3,281	$0	$522	$2,712	$0	$10,761	$0	$14,731	$6,734	$0	$2,492	$1,661	$0	$27,642	$0	$8,546	$0	**$115,771**
Park Restrooms - Snack Shacks / Gill Memorial Park Restroom	$2,917	$9,082	$15,912	$2,428	$20,002	$0	$2,684	$0	$2,847	$3,490	$5,022	$7,420	$872	$3,263	$0	$0	$5,602	$1,296	$1,754	$29,325	$5,269	**$119,187**
Park Restrooms - Snack Shacks / Hall Memorial Park	$21,297	$2,594	$5,192	$4,153	$2,546	$0	$0	$0	$0	$3,122	$10,041	$0	$5,929	$0	$3,422	$0	$0	$0	$2,641	$0	$5,333	**$66,271**
Park Restrooms - Snack Shacks / John McDermott Park	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,899	$587	$0	$0	$0	$4,489	$29,016	$0	$0	$0	$3,896	$7,247	**$48,134**
Park Restrooms - Snack Shacks / Jose Higuera Adobe	$0	$0	$15,589	$96	$0	$7,668	$15,496	$0	$111	$0	$3,021	$0	$1,253	$3,305	$1,585	$20,283	$6,159	$4,439	$149	$0	$0	**$79,156**
Park Restrooms - Snack Shacks / Murphy Park	$0	$7,366	$12,707	$0	$2,637	$0	$0	$7,815	$0	$570	$2,057	$0	$12,167	$1,439	$4,733	$0	$0	$4,512	$2,606	$6,220	$0	**$64,831**
Park Restrooms - Snack Shacks / Park Metro East	$13,520	$0	$8,990	$2,615	$5,010	$455	$4,791	$0	$2,069	$3,872	$3,801	$10,503	$1,110	$0	$6,733	$0	$2,620	$0	$0	$0	$5,816	**$71,906**
Park Restrooms - Snack Shacks / Pinewood Park	$41,098	$2,445	$7,534	$5,065	$8,426	$0	$7,163	$504	$0	$0	$20,070	$0	$2,524	$5,133	$0	$681	$0	$678	$2,606	$688	$18,732	**$123,346**
Park Restrooms - Snack Shacks / Sinnott Park Restroom	$9,702	$14,731	$24,670	$2,230	$1,180	$4,650	$0	$3,650	$1,475	$0	$6,860	$3,430	$4,978	$0	$0	$6,249	$0	$32,133	$0	$5,577	$9,219	**$130,753**
Park Restrooms - Snack Shacks / Starlight Park	$11,707	$17,074	$11,308	$6,684	$2,728	$0	$0	$3,650	$10,446	$11,893	$5,982	$1,978	$1,110	$0	$9,638	$0	$1,682	$4,512	$0	$22,650	$8,229	**$131,272**
Park Restrooms - Snack Shacks / Thomas Russell middle school	$29,027	$31,254	$11,886	$2,392	$35,739	$11,303	$0	$13,766	$0	$20,510	$0	$18,026	$1,534	$0	$13,733	$20,416	$45,851	$8,898	$0	$8,859	$9,583	**$282,775**
GrandTotal	**$207,338**	**$96,515**	**$156,298**	**$40,421**	**$86,537**	**$59,697**	**$63,169**	**$53,941**	**$20,405**	**$58,181**	**$135,199**	**$74,780**	**$67,682**	**$68,136**	**$61,840**	**$133,348**	**$94,863**	**$130,496**	**$51,052**	**$145,957**	**$106,157**	**$1,912,011**

Park Restrooms - Snack Shacks

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
P000X	Hall & Foothill	1051667	Architect/Engineer, Building Envelope, Masonry, Evaluate/Report	0	0	0	1	EA	$9,500.00	$13,373.25	$13,373	$13,373																					**$13,373**
P000X	All restrooms	1051668	Licensed Inspector, Termite investigation, Evaluate/Report	0	0	0	1	EA	$7,000.00	$9,853.97	$9,854	$9,854																					**$9,854**
Z105X	All restrooms	1051669	ADA, Miscellaneous, Level III Study, Includes Measurements, Evaluate/Report	0	0	0	1	EA	$15,000.00	$21,115.65	$21,116	$21,116																					**$21,116**
Totals, Unescalated												**$44,343**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**		**$44,343**
Totals, Escalated (3.0% inflation, compounded annually)												**$44,343**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**		**$44,343**

* MarkupLocationFactor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Alviso Adobe Park Restroom

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Exterior wall	1019773	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	7	3	800	SF	$2.87	$4.04	$3,232				$3,232										$3,232								**$6,464**
B2032	Exterior wall	1019772	Exterior Door, Steel, Replace	25	7	18	3	EA	$950.12	$1,337.49	$4,012																$4,012						**$4,012**
B3011	Roof	1019758	Roof, Wood Shake/Shingle, Replace	25	7	18	700	SF	$5.59	$7.87	$5,508																$5,508						**$5,508**
C3012	Interior	1020244	Interior Finish, Generic Surface, Prep & Paint	8	5	3	1300	SF	$1.45	$2.04	$2,654				$2,654						$2,654								$2,654				**$7,961**
D2011	Restrooms	1020237	Toilet/Water Closet, Stainless Steel, Replace	25	7	18	2	EA	$1,240.00	$1,745.56	$3,491																$3,491						**$3,491**
D2012	Restrooms	1020239	Urinal, Stainless, Replace	20	7	13	1	EA	$1,193.44	$2,031.49	$2,031														$2,031								**$2,031**
D2014	Restrooms	1020240	Sink/Lavatory, Stainless Steel, Replace	20	7	13	2	EA	$1,054.05	$1,483.80	$2,968														$2,968								**$2,968**
D2018	Exterior wall	1020242	Drinking Fountain, , Replace	10	7	3	1	EA	$1,257.51	$1,770.21	$1,770				$1,770										$1,770								**$3,540**
D5037	Throughout	1019764	Fire Alarm System, Office Building, Install	20	20	0	500	SF	$2.36	$3.32	$1,661	$1,661																			$1,661		**$3,322**
Totals, Unescalated												**$1,661**	**$0**	**$0**	**$7,656**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,654**	**$0**	**$10,001**	**$0**	**$0**	**$0**	**$0**	**$13,012**	**$2,654**	**$1,661**		**$39,298**
Totals, Escalated (3.0% inflation, compounded annually)												**$1,661**	**$0**	**$0**	**$8,366**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,673**	**$0**	**$14,687**	**$0**	**$0**	**$0**	**$0**	**$22,152**	**$4,653**	**$3,000**		**$58,192**

* MarkupLocationFactor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Augustine Memorial Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Augustine	1051781	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	8	2	350	SF	$2.87	$4.04	$1,414			$1,414										$1,414									**$2,828**
B2011	Augustine	1051690	Exterior Wall, Concrete Block (CMU), 1-2 Stories, Replace	40	24	16	350	SF	$17.16	$24.16	$8,455																	$8,455					**$8,455**
B2032	Augustine	1051759	Exterior Door, Steel, Replace	25	19	6	1	EA	$950.12	$1,164.01	$1,164							$1,164															**$1,164**
B3011	Augustine	1051760	Roof, Modified Bituminous, Replace	20	9	11	280	SF	$9.00	$12.67	$3,547												$3,547										**$3,547**
B3016	Augustine	1051718	Gutters & Downspouts, Aluminum w/ Fittings, Replace	10	4	6	320	LF	$8.37	$11.78	$3,770							$3,770										$3,770					**$7,541**
C1031	Augustine	1051735	Toilet Partitions, Metal Overhead-Braced, Replace	20	18	2	2	EA	$850.00	$1,196.55	$2,393			$2,393																			**$2,393**
C3012	Augustine	1051705	Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	7	1	450	SF	$1.45	$1.78	$799		$799									$799								$799			**$2,398**
C3021	Augustine	1051671	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	8	2	280	SF	$8.74	$12.30	$3,445			$3,445										$3,445									**$6,890**
C3031	Augustine	1051782	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	7	3	280	SF	$2.27	$2.78	$779				$779										$779								**$1,557**
D2014	Augustine	1051694	Sink/Lavatory, Stainless Steel, Replace	20	9	11	2	EA	$1,054.05	$1,483.80	$2,968												$2,968										**$2,968**
D2018	Augustine	1051709	Drinking Fountain, Vitreous China, Replace	15	15	0	1	EA	$1,938.99	$2,729.54	$2,730	$2,730															$2,730						**$5,459**
D2033	Augustine	1051707	Floor Drain, , Replace	30	30	0	1	EA	$406.91	$468.51	$499	$499																					**$499**
D5012	Augustine	1051757	Distribution Panel, 100 AMP, Replace	30	30	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																					**$7,151**
D5012	Augustine	1051721	Distribution Panel, 100 AMP, Replace	30	14	16	1	EA	$5,079.93	$7,151.07	$7,151																	$7,151					**$7,151**
D5022	Augustine	1051691	Light Dimming Panel, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	11	4	1	EA	$1,596.61	$2,247.56	$2,248					$2,248															$2,248		**$4,495**

FACILITY CONDITION ASSESSMENT

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
G2057	Augustine	1051776	Irrigation System, Controller, 24 Stations, Replace	15	9	6	1	EA	$11,880.02	$16,723.62	$16,724							$16,724															**$16,724**
Z1080	Augustine	1051747	ADA, Restroom, Hand Dryer, Modify	0	0	0	2	EA	$850.00	$1,196.55	$2,393	$2,393																					**$2,393**
Totals, Unescalated												**$12,772**	**$799**	**$7,252**	**$779**	**$2,248**	**$0**	**$21,698**	**$0**	**$0**	**$799**	**$0**	**$6,515**	**$4,859**	**$779**	**$0**	**$2,730**	**$19,376**	**$799**	**$0**	**$2,248**	**$0**	**$83,613**
Totals, Escalated (3.0% inflation, compounded annually)												**$12,772**	**$823**	**$7,694**	**$851**	**$2,530**	**$0**	**$25,861**	**$0**	**$0**	**$1,043**	**$0**	**$9,018**	**$6,928**	**$1,144**	**$0**	**$4,253**	**$31,093**	**$1,321**	**$0**	**$3,941**	**$0**	**$109,271**

* Markup/LocationFactor (1.176) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Bob Mcguire Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Bob Mcguire Park	1061682	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	4	6	139	SF	$2.87	$3.52	$489							$489										$489						**$977**
B2021	Building Exterior	1035538	Window, SF, Replace	30	23	7	2	EA	$555.58	$782.10	$1,564								$1,564															**$1,564**
C1031	Restrooms	1035532	Toilet Partitions, Wood, Replace	20	3	17	3	EA	$465.02	$654.61	$1,964																		$1,964					**$1,964**
C3012	Restrooms	1035539	Interior Wall Finish, Generic Surface, Prep & Paint	8	3	5	420	SF	$1.45	$1.78	$746						$746								$746									**$1,492**
C3021	Restrooms	1035540	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	3	7	240	SF	$8.74	$12.30	$2,953								$2,953										$2,953					**$5,906**
C3031	Restrooms	1035536	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	3	7	240	SF	$2.27	$2.78	$667								$667										$667					**$1,335**
D2011	Restrooms	1035531	Toilet, Tankless (Water Closet), Replace	20	3	17	3	EA	$842.97	$1,186.66	$3,560																		$3,560					**$3,560**
D2012	Restrooms	1035534	Urinal, Vitreous China, Replace	20	3	17	1	EA	$1,193.44	$1,680.02	$1,680																		$1,680					**$1,680**
D2014	Restrooms	1035530	Sink/Lavatory, Vitreous China, Replace	20	3	17	2	EA	$861.51	$1,212.76	$2,426																		$2,426					**$2,426**
D2018	Building exterior	1035533	Drinking Fountain, Stainless Steel, Replace	10	3	7	2	EA	$1,257.51	$1,770.21	$3,540								$3,540										$3,540					**$7,081**
D3099	Restrooms	1035529	Hand Dryer, Restroom, Replace	10	3	7	2	EA	$1,581.00	$2,225.59	$4,451								$4,451										$4,451					**$8,902**
D5092	Restrooms	1035541	Emergency Lighting Pack, 2 Light w/ Battery, Replace	10	3	7	2	EA	$1,227.87	$1,728.48	$3,457								$3,457										$3,457					**$6,914**
Totals, Unescalated												**$0**	**$0**	**$0**	**$0**	**$0**	**$746**	**$489**	**$16,633**	**$0**	**$0**	**$0**	**$0**	**$0**	**$746**	**$0**	**$0**	**$489**	**$24,698**	**$0**	**$0**	**$0**		**$43,801**
Totals, Escalated (3.0% inflation, compounded annually)												**$0**	**$0**	**$0**	**$0**	**$0**	**$865**	**$584**	**$20,457**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,096**	**$0**	**$0**	**$784**	**$40,822**	**$0**	**$0**	**$0**		**$64,607**

* Markup/LocationFactor (1.176) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Cardoza Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Cardoza	1051744	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	5	5	720	SF	$2.87	$4.04	$2,909						$2,909										$2,909						**$5,818**
B2032	Cardoza	1051754	Exterior Door, Steel, Replace	25	25	0	2	EA	$950.12	$1,337.49	$2,675	$2,675																					**$2,675**
B3011	Cardoza	1051713	Roof, Modified Bituminous, Replace	20	15	5	300	SF	$9.00	$12.67	$3,801						$3,801																**$3,801**
C3012	Cardoza	1051756	Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	6	2	600	SF	$1.45	$1.78	$1,066			$1,066								$1,066								$1,066			**$3,198**
C3021	Cardoza	1051734	Interior Floor Finish, Elastomeric Coating, Prep & Paint	10	10	0	240	SF	$12.95	$18.23	$4,375	$4,375										$4,375									$4,375		**$13,125**
C3031	Cardoza	1051779	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	4	6	240	SF	$2.27	$2.78	$667							$667											$667				**$1,335**
D2011	Cardoza	1051745	Toilet/Water Closet, Stainless Steel, Replace	25	7	18	2	EA	$1,240.00	$1,745.56	$3,491																			$3,491			**$3,491**
D2014	Cardoza	1051699	Sink/Lavatory, Stainless Steel, Replace	20	7	13	2	EA	$1,054.05	$1,483.80	$2,968															$2,968							**$2,968**
D2018	Cardoza	1051765	Drinking Fountain, Vitreous China, Replace	15	7	8	1	EA	$1,938.99	$2,729.54	$2,730									$2,730													**$2,730**
D5012	Cardoza	1051780	Distribution Panel, 100 AMP, Replace	30	30	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																					**$7,151**
D5021	Cardoza	1051624	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	20	20	0	1	EA	$85.88	$105.21	$105	$105																			$105		**$210**
D5022	Cardoza	1051708	Flood Light, Exterior, 100 W, Replace	20	9	11	2	EA	$995.47	$1,401.33	$2,803													$2,803									**$2,803**
G2031	Cardoza	1051739	Pedestrian Pavement, Sidewalk, Asphalt, Replace	25	24	1	200	SF	$5.00	$6.13	$1,225			$1,225																			**$1,225**
Z1080	Cardoza	1051742	ADA, Restroom, Hand Dryer, Modify	0	0	0	2	EA	$850.00	$1,196.55	$2,393	$2,393																					**$2,393**
Totals, Unescalated													**$16,700**	**$1,225**	**$1,066**	**$0**	**$0**	**$6,710**	**$667**	**$0**	**$2,730**	**$0**	**$5,441**	**$2,803**	**$0**	**$2,968**	**$0**	**$2,909**	**$667**	**$0**	**$4,557**	**$0**	**$4,480**	**$52,922**
Totals, Escalated (3.0% inflation, compounded annually)													**$16,700**	**$1,262**	**$1,131**	**$0**	**$0**	**$7,778**	**$797**	**$0**	**$3,458**	**$0**	**$7,312**	**$3,880**	**$0**	**$4,358**	**$0**	**$4,532**	**$1,071**	**$0**	**$7,758**	**$0**	**$8,092**	**$68,128**

* Markup/LocationFactor (1.176) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Cerano Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Building Exterior	1035569	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	5	5	800	SF	$2.87	$4.04	$3,232						$3,232										$3,232						**$6,464**
B2032	Building Exterior	1035565	Exterior Door, Steel, Replace	25	7	18	2	EA	$950.12	$1,337.49	$2,675																			$2,675			**$2,675**
B2032	Building Exterior	1035562	Exterior Door, Steel, Replace	25	7	18	3	EA	$950.12	$1,337.49	$4,012																			$4,012			**$4,012**
B3016	Roof	1035575	Gutters & Downspouts, Aluminum w/ Fittings, Replace	10	3	7	110	LF	$8.37	$10.25	$1,128								$1,128										$1,128					**$2,256**
C1031	Restrooms	1035574	Toilet Partitions, Metal Overhead-Braced, Replace	20	7	13	2	EA	$850.00	$1,196.55	$2,393													$2,393									**$2,393**
C3031	Restrooms	1035572	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	5	5	400	SF	$2.27	$2.78	$1,112						$1,112										$1,112						**$2,225**
D2011	Restrooms	1035557	Toilet, Tankless (Water Closet), Replace	20	7	13	3	EA	$842.97	$1,186.66	$3,560													$3,560									**$3,560**
D2012	Restrooms	1035568	Urinal, Vitreous China, Replace	20	7	13	1	EA	$1,193.44	$1,680.02	$1,680													$1,680									**$1,680**
D2014	Restrooms	1035570	Sink/Lavatory, Stainless Steel, Replace	20	7	13	2	EA	$1,054.05	$1,483.80	$2,968													$2,968									**$2,968**
D2018	Building exterior	1035561	Drinking Fountain, Stainless Steel, Replace	10	7	3	2	EA	$1,257.51	$1,770.21	$3,540				$3,540									$3,540									**$7,081**
D3099	Restrooms	1035571	Hand Dryer, Restroom, Replace	10	5	5	2	EA	$1,581.00	$2,225.59	$4,451						$4,451									$4,451							**$8,902**
D4031	Electrical room	1035566	Fire Extinguisher, , Replace	15	15	0	1	EA	$356.54	$436.80	$437	$437														$437							**$874**
D5022	Throughout building	1035564	Fluorescent Lighting Fixture, T12, 60 W, Replace	20	7	13	6	EA	$213.86	$301.05	$1,806													$1,806									**$1,806**
D5022	Building exterior	1035560	Flood Light, Exterior, High Pressure Sodium, Replace	20	7	13	5	EA	$995.47	$1,401.33	$7,007													$7,007									**$7,007**
Totals, Unescalated												**$437**	**$0**	**$0**	**$3,540**	**$0**	**$8,796**	**$0**	**$1,128**	**$0**	**$0**	**$0**	**$0**	**$22,954**	**$0**	**$9,232**	**$0**	**$1,128**	**$6,687**	**$0**	**$0**		**$53,903**
Totals, Escalated (3.0% inflation, compounded annually)												**$437**	**$0**	**$0**	**$3,869**	**$0**	**$10,197**	**$0**	**$1,387**	**$0**	**$0**	**$0**	**$0**	**$33,709**	**$0**	**$14,384**	**$0**	**$1,864**	**$11,385**	**$0**	**$0**		**$77,231**

* Markup/LocationFactor (1.176) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Dixon Landing Park Restroom

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Dixon Landing	1048901	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	5	5	1760	SF	$2.87	$4.04	$5,050						$5,050										$5,050						**$10,100**
B2032	Dixon landing	1051746	Exterior Door, Steel, Replace	25	5	20	9	EA	$950.12	$1,337.49	$12,037																					$12,037	**$12,037**
B3011	Roof	1061688	Roof, Metal, Replace	40	21	19	1400	SF	$12.45	$17.53	$24,536																				$24,536		**$24,536**

FACILITY CONDITION ASSESSMENT

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	Age	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B3016	Dixon Landing	1051712	Gutters & Downspouts, Aluminum w/ Fittings, Replace	10	5	5	800	LF	$8.37	$11.78	$9,426						$9,426										$9,426							$18,852
C1031	Dixon landing	1051727	Toilet Partitions, Metal Overhead-Braced, Replace	20	5	15	5	EA	$850.00	$1,196.55	$5,983																$5,983							$5,983
C3012	Dixon landing	1051702	Interior Wall Finish, Generic Surface, Prep & Paint	8	5	3	750	SF	$1.45	$2.04	$1,531				$1,531								$1,531								$1,531			$4,593
C3031	Ceiling	1061689	Interior Ceiling Finish, Gypsum Board/Plaster, Prep & Paint	10	6	4	800	SF	$1.94	$2.73	$2,185					$2,185										$2,185								$4,370
D2011	Dixon landing	1051763	Toilet/Water Closet, Stainless Steel, Replace	25	13	12	5	EA	$1,240.00	$1,745.56	$8,728													$8,728										$8,728
D2012	Dixon landing	1051769	Urinal, Vitreous China, Replace	20	1	19	2	EA	$1,193.44	$1,680.02	$3,360																				$3,360			$3,360
D2014	Dixon landing	1051726	Sink/Lavatory, Stainless Steel, Replace	20	6	14	4	EA	$1,054.05	$1,483.80	$5,935															$5,935								$5,935
D2023	Dixon landing	1051703	Water Heater, 5 - 15 GAL, Replace	15	13	2	1	EA	$1,014.17	$1,427.66	$1,428			$1,428															$1,428					$2,855
D3099	Dixon landing	1051774	Hand Dryer, Restroom, Replace	10	8	2	2	EA	$1,581.00	$2,225.59	$4,451			$4,451										$4,451										$8,902
D4031	Dixon landing	1051741	Fire Extinguisher, , Replace	15	3	12	4	EA	$356.54	$501.90	$2,008													$2,008										$2,008
D5022	Dixon Landing	1048898	Light Dimming Panel, , Replace	15	5	10	1	EA	$1,596.61	$2,247.56	$2,248											$2,248												$2,248
D5022	Dixon Landing	1048800	Fluorescent Lighting Fixture, T12, 60 W, Replace	20	6	14	6	EA	$213.86	$301.05	$1,806															$1,806								$1,806
E1093	Dixon Landing	1051761	Commercial Kitchen, Freezer, Chest, Replace	15	9	6	2	EA	$1,568.19	$2,207.56	$4,415						$4,415																	$4,415
E1094	Dixon landing	1051697	Residential Appliances, Garbage Disposal, Replace	10	8	2	1	EA	$509.92	$624.71	$625			$625										$625										$1,249
E2012	Dixon landing	1051728	Kitchen Counter, Ceramic Tile, Replace	20	20	0	18	LF	$85.12	$119.82	$2,157	$2,157																				$2,157		$4,314
G2057	Dixon landing	1051729	Irrigation System, Controller, 24 Stations, Replace	15	5	10	3	EA	$11,880.02	$16,723.62	$50,171											$50,171												$50,171
Totals, Unescalated												**$2,157**	**$0**	**$6,504**	**$1,531**	**$2,185**	**$14,476**	**$4,415**	**$0**	**$0**	**$0**	**$52,418**	**$1,531**	**$15,811**	**$0**	**$9,926**	**$20,459**	**$0**	**$1,428**	**$0**	**$29,427**	**$14,194**		**$176,462**
Totals, Escalated (3.0% inflation, compounded annually)												**$2,157**	**$0**	**$6,900**	**$1,673**	**$2,459**	**$16,782**	**$5,272**	**$0**	**$0**	**$0**	**$70,446**	**$2,119**	**$22,543**	**$0**	**$15,014**	**$31,874**	**$0**	**$2,360**	**$0**	**$51,601**	**$25,636**		**$256,836**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Foothill Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	Age	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Building Exterior	1053077	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	1	9	650	SF	$2.87	$4.04	$2,626										$2,626										$2,626			$5,252
B2016	At termite damaged areas	1061730	Ceiling, Wood, Replace	20	19	1	100	SF	$17.37	$24.45	$2,445		$2,445																					$2,445
B2032	Building Exterior	1053078	Exterior Door, Steel, Replace	25	16	9	1	EA	$950.12	$1,164.01	$1,164										$1,164													$1,164
B3011	Roof	1053073	Roof, Modified Bituminous, Replace	20	18	2	300	SF	$9.00	$12.67	$3,801			$3,801																				$3,801
C1031	Restroom	1053070	Toilet Partitions, Wood, Replace	20	13	7	2	EA	$465.02	$569.71	$1,139								$1,139															$1,139
C3012	Restrooms	1053068	Interior Wall Finish, Generic Surface, Prep & Paint	8	1	7	600	SF	$1.45	$1.78	$1,066								$1,066								$1,066							$2,132
C3021	Restrooms	1053072	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	8	2	240	SF	$8.74	$12.30	$2,953			$2,953										$2,953										$5,906
C3031	Restrooms	1053080	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	6	4	240	SF	$2.27	$2.78	$667					$667										$667								$1,335
D2011	Foothill Park	1053057	Toilet/Water Closet, Stainless Steel, Replace	25	14	11	2	EA	$1,240.00	$1,745.56	$3,491												$3,491											$3,491
D2014	Foothill Park	1053082	Sink/Lavatory, Stainless Steel, Replace	20	11	9	2	EA	$1,054.05	$1,483.80	$2,968										$2,968													$2,968
D2018	Building exterior	1053085	Drinking Fountain, Refrigerated, Replace	10	8	2	1	EA	$1,257.51	$1,770.21	$1,770			$1,770										$1,770										$3,540
D4031	Foothill Park	1053069	Fire Extinguisher, , Replace	15	9	6	1	EA	$356.54	$436.80	$437							$437																$437
D5012	Utility closet	1053075	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	29	1	1	EA	$5,079.93	$7,151.07	$7,151		$7,151																					$7,151
D5012	Utility closet	1053079	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	19	11	1	EA	$5,079.93	$7,151.07	$7,151												$7,151											$7,151
D5022	Utility room	1053074	Light Dimming Panel, , Replace	15	11	4	1	EA	$1,596.61	$2,247.56	$2,248					$2,248															$2,248			$4,495
D5022	Restrooms	1053076	Fluorescent Lighting Fixture, 60 WATT, Replace	20	11	9	5	EA	$213.86	$301.05	$1,505										$1,505													$1,505
G2041	Building Exterior	1053084	Fences & Gates, Metal Tube, 6' High, Replace	30	16	14	10	LF	$80.01	$98.02	$980															$980								$980
G2057	Utility room	1053081	Irrigation System, Controller, 24 Stations, Replace	15	13	2	1	EA	$11,880.02	$16,723.62	$16,724			$16,724															$16,724					$33,447
Totals, Unescalated													**$0**	**$9,596**	**$25,247**	**$0**	**$2,915**	**$0**	**$437**	**$2,205**	**$0**	**$8,263**	**$0**	**$10,642**	**$4,723**	**$0**	**$1,648**	**$1,066**	**$0**	**$16,724**	**$0**	**$4,874**	**$0**		**$88,340**
Totals, Escalated (3.0% inflation, compounded annually)													**$0**	**$9,884**	**$26,785**	**$0**	**$3,281**	**$0**	**$522**	**$2,712**	**$0**	**$10,781**	**$0**	**$14,731**	**$6,734**	**$0**	**$2,492**	**$1,661**	**$0**	**$27,642**	**$0**	**$8,546**	**$0**		**$115,771**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Gill Memorial Park Restroom

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	Age	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B1022	Gill Park	1035739	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	49	1	200	SF	$31.32	$44.09	$8,818		$8,818																					$8,818
B2011	Gill Park	1035740	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	7	3	550	SF	$2.87	$4.04	$2,222				$2,222											$2,222								$4,444
B2032	Gill Park	1035729	Exterior Door, Steel, Replace	25	16	9	2	EA	$950.12	$1,337.49	$2,675											$2,675												$2,675
C1031	Gill Park	1035714	Toilet Partitions, Composite, Replace	20	9	11	2	EA	$850.00	$1,196.55	$2,393													$2,393										$2,393
C3012	Gill Park	1035764	Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	6	2	580	SF	$1.45	$1.78	$1,030				$1,030								$1,030								$1,030			$3,091
C3021	Gill Park	1035720	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	10	0	220	SF	$8.74	$12.30	$2,707	$2,707											$2,707										$2,707	$8,120
C3031	Gill Park	1035742	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	8	2	220	SF	$2.27	$2.78	$612				$612										$612									$1,224
D2011	Gill Park	1035746	Toilet/Water Closet, Stainless Steel, Replace	25	9	16	2	EA	$1,240.00	$1,745.56	$3,491																	$3,491						$3,491
D2014	Gill Park	1035684	Sink/Lavatory, Stainless Steel, Replace	20	9	11	2	EA	$1,054.05	$1,483.80	$2,968													$2,968										$2,968
D5012	Gill Park	1035681	Distribution Panel, 208 Y, 120 V, 400 Amp, Replace	30	28	2	1	EA	$9,487.85	$13,356.14	$13,356				$13,356																			$13,356
D5021	Gill Park	1035735	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	20	20	0	1	EA	$85.88	$105.21	$105	$105																					$105	$210
D5021	Gill Park	1035719	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	20	20	0	1	EA	$85.88	$105.21	$105	$105																					$105	$210
D5022	Gill Park	1035701	Fluorescent Lighting Fixture, 60 WATT, Replace	20	16	4	4	EA	$213.86	$262.00	$1,048						$1,048																	$1,048
D5022	Gill Park	1035696	Light Dimming Panel, , Replace	15	9	6	1	EA	$1,596.61	$2,247.56	$2,248								$2,248															$2,248
D5022	Gill Park	1035743	Light Dimming Panel, , Replace	15	7	8	1	EA	$1,596.61	$2,247.56	$2,248										$2,248													$2,248
G2041	Gill Park	1035680	Fences & Gates, Metal Tube, 6' High, Replace	30	13	17	8	LF	$80.01	$98.02	$784																			$784				$784
G2057	Gill Park	1035715	Irrigation System, Controller, 24 Stations, Replace	15	11	4	1	EA	$11,880.02	$16,723.62	$16,724					$16,724																$16,724		$33,447
Totals, Unescalated													**$2,917**	**$8,818**	**$14,998**	**$2,222**	**$17,772**	**$0**	**$2,248**		**$0**	**$2,248**	**$2,675**	**$3,737**	**$5,361**	**$612**	**$2,222**	**$0**	**$0**	**$3,491**	**$784**	**$1,030**	**$16,724**	**$2,917**	**$90,775**
Totals, Escalated (3.0% inflation, compounded annually)													**$2,917**	**$9,082**	**$15,912**	**$2,428**	**$20,002**	**$0**	**$2,684**		**$0**	**$2,847**	**$3,490**	**$5,022**	**$7,420**	**$872**	**$3,263**	**$0**	**$0**	**$5,602**	**$1,296**	**$1,754**	**$29,325**	**$5,269**	**$119,197**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

FACILITY CONDITION ASSESSMENT

Park Restrooms - Snack Shacks / Hall Memorial Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Hall Memorial Park	1061824	Exterior Wall, Concrete Block (CMU), 1-2 Stories, Replace	40	39	1	50	SF	$17.16	$21.02	$1,051		$1,051																			$1,051
B2011	Hall Memorial Park	1035728	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	6	4	560	SF	$2.87	$4.04	$2,262				$2,262										$2,262							$4,525
B2016	Hall Memorial Park	1035700	Fascia, Wood, Replace	20	19	1	60	SF	$17.37	$24.45	$1,467		$1,467																			$1,467
B2032	Hall Memorial Park	1035770	Exterior Door, Steel, Replace	25	23	2	2	EA	$950.12	$1,337.49	$2,675			$2,675																		$2,675
B3011	Hall Memorial Park	1035707	Roof, Modified Bituminous, Replace	20	17	3	300	SF	$9.00	$12.67	$3,801				$3,801																	$3,801
C1031	Hall Memorial Park	1035731	Toilet Partitions, Metal Overhead-Braced, Replace	20	11	9	2	EA	$850.00	$1,196.55	$2,393									$2,393												$2,393
C3012	Hall Memorial Park	1035738	Interior Wall Finish, Generic Surface, Prep & Paint	8	6	2	760	SF	$1.45	$2.04	$1,551			$1,551							$1,551								$1,551			$4,654
C3021	Hall Memorial Park	1035745	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	10	0	240	SF	$8.74	$12.30	$2,953	$2,953									$2,953										$2,953	$8,858
C3031	Hall Memorial Park	1061813	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	8	2	240	SF	$2.27	$2.78	$667			$667									$667									$1,335
D2011	Hall memorial park	1035721	Toilet/Water Closet, Stainless Steel, Replace	25	13	12	2	EA	$1,240.00	$1,745.56	$3,491												$3,491									$3,491
D2014	Hall memorial park	1035677	Sink/Lavatory, Stainless Steel, Replace	20	10	10	2	EA	$1,054.05	$1,483.80	$2,968										$2,968											$2,968
D5012	Hall memorial park	1035708	Distribution Panel, 100 AMP, Replace	30	30	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																				$7,151
D5012	Hall memorial park	1035706	Distribution Panel, 225 AMP, Replace	30	30	0	1	EA	$7,951.00	$11,192.70	$11,193	$11,193																				$11,193
Totals, Unescalated												**$21,297**	**$2,518**	**$4,894**	**$3,801**	**$2,262**	**$0**	**$0**	**$0**	**$0**	**$2,393**	**$7,472**	**$0**	**$4,159**	**$0**	**$2,262**	**$0**	**$0**	**$0**	**$1,551**	**$0**	**$2,953**	**$55,562**
Totals, Escalated (3.0% inflation, compounded annually)												**$21,297**	**$2,594**	**$5,192**	**$4,153**	**$2,546**	**$0**	**$0**	**$0**	**$0**	**$3,122**	**$10,041**	**$0**	**$5,929**	**$0**	**$3,422**	**$0**	**$0**	**$0**	**$2,641**	**$0**	**$5,333**	**$66,271**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / John McDermott Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	John mcdermond	1035752	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	1	9	550	SF	$2.87	$4.04	$2,222									$2,222									$2,222			$4,444
B2032	John mcdermond	1035734	Exterior Door, Steel, Replace	25	5	20	3	EA	$950.12	$1,337.49	$4,012																				$4,012	$4,012
C3012	John mcdermond	1035727	Interior Wall Finish, Laminated Paneling, Replace	20	5	15	640	SF	$15.31	$21.55	$13,793														$13,793							$13,793
D2014	John mcdermond	1035751	Sink/Lavatory, Stainless Steel, Replace	20	6	14	2	EA	$1,054.05	$1,483.80	$2,968													$2,968								$2,968
D2014	John mcdermond	1035688	Sink/Lavatory, Stainless Steel, Replace	20	5	15	2	EA	$1,054.05	$1,483.80	$2,968															$2,968						$2,968
D4031	John mcdermond	1035712	Fire Extinguisher, , Replace	15	5	10	1	EA	$395.54	$436.80	$437										$437											$437
D5022	John mcdermond	1035698	Flood Light, Exterior, 100 W, Replace	20	5	15	1	EA	$995.47	$1,219.57	$1,220															$1,220						$1,220
D5022	John mcdermond	1035749	Fluorescent Lighting Fixture, 160 WATT, Replace	20	5	15	2	EA	$262.68	$321.81	$644															$644						$644
Totals, Unescalated												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,222**	**$437**	**$0**	**$0**	**$0**	**$2,968**	**$16,624**	**$0**	**$0**	**$0**	**$2,222**	**$4,012**	**$30,485**
Totals, Escalated (3.0% inflation, compounded annually)												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,899**	**$587**	**$0**	**$0**	**$0**	**$4,489**	**$29,016**	**$0**	**$0**	**$0**	**$3,896**	**$7,247**	**$48,134**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Jose Higuera Adobe

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Higuera Adobe	1035717	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	8	2	250	SF	$2.87	$3.52	$879			$879												$879						$1,758
B2011	Higuera Adobe	1035725	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	4	6	950	SF	$2.87	$4.04	$3,838						$3,838													$3,838			$7,676
B2032	Higuera Adobe	1035750	Exterior Door, Wood Solid-Core, Replace	25	19	6	2	EA	$1,823.11	$2,566.42	$5,133						$5,133															$5,133
B2032	Higuera Adobe	1035747	Exterior Door, Wood Solid-Core, Replace	25	19	6	2	EA	$1,423.11	$2,003.33	$4,007						$4,007															$4,007
C1031	Higuera Adobe	1035756	Toilet Partitions, Metal, Refinish	5	2	3	2	EA	$35.77	$43.82	$88				$88							$88					$88				$88	$351
C3012	Higuera Adobe	1035702	Interior Wall Finish, Generic Surface, Prep & Paint	8	3	5	1060	SF	$1.45	$2.04	$2,164								$2,164								$2,164						$4,327
D2011	Higuera Adobe	1035676	Toilet, Tankless (Water Closet), Replace	20	5	15	2	EA	$842.97	$1,186.66	$2,373																		$2,373				$2,373
D2014	Higuera Adobe	1035730	Sink/Lavatory, Porcelain Enamel, Cast Iron, Replace	20	5	15	2	EA	$1,167.28	$1,643.19	$3,286																		$3,286				$3,286
D2023	Higuera Adobe	1035769	Water Heater, 3.5, Replace	15	13	2	1	EA	$1,907.74	$2,685.54	$2,686			$2,686																	$2,686			$5,371
D3099	Higuera Adobe	1035759	Hand Dryer, Restroom, Replace	10	5	5	2	EA	$1,581.00	$2,225.59	$4,451								$4,451										$4,451					$8,902
D5012	Higuera Adobe	1035723	Distribution Panel, 225 AMP, Replace	30	28	2	1	EA	$7,906.20	$11,129.64	$11,130			$11,130																				$11,130
D5022	Higuera Adobe	1035733	Light Dimming Panel, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	5	10	1	EA	$1,596.61	$2,247.56	$2,248													$2,248									$2,248
D5022	Higuera Adobe	1035679	Fluorescent Lighting Fixture, T12, 40 W, Replace	20	6	14	4	EA	$213.86	$262.00	$1,048																	$1,048					$1,048
D5022	Higuera Adobe	1035736	Compact Fluorescent Lighting Fixture w/ Electronic Ballast, 160 W, Replace	20	5	15	3	EA	$136.01	$166.63	$500																		$500				$500
D5022	Higuera Adobe	1035711	Fluorescent Lighting Fixture, T12, 60 W, Replace	20	5	15	8	EA	$213.86	$301.05	$2,408																		$2,408				$2,408
Totals, Unescalated													**$0**	**$0**	**$14,694**	**$88**	**$0**	**$6,615**	**$12,978**	**$0**	**$88**	**$0**	**$2,248**	**$0**	**$879**	**$2,251**	**$1,048**	**$13,019**	**$13,838**	**$2,686**	**$88**	**$0**	**$0**	**$60,518**
Totals, Escalated (3.0% inflation, compounded annually)													**$0**	**$0**	**$15,589**	**$96**	**$0**	**$7,668**	**$15,496**	**$0**	**$111**	**$0**	**$3,021**	**$0**	**$1,253**	**$3,306**	**$1,585**	**$20,283**	**$6,159**	**$4,439**	**$149**	**$0**	**$0**	**$79,156**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Murphy Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Building Exterior	1053123	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	6	4	580	SF	$2.87	$4.04	$2,343				$2,343										$2,343							$4,687
B2032	Building Exterior	1053111	Exterior Door, Steel, Replace	25	23	2	2	EA	$950.12	$1,337.49	$2,675			$2,675																		$2,675
B3011	Roof	1053120	Roof, Modified Bituminous, Replace	20	1	19	280	SF	$9.00	$12.67	$3,547																		$3,547			$3,547
C1031	Restrooms	1053113	Toilet Partitions, Wood, Replace	20	13	7	2	EA	$465.02	$569.71	$1,139							$1,139														$1,139
C3012	Restrooms	1053118	Interior Wall Finish, Generic Surface, Prep & Paint	8	6	2	750	SF	$1.45	$2.04	$1,531			$1,531							$1,531								$1,531			$4,593
C3021	Murphy Park	1053125	Interior Floor Finish, Elastomeric Coating, Prep & Paint	10	8	2	240	SF	$12.95	$18.23	$4,375			$4,375									$4,375									$8,750
C3031	Murphy Park	1053119	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	8	2	240	SF	$2.27	$2.78	$667			$667									$667									$1,335
D2011	Murphy Park	1053116	Toilet/Water Closet, Stainless Steel, Replace	25	13	12	2	EA	$1,240.00	$1,745.56	$3,491												$3,491									$3,491
D2014	Murphy Park	1053110	Sink/Lavatory, Stainless Steel, Replace	20	13	7	2	EA	$1,054.05	$1,483.80	$2,968							$2,968														$2,968
D2018	Murphy Park	1053117	Drinking Fountain, Cast Concrete, Replace	15	13	2	1	EA	$1,938.99	$2,729.54	$2,730			$2,730														$2,730					$5,459
D4031	Utility closet	1053115	Fire Extinguisher, , Replace	15	6	9	1	EA	$395.54	$436.80	$437									$437												$437
D5012	Utility closet	1053112	Distribution Panel, 100 AMP, Replace	30	29	1	1	EA	$5,079.93	$7,151.07	$7,151		$7,151																			$7,151
D5022	Utility room	1053121	Light Dimming Panel, 100, Replace	15	8	7	1	EA	$1,596.61	$2,247.56	$2,248							$2,248														$2,248

FACILITY CONDITION ASSESSMENT

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
D5022	Throughout building	1053124	Fluorescent Lighting Fixture, 60 WATT, Replace	20	6	14	3	EA	$213.86	$262.00	$786															$786							$786
G2041	Building Exterior	1053122	Fences & Gates, Metal Tube, 6' High, Replace	30	17	13	10	LF	$80.01	$98.02	$980														$980								$980
Totals, Unescalated												**$0**	**$7,151**	**$11,978**	**$0**	**$2,343**	**$0**	**$0**	**$6,355**	**$0**	**$437**	**$1,531**	**$0**	**$8,534**	**$980**	**$3,129**	**$0**	**$0**	**$2,730**	**$1,531**	**$3,547**	**$0**	**$50,246**
Totals, Escalated (3.0% inflation, compounded annually)												**$0**	**$7,366**	**$12,707**	**$0**	**$2,637**	**$0**	**$0**	**$7,815**	**$0**	**$570**	**$2,057**	**$0**	**$12,167**	**$1,439**	**$4,733**	**$0**	**$0**	**$4,512**	**$2,806**	**$6,220**	**$0**	**$64,831**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Park Metro East

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B1022	Exterior	1036598	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	50	0	30	SF	$31.32	$38.37	$1,151	$1,151																					$1,151
B2011	Building Exterior	1036549	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	10	0	700	SF	$2.87	$4.04	$2,828	$2,828										$2,828										$2,828	$8,484
B2032	Maintenance door	1036599	Exterior Door, Steel, Replace	25	25	0	1	EA	$950.12	$1,164.01	$1,164	$1,164																					$1,164
B2032	Building Exterior	1036545	Exterior Door, Steel, Replace	25	19	6	3	EA	$950.12	$1,337.49	$4,012							$4,012															$4,012
B3011	Roof	1036556	Roof, Clay/Concrete Tile, Replace	40	40	0	310	SF	$15.23	$21.44	$6,646	$6,646																					$6,646
C1031	Restrooms	1036543	Toilet Partitions, Metal Overhead-Braced, Replace	20	17	3	2	EA	$850.00	$1,196.55	$2,393				$2,393																		$2,393
C3012	Restrooms	1036553	Interior Wall Finish, Generic Surface, Prep & Paint	8	8	0	800	SF	$1.45	$2.04	$1,633	$1,633								$1,633								$1,633					$4,899
C3031	Restrooms	1036550	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	8	2	280	SF	$2.27	$2.78	$779			$779										$779									$1,557
D2011	Restrooms	1036548	Toilet, Tankless (Water Closet), Replace	20	18	2	2	EA	$842.97	$1,186.66	$2,373			$2,373																			$2,373
D2012	Restrooms	1036544	Urinal, Stainless Steel, Replace	20	18	2	1	EA	$1,193.44	$1,680.02	$1,680			$1,680																			$1,680
D2014	Restrooms	1036547	Sink/Lavatory, Stainless Steel, Replace	20	11	9	2	EA	$1,054.05	$1,483.80	$2,968										$2,968												$2,968
D3099	Restrooms	1036551	Hand Dryer, Restroom, Replace	10	6	4	2	EA	$1,581.00	$2,225.59	$4,451					$4,451										$4,451							$8,902
D4031	Electrical room	1036552	Fire Extinguisher, , Replace	15	4	11	1	EA	$356.54	$436.80	$437												$437										$437
D5012	Electrical room	1036546	Distribution Panel, 208 Y, 120 V, 125 Amp, Replace	30	19	11	1	EA	$5,079.93	$7,151.07	$7,151											$7,151											$7,151
D5029	Throughout building	1036554	Lighting System, Interior, Upgrade	25	23	2	280	SF	$9.24	$13.01	$3,642			$3,642																			$3,642
D5036	Electrical room	1036555	Irrigation Controller, Park Irrigation, Replace	15	10	5	1	EA	$320.18	$392.26	$392						$392															$392	$785
Z108X	restroom	1053066	ADA, Restroom, Lavatory Pipe Wraps, Install	0	0	0	1	EA	$80.00	$98.01	$98	$98																					$98
Totals, Unescalated												**$13,520**	**$0**	**$8,474**	**$2,393**	**$4,451**	**$392**	**$4,012**	**$0**	**$1,633**	**$2,968**	**$2,828**	**$7,588**	**$779**	**$0**	**$4,451**	**$0**	**$1,633**	**$0**	**$0**	**$0**	**$3,220**	**$58,343**
Totals, Escalated (3.0% inflation, compounded annually)												**$13,520**	**$0**	**$8,990**	**$2,615**	**$5,010**	**$455**	**$4,791**	**$0**	**$2,069**	**$3,672**	**$3,801**	**$10,503**	**$1,110**	**$0**	**$6,733**	**$0**	**$2,620**	**$0**	**$0**	**$0**	**$5,816**	**$71,906**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Pinewood Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B1022	Roof	1036592	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	58	0	280	SF	$31.32	$44.09	$12,345	$12,345																					$12,345
B2011	Building Exterior	1036585	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	7	3	700	SF	$2.87	$4.04	$2,828				$2,828																		$5,656
B2032	Building Exterior	1036576	Exterior Door, Steel, Replace	25	21	4	2	EA	$950.12	$1,337.49	$2,675								$2,675														$2,675
B3011	Roof	1036579	Roof, Modified Bituminous, Replace	20	18	2	300	SF	$9.00	$12.67	$3,801						$3,801																$3,801
B3016	Roof	1036578	Gutters & Downspouts, Aluminum w/ Fittings, Replace	10	3	7	40	LF	$8.37	$10.25	$410											$410											$820
C1031	Restrooms	1036582	Toilet Partitions, Wood, Replace	20	17	3	2	EA	$465.02	$569.71	$1,139							$1,139															$1,139
C3012	Restrooms	1036577	Interior Wall Finish, Generic Surface, Prep & Paint	8	6	2	750	SF	$1.45	$2.04	$1,531						$1,531								$1,531								$4,593
C3021	Restrooms	1036595	Interior Floor Finish, Epoxy Coating, Prep & Paint	10	10	0	240	SF	$8.74	$12.30	$2,953	$2,953													$2,953								$8,858
C3031	Restrooms	1036580	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	7	3	240	SF	$2.27	$2.78	$667				$667													$667					$1,335
D2011	Restrooms	1036588	Toilet, Tankless (Water Closet), Replace	20	19	1	2	EA	$842.97	$1,186.66	$2,373					$2,373																	$2,373
D2014	Restrooms	1036591	Sink/Lavatory, Stainless Steel, Replace	20	20	0	2	EA	$1,054.05	$1,483.80	$2,968	$2,968																				$2,968	$5,935
D2018	Building exterior	1036590	Drinking Fountain, , Replace	10	8	2	1	EA	$1,257.51	$1,770.21	$1,770						$1,770										$1,770						$3,540
D3099	Restrooms	1036596	Hand Dryer, Restroom, Replace	10	28	0	2	EA	$1,581.00	$2,225.59	$4,451	$4,451													$4,451							$4,451	$13,354
D4031	Electrical room	1036594	Fire Extinguisher, , Replace	15	15	0	1	EA	$356.54	$436.80	$437	$437																		$437			$874
D5012	Electrical room	1036587	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	58	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																					$7,151
D5012	Electrical room	1036583	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	58	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																					$7,151
D5022	Electrical room	1036586	Light Dimming Panel, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	9	6	1	EA	$4,261.42	$5,998.84	$5,999										$5,999												$5,999
D5022	Electrical room	1036589	Irrigation Controller, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	5	10	1	EA	$4,261.42	$5,998.84	$5,999														$5,999								$5,999
D5029	Throughout building	1036581	Lighting System, Interior, Upgrade	25	28	0	280	SF	$9.24	$13.01	$3,642	$3,642																					$3,642
D5036	Electrical room	1036584	Irrigation Controller, Park Irrigation, Replace	15	11	4	1	EA	$320.18	$392.26	$392								$392													$392	$785
G2041	Building Exterior	1036593	Fences & Gates, Swing Gate, Replace	20	16	4	2	EA	$1,569.49	$2,209.39	$4,419								$4,419														$4,419
Totals, Unescalated															**$41,098**	**$2,373**	**$7,102**	**$4,635**	**$7,486**	**$0**	**$5,999**	**$410**	**$0**	**$0**	**$14,934**	**$0**	**$1,770**	**$3,496**	**$0**	**$437**	**$0**	**$410**	**$1,531**	**$392**	**$10,372**	**$102,444**
Totals, Escalated (3.0% inflation, compounded annually)															**$41,098**	**$2,445**	**$7,534**	**$5,065**	**$8,426**	**$0**	**$7,163**	**$504**	**$0**	**$0**	**$20,070**	**$0**	**$2,524**	**$5,133**	**$0**	**$681**	**$0**	**$678**	**$2,606**	**$688**	**$18,732**	**$123,346**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Sinnott Park Restroom

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup *	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B1022	Building exterior	1053620	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	50	0	50	SF	$31.32	$44.09	$2,204	$2,204																					$2,204
B2011	Building Exterior	1053607	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	5	5	800	SF	$2.87	$4.04	$3,232						$3,232										$3,232						$6,464
B2032	Building Exterior	1053615	Exterior Door, Steel, Replace	25	17	8	1	EA	$950.12	$1,164.01	$1,164									$1,164													$1,164
B3011	Roof	1053618	Roof, Modified Bituminous, Replace	20	18	2	300	SF	$9.00	$12.67	$3,801			$3,801																			$3,801
C1031	Restrooms	1053619	Toilet Partitions, Wood, Replace	20	1	19	2	EA	$465.02	$569.71	$1,139																				$1,139		$1,139
C3012	Restrooms	1053611	Interior Wall Finish, Generic Surface, Prep & Paint	8	5	3	1000	SF	$1.45	$2.04	$2,041				$2,041								$2,041								$2,041		$6,124
C3021	Restrooms	1053621	Interior Floor Finish, Elastomeric Coating, Prep & Paint	10	10	0	280	SF	$12.95	$18.23	$5,104	$5,104										$5,104										$5,104	$15,313
C3031	Restrooms	1053610	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	5	5	280	SF	$2.27	$2.78	$779						$779										$779						$1,557
D2011	Sinnott Park Restroom	1053616	Toilet/Water Closet, Stainless Steel, Replace	25	13	12	2	EA	$1,240.00	$1,745.56	$3,491													$3,491									$3,491
D2014	Sinnott Park Restroom	1053602	Sink/Lavatory, Stainless Steel, Replace	20	13	7	2	EA	$1,054.05	$1,483.80	$2,968								$2,968														$2,968

FACILITY CONDITION ASSESSMENT

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
D2018	Sinnott Park Restroom	1053613	Drinking Fountain, Cast Concrete, Replace	15	13	2	1	EA	$1,938.99	$2,729.54	$2,730			$2,730															$2,730					$5,459
D4031	Utility room	1053608	Fire Extinguisher,, Replace	15	4	11	1	EA	$356.54	$436.80	$437												$437											$437
D5012	Utility room	1053617	Distribution Panel, 125 AMP, Replace	30	29	1	1	EA	$5,079.93	$7,151.07	$7,151		$7,151																					$7,151
D5012	Sinnott Park Restroom	1053604	Distribution Panel, 100 AMP, Replace	30	29	1	1	EA	$5,079.93	$7,151.07	$7,151		$7,151																					$7,151
D5022	Restrooms	1053606	Fluorescent Lighting Fixture, 60 WATT, Replace	20	16	4	4	EA	$213.86	$262.00	$1,048					$1,048																		$1,048
G2057	Sinnott Park Restroom	1053603	Irrigation System, Controller, 24 Stations, Replace	15	13	2	1	EA	$11,880.02	$16,723.62	$16,724			$16,724															$16,724					$33,447
Z108X	Restrooms	1053600	ADA, Restroom, Hand Dryer, Modify	0	0	0	2	EA	$850.00	$1,196.55	$2,393	$2,393																						$2,393
Totals, Unescalated												**$9,702**	**$14,302**	**$23,254**	**$2,041**	**$1,048**	**$4,011**	**$0**	**$2,968**	**$1,164**	**$0**	**$5,104**	**$2,478**	**$3,491**	**$0**	**$0**	**$4,011**	**$0**	**$19,453**	**$0**	**$3,181**	**$5,104**		**$101,312**
Totals, Escalated (3.0% inflation, compounded annually)												**$9,702**	**$14,731**	**$24,670**	**$2,230**	**$1,180**	**$4,650**	**$0**	**$3,650**	**$1,475**	**$0**	**$6,860**	**$3,430**	**$4,978**	**$0**	**$0**	**$6,249**	**$0**	**$32,153**	**$0**	**$5,577**	**$9,219**		**$130,753**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Starlight Park

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B101X	Starlight Park	1035678	Structural Frame,, Replace	50	49	1	180	SF	$30.62	$43.10	$7,759		$7,759																				$7,759
B1022	Starlight	1035771	Roof Structure, Pitched, Heavy Timber Framing, Replace	50	49	1	200	SF	$31.32	$44.09	$8,818		$8,818																				$8,818
B2011	Starlight	1035687	Exterior Wall, Painted Surface, 1-2 Stories, Prep & Paint	10	6	4	600	SF	$2.87	$4.04	$2,424						$2,424												$2,424					$4,848
B3011	Starlight	1035773	Roof, Modified Bituminous, Replace	20	17	3	370	SF	$9.00	$12.67	$4,688					$4,688																	$4,688
C3012	Starlight	1035761	Interior Wall Finish, Concrete/Masonry, Prep & Paint	8	5	3	700	SF	$1.45	$2.04	$1,429					$1,429								$1,429								$1,429		$4,286
C3021	Starlight	1035690	Interior Floor Finish, Elastomeric Coating, Prep & Paint	10	1	9	500	SF	$12.95	$18.23	$9,115										$9,115											$9,115		$18,230
C3031	Starlight	1035766	Interior Ceiling Finish, Exposed/Generic, Prep & Paint	10	8	2	280	SF	$2.27	$2.78	$779			$779													$779							$1,557
D2011	Starlight	1035732	Toilet, Tankless (Water Closet), Replace	20	1	19	2	EA	$842.97	$1,186.66	$2,373																					$2,373		$2,373
D2014	Starlight	1035713	Sink/Lavatory, Stainless Steel, Replace	20	13	7	2	EA	$1,054.05	$1,483.80	$2,968								$2,968															$2,968
D2014	Starlight	1035705	Sink/Lavatory, Stainless Steel, Replace	20	6	14	2	EA	$1,054.05	$1,483.80	$2,968																		$2,968					$2,968
D2018	Starlight	1035703	Drinking Fountain, Vitreous China, Replace	15	13	2	1	EA	$1,938.99	$2,729.54	$2,730			$2,730																	$2,730			$5,459
D3099	Starlight	1035763	Hand Dryer, Restroom, Replace	10	10	0	2	EA	$1,581.00	$2,225.59	$4,451	$4,451										$4,451											$4,451	$13,354
D5012	Starlight	1035724	Distribution Panel, 208 Y, 120 V, 100 Amp, Replace	30	30	0	1	EA	$5,079.93	$7,151.07	$7,151	$7,151																						$7,151
D5012	Starlight	1035744	Distribution Panel, 100 AMP, Replace	30	28	2	1	EA	$5,079.93	$7,151.07	$7,151			$7,151																				$7,151
D5021	Starlight	1035755	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	20	20	0	1	EA	$85.88	$105.21	$105	$105																				$105		$210
D5022	Starlight	1035768	Light Dimming Panel,, Replace	15	7	8	1	EA	$1,596.61	$2,247.56	$2,248										$2,248													$2,248
D5022	Starlight	1035762	Light Dimming Panel, Digital Multi-Purpose Time Control Clock & Photosensor, Replace	15	7	8	1	EA	$4,261.42	$5,998.84	$5,999										$5,999													$5,999
D5022	Starlight	1035774	Fluorescent Lighting Fixture, 40 WATT, Replace	20	4	16	4	EA	$213.86	$262.00	$1,048																	$1,048						$1,048
G2041	Starlight	1035699	Fences & Gates, Metal Tube, 6' High, Replace	30	16	14	10	LF	$80.01	$98.02	$980																		$980					$980
Totals, Unescalated														**$11,707**	**$16,577**	**$10,659**	**$6,116**	**$2,424**	**$0**	**$0**	**$2,968**	**$8,246**	**$9,115**	**$4,451**	**$1,429**	**$779**	**$0**	**$6,372**	**$0**	**$1,048**	**$2,730**	**$0**	**$12,917**	**$4,556**	**$102,094**
Totals, Escalated (3.0% inflation, compounded annually)														**$11,707**	**$17,074**	**$11,308**	**$6,684**	**$2,728**	**$0**	**$0**	**$3,650**	**$10,446**	**$11,993**	**$5,992**	**$1,978**	**$1,110**	**$0**	**$9,638**	**$0**	**$1,682**	**$4,512**	**$0**	**$22,650**	**$8,229**	**$131,272**

* Markup/Location Factor (1.178) has been included in unit costs. Markup includes a 7.5% Design and Permits, 4% Client Administration, and 8% G.C. Fees, Bonding and Insurance factors applied to the location adjusted unit cost.

Park Restrooms - Snack Shacks / Thomas Russell middle school

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	EAge	RUL	Quantity	Unit	Unit Cost	w/ Markup	*Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
B2011	Russel middle	1051716	Exterior Wall, Fiber Cement Siding, 1-2 Stories, Replace	40	40	0	1200	SF	$8.24	$8.78	$10,541	$10,541																					$10,541
B2021	Russel middle	1051778	Window, SF, Replace	30	26	4	2	EA	$584.21	$822.40	$1,645					$1,645																	$1,645
B2021	Russel middle	1051731	Window, SF, Replace	30	11	19	2	EA	$870.45	$1,225.34	$2,451																			$2,451			$2,451
B2032	Russel middle	1051755	Exterior Door, Steel, Replace	25	25	0	2	EA	$950.12	$1,337.49	$2,675	$2,675																					$2,675
C1031	Russel middle	1051730	Toilet Partitions, Metal Overhead-Braced, Replace	20	9	11	8	EA	$850.00	$1,196.55	$9,572											$9,572											$9,572
C3012	Russel middle	1051770	Interior Wall Finish, Laminated Paneling, Replace	20	16	4	750	SF	$15.31	$21.55	$16,164					$16,164																	$16,164
C3024	Russel middle	1051724	Interior Floor Finish, Vinyl Sheeting, Replace	15	15	0	500	SF	$7.01	$9.87	$4,934	$4,934														$4,934							$9,868
C3032	Russel middle	1051696	Interior Ceiling Finish, Suspended Acoustical Tile (ACT), Replace	20	17	3	500	SF	$3.11	$4.38	$2,189				$2,189																		$2,189
D2011	Russel middle	1051695	Toilet, Tankless (Water Closet), Replace	20	16	4	8	EA	$842.97	$1,186.66	$9,493					$9,493																	$9,493
D2012	Russel middle	1051693	Urinal, Vitreous China, Replace	20	9	11	1	EA	$1,193.44	$1,680.02	$1,680											$1,680											$1,680
D2014	Russel middle	1051700	Sink/Lavatory, Enameled Steel, Replace	20	20	0	3	EA	$616.03	$867.19	$2,602	$2,602																			$2,602		$5,203
D2014	Russel middle	1051749	Sink/Lavatory, Enameled Steel, Replace	20	1	19	3	EA	$616.03	$867.19	$2,602																			$2,602			$2,602
D2018	Russel middle	1051772	Drinking Fountain, Refrigerated, Replace	10	9	1	1	EA	$1,257.51	$1,770.21	$1,770		$1,770									$1,770											$3,540
D2023	Russel middle	1051737	Water Heater, Electric, Residential, 5 to 15 GAL, Replace	15	10	5	1	EA	$1,014.17	$1,427.66	$1,428						$1,428														$1,428		$2,855
D3051	Russel middle	1051751	Unit Heater, Electric, 1 to 2 kW, Replace	20	6	14	3	EA	$1,095.84	$1,542.62	$4,628															$4,628							$4,628
D3099	Russel middle	1051715	Hand Dryer, Restroom, Replace	10	6	4	2	EA	$1,581.00	$2,225.59	$4,451					$4,451										$4,451							$8,902
D5012	Russel middle	1051753	Distribution Panel, 60 AMP, Replace	30	25	5	1	EA	$5,079.93	$7,151.07	$7,151						$7,151																$7,151
D5012	Russel middle	1051773	Distribution Panel, 225 AMP, Replace	30	23	7	1	EA	$7,951.00	$11,192.70	$11,193								$11,193														$11,193
D5012	Russel middle	1051723	Secondary Transformer, 25 kVA, Replace	30	21	9	1	EA	$6,086.36	$8,567.83	$8,568										$8,568												$8,568
D5012	Russel middle	1051725	Distribution Panel, 100 AMP, Replace	30	21	9	1	EA	$5,079.93	$7,151.07	$7,151										$7,151												$7,151
D5021	Russel middle	1051717	Receptacle, Ground Fault Circuit Interrupter (GFCI), 15-20 Amp, Replace	20	20	0	1	EA	$85.88	$105.21	$105	$105																			$105		$210
D5022	Russel middle	1051748	Flood Light, Exterior, 100 W, Replace	20	18	2	1	EA	$995.47	$1,219.57	$1,220			$1,220																			$1,220
D5037	Russel middle	1051711	Fire Alarm Control Panel, Addressable, Replace	15	14	1	1	EA	$20,297.59	$28,573.12	$28,573		$28,573														$28,573						$57,146
D5037	Russel middle	1051771	Fire Alarm System, School, Upgrade/Install	20	18	2	800	SF	$3.13	$4.41	$3,525			$3,525																			$3,525
E1093	Russel middle	1051762	Commercial Kitchen, Refrigerator, 3-Door Reach-In, Replace	15	15	0	1	EA	$5,804.00	$8,170.35	$8,170	$8,170																	$8,170					$16,341
E1094	Russel middle	1051775	Residential Appliances, 18 CF, Replace	15	13	2	4	EA	$956.04	$1,345.83	$5,383				$5,383																$5,383		$10,767
E1094	Russel middle	1051767	Residential Appliances, Refrigerator, 14-18 CF, Replace	15	10	5	1	EA	$956.04	$1,171.26	$1,171						$1,171															$1,171	$2,343
E2012	Russel middle	1051733	Kitchen Counter, Plastic Laminate, Postformed, Replace	10	8	2	20	LF	$43.90	$53.78	$1,076				$1,076									$1,076									$2,151

FACILITY CONDITION ASSESSMENT

Uniformat Code	Location Description	ID	Cost Description	Lifespan (EUL)	Age	RUL	Quantity	Unit	Unit Cost	w/ Markup*	Subtotal	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Deficiency Repair Estimate
Totals, Unescalated											$29,827	$30,345	$11,203	$2,169	$51,753	$9,750	$9	$11,193	$9	$15,719	$9	$13,023	$1,076	$0	$9,979	$13,104	$28,873	$5,383	$0	$6,452	$5,906		$221,774
Totals, Escalated (3.0% inflation, compounded annually)											$29,827	$31,256	$11,486	$2,392	$58,759	$11,303	$0	$13,706	$0	$20,510	$0	$18,026	$1,534	$0	$15,733	$20,416	$45,651	$8,886	$0	$9,859	$9,583		$282,775

* Markup/Location Factor (1.79) has been included in unit costs. Markup includes a 7.5 % Design and Permits, 4% Client Administration, and 8% G.C. Fees. Bonding and Insurance factors applied to the location adjusted unit cost.

F APPENDIX

PUBLIC WORKS O&M COSTS

In this section you will find past work order costs for maintenance and operations for Milpitas parks. These values were used in determining the estimated costs of improvements outlined in the Goals and Recommendations and Implementation chapters.

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PUBLIC WORKS O&M COSTS

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PARKS PRICE TABLE

Name	Maintenance Services Price Per Month	Irrigation Price Per Month	Landscaping Per Month	Annual Lump Sum
Alviso Adobe	$2,821.32	$270.00	$3,091.32	$37,095.87
Augustine Memorial Park	$ 3,354.45	$ 341.26	$ 3,695.71	$44,348.51
Augustus Rathbone	$1,434.60	$11.38	$1,445.98	$17,351.76
Ben Rogers Park	$4,654.03	$485.23	$5,139.26	$61,671.15
Bob McGuire Park	$5,440.97	$287.48	$5,728.45	$68,741.40
Calaveras Ridge Park	$1,279.70	$ 0.00	$1,279.70	$15,356.35
Calle Oriente Mini-Park	$228.93	$19.90	$248.83	$2,986.00
Cardoza Park	$ 6,540.88	$ 568.77	$ 7,109.66	$ 85,315.89
Cerano Park	$ 1,530.24	$ 200.00	$ 1,730.24	$ 20,762.88
Creighton Park	$ 2,603.00	$ 284.38	$ 2,887.38	$ 34,648.59
Dixon Landing Park	$ 6,407.75	$ 625.65	$ 7,033.40	$ 84,400.81
Dog Park at Ed Levin (Milpitas Muni Code V-9-7.01)	$ 1,026.92	$ 89.30	$ 1,116.22	$ 13,394.66
Foothill Park	$ 1,973.20	$ 205.66	$ 2,178.85	$ 26,146.24

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PUBLIC WORKS O&M COSTS

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Gill Memorial Park	$ 4,917.20	$ 460.70	$ 5,377.90	$ 64,534.83
Hall Memorial Park	$ 5,436.85	$ 595.43	$ 6,032.28	$ 72,387.38
Hetch-Hetchy Linear Park	$ 3,922.96	$ 423.74	$ 4,346.70	$ 52,160.36
Hidden Lake Park	$ 3,871.25	$ 369.70	$ 4,240.95	$ 50,891.42
Higuera Adobe Park	$ 3,597.48	$ 309.98	$ 3,907.45	$ 46,889.45
Hillcrest Park	$ 3,733.76	$ 295.76	$ 4,029.52	$ 48,354.24
John McDermott Park	$ 1,243.32	$ 56.88	$ 1,300.20	$ 15,602.40
Jones Memorial Park	$ 3,068.76	$ 295.76	$ 3,364.52	$ 40,374.24
Milpitas Sports Center	$ 9,975.00	$ 1,156.31	$ 11,131.31	$ 133,575.74
Murphy Park	$ 4,275.00	$ 494.84	$ 4,769.84	$ 57,238.03
O'Toole Elms Park	$ 3,465.89	$ 59.90	$ 3,525.79	$ 42,309.48
Parc Metro East Park	$ 4,289.40	$ 123.33	$ 4,412.73	$ 52,952.76
Parc Metro Middle (Central) Park	$ 1,935.02	$ 34.73	$ 1,969.75	$ 23,637.00
Parc Metro West Park	$ 2,200.41	$ 58.67	$ 2,259.08	$ 27,108.96

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PUBLIC WORKS O&M COSTS

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Pecot Park	$ 1,962.26	$ 170.63	$ 2,132.89	$ 25,594.71
Pinewood Park	$4,759.50	$455.02	$5,214.52	$ 62,574.26
Robert E. Browne Park	$ 3,224.65	$ 280.40	$ 3,505.05	$ 42,060.64
Russel Middle School Softball Field	$ 2,955.83	$ 447.05	$ 3,402.88	$ 40,834.57
Sandalwood Park	$ 2,289.31	$ 199.07	$ 2,488.38	$ 29,860.59
Selwyn Park	$ 163.52	$ 14.22	$ 177.75	$ 2,132.94
Sinnott Park	$ 2,090.00	$ 267.32	$ 2,357.32	$ 28,287.85
Starlite Park	$ 1,973.20	$ 205.66	$ 2,178.85	$ 26,146.24
Strickroth Park	$ 2,755.00	$ 324.20	$ 3,079.20	$ 36,950.36
Tom Evatt Park	$ 5,258.14	$ 326.89	$ 5,585.03	$ 67,020.36

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PUBLIC WORKS O&M COSTS

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Future Park Pricing

Job Duties	Frequency	Unit of Measure	Cost Per unit of Measure
1) Mowing and edging	weekly	Square Foot	$.04 per month
2) Weed control	twice annually and as needed	Square Foot	$.01 per month
3) Mechanical weed control	as needed	Square Foot	$.05 per month
4) Pruning shrubs and ground cover	Twice annually and as needed	Square Foot	$.02 per month
5) Fertilizing and Aeration	2 to 4 times annually depending on the park or athletic field	Square Foot	$.04 per month
6) Empty trash cans	twice weekly and as needed	Per Trash Can	$17.33 per can per month
7) Remove trash & misc. debris from landscape	weekly and as needed	Square Foot	$.01 per month
8) Inspect, adjust and repair irrigation system	weekly and as needed	Per Hour	$75.00 per hour
9) Restroom service: opening, closing cleaning, repair and restocking	daily	Per Restroom	$653.00 per month
10) Playground inspection reports per U.S. CPSC requirements	weekly	Per Structure	$133.00 per structure
11) Playground inspection	weekly and as needed	Per Structure	$257.00 per structure per inspection
12) Athletic field maintenance	daily/weekly	Square Foot	$.05 per month
13) Parking lot cleaning	weekly and as needed	Square Foot	$.01 per month
14) Vandalism reports	as needed	Per Location	$737.00 per month all locations
15) Graffiti Maintenance	as needed	Square Foot	$1.50 per sq ft of graffiti area
16) Herbicide application	seasonally	Square Foot	$.01 per month
17) Clean and repair drinking fountains	as needed	Per Unit	$485.00 per unit per repair/$22.50 per unit for cleaning if clogged
18) General Park Maintenance	as needed	Square Foot	$.01 per month
19) Tennis and basketball court cleaning	weekly	Square Foot	$.01 per month
20) Dog park	twice weekly	Per Location	$262.60 per service

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PUBLIC WORKS O&M COSTS

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On-Call Pricing

Labor Item No.	Description/Title	Regular Hourly Rate	Overtime Weekday Rate	Overtime Weekend Rate	Overtime Holiday Hourly Rate
	Crew Supervisor	$85.00	$127.50	$127.50	$170.00
	Crew Foreman	$55.00	$82.50	$82.50	$110.00
	Irrigation Technician	$75.00	$112.50	$112.50	150.00
	Landscape Maintenance Laborer	$45.00	$67.50	$67.50	$90.00
	Mark-up percentage off Contractors verified invoice cost for materials	10%	10%	10%	10%
	Markup percentage for rented equipment	10%	10%	10%	10%

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PUBLIC WORKS O&M COSTS

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Future Park Pricing

Job Duties	Frequency	Unit of Measure	Cost Per unit of Measure
1) Mowing and edging	weekly	Square Foot	$.04 per month
2) Weed control	twice annually and as needed	Square Foot	$.01 per month
3) Mechanical weed control	as needed	Square Foot	$.05 per month
4) Pruning shrubs and ground cover	Twice annually and as needed	Square Foot	$.02 per month
5) Fertilizing and Aeration	2 to 4 times annually depending on the park or athletic field	Square Foot	$.04 per month
6) Empty trash cans	twice weekly and as needed	Per Trash Can	$17.33 per can per month
7) Remove trash & misc. debris from landscape	weekly and as needed	Square Foot	$.01 per month
8) Inspect, adjust and repair irrigation system	weekly and as needed	Per Hour	$75.00 per hour
9) Restroom service: opening, closing cleaning, repair and restocking	daily	Per Restroom	$653.00 per month
10) Playground inspection reports per U.S. CPSC requirements	weekly	Per Structure	$133.00 per structure
11) Playground inspection	weekly and as needed	Per Structure	$257.00 per structure per inspection
12) Athletic field maintenance	daily/weekly	Square Foot	$.05 per month
13) Parking lot cleaning	weekly and as needed	Square Foot	$.01 per month
14) Vandalism reports	as needed	Per Location	$737.00 per month all locations
15) Graffiti Maintenance	as needed	Square Foot	$1.50 per sq ft of graffiti area
16) Herbicide application	seasonally	Square Foot	$.01 per month
17) Clean and repair drinking fountains	as needed	Per Unit	$485.00 per unit per repair/$22.50 per unit for cleaning if clogged
18) General Park Maintenance	as needed	Square Foot	$.01 per month
19) Tennis and basketball court cleaning	weekly	Square Foot	$.01 per month
20) Dog park	twice weekly	Per Location	$262.60 per service

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MILPITAS PLAYGROUND REHABILITATION PROJECT

This section includes the descriptions and statuses of playground rehabilitation projects at various Milpitas parks. This document was prepared by Redwood Engineering Construction in November 2020.

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MILPITAS PLAYGROUND REHABILITATION PROJECT

Redwood Engineering Construction

Milpitas Playground Rehabilitation Project
City of Milpitas
MONTHLY PROGRESS STATUS

Month
Nov-2020

Bid Item	Description	Project Status
	Phase 1 - Ben Rodgers Park	
1.1	Remove and dispose the existing sand and replace it with Engineered Wood Fiber (EWF) as described in the specifications and shown on the plans	COMPLETED
1.2	Remove and dispose the existing Little Tikes Composite Structure Equipment for 5-12 yrs. age group and replace it with a new Composite Structure Equipment with new and similar equipment	COMPLETED
1.3.a	a. Remove and dispose the following existing Ground Elements: Swings by Little Tikes Replace it with a new and similar equipment.	COMPLETED
1.3.b	b. Remove and dispose the following existing Ground Elements: Free Standing Climber by Gametime Replace it with a new and similar equipment.	COMPLETED
	Change Order Work - Removal of New EWF and Replace with new Poured - In - Place Rubber surfacing in the six foot fall zone of the newly insalled Climber and Composite Structure Equipment (Does not apply to Swings)	COMPLETED WEEK ENDING DEC 12TH
	Change Order Work - Purchase and Installation of new Daisy Rocker	COMPLETED WEEK ENDING DEC 19TH
1.4	Site restoration and clean-up	COMPLETED WEEK ENDING DEC 19TH
	Phase 1 - Community Center Playground Area	
2.1	Remove and dispose the existing, Poured-in-Place (PIP) Synthetic Safety Surface and install new Poured-in-Place Synthetic Safety Surface as described in the specifications and shown on the plans	COMPLETED
2.3	Site restoration and clean-up	COMPLETED
	Phase 1 - Foothill Park	
3.1	Remove and dispose the existing sand from the 5-12 yrs., and 2-5 yrs. playground areas and replace it with Engineered Wood Fiber (EWF) as described in the specifications and shown on the plans	COMPLETED
3.2	Remove and dispose the existing PIP, Poured-in-Place Synthetic Safety Surface from the two play areas, and install new PIP as described in the specifications and shown on the plans	COMPLETED
3.3	Remove and dispose the following existing Composite Structure Equipment from the 5-12 yrs. age group Replace the entire Composite Structure Equipment including complete installation at the same	COMPLETED
3.4	Remove and dispose the following existing Composite Structure Equipment from the 2- 5 yrs. old playground area Replace the entire Composite Structure Equipment including complete installation at the same location	COMPLETED
3.5	Slurry Seal the access road to the play area per the specification	TO BE SCHEDULED (DEPENDENT ON WEATHER)
	Change Order Work - Removal of New EWF and Replace with new Poured - In - Place Rubber surfacing in the six foot fall zone of the newly installed Play Equipment	COMPLETED
3.6	Site restoration and clean-up	TO BE SCHEDULED AFTER COMPLETION OF SLURRY SEAL
	Phase 1 - Oliver Jones Memorial Park	
4.1	Remove and dispose the existing sand from the 2-5 yrs. play area and it replace with Engineered Wood Fiber (EWF) per specification	COMPLETED
4.2	Remove and dispose the existing Little Tikes Composite Structure Equipment for 2-5 yrs. age group and replace it with a new Composite Structure Equipment with new playground equipment	COMPLETED
4.3	Remove and dispose the existing Swings by Landscape Structures and replace it a new single bay of swings with 2-bucket style seats for 2-5 yrs. olds	COMPLETED
4.4	Remove and dispose the existing sand from the 5-12 yrs. play area and it replace with Engineered Wood Fiber (EWF) per specification	COMPLETED
4.5	Remove and dispose the existing Little Tikes Composite Structure Equipment for 5-12 yrs. age group consisting and replace it with a new Composite Structure Equipment with the following	COMPLETED
	Change Order Work - Removal of New EWF and Replace with new Poured - In - Place Rubber surfacing in the six foot fall zone of the newly insalled Climber and Composite Structure Equipment	COMPLETED
4.6	Site restoration and clean-up	COMPLETED
	Phase 2 - Calle Oriente Park	
5.1	Repair the existing PIP, Poured-in-Place Synthetic Safety Surface as described in the specifications and shown on the plans. Color to match the existing PIP color	RFI TO BE ISSUED, CONDITION OF EXISTING SURFACES
5.2	Roll Coat the entire existing PIP play area. Color to match the existing PIP color.	
5.3	Remove the Alligator Bench from Ground Equipment Area	
5.4	Site restoration and clean-up	
	Phase 2 - Cardoza Park	
6.1	Remove and dispose the following existing Adventure Playground System Composite Structure Equipment for 5-12 yrs. age group Replace each of these with new equipment and install them at the same locations	NEW PLAY EQUIPMENT SCHEDULED TO BE DELIVERED WEEK ENDING DECEMBE 26TH
6.2	After removal of the existing and installation of the new Composite Structure Equipment, repair the existing PIP surface for 5-12 yr. old and 2-5 yr. old play areas. Color of repaired surface to match the existing color	RFI TO BE ISSUED, REPAIRED AREA TO BE MUCH LARGER THAN STATED ON PROJECT SPECS
6.3	Roll coat the existing PIP surface for 5-12 yr. old and 2-5 yr. old play areas. Color of repaired surface to match the existing color	
6.4	Site restoration and clean-up	
	Phase 2 - Dixon Landing Park	
7.1	Remove and dispose the existing PIP, Poured-in-Place Synthetic Safety Surface and replace it with new PIP, Poured-in Place Synthetic Safety Surface as described in the specifications and shown on the plans	COMPLETED
7.2	Remove and dispose the existing sand and replace it with Engineered Wood Fiber (EWF) as described in the specifications and shown on the plans	COMPLETED
	Change Order Work - Removal of New EWF and Replace with new Poured - In - Place Rubber surfacing in the six foot fall zone of the existing play equipment	COMPLETED
7.3	Site restoration and clean-up	COMPLETED
	Phase 2 - Hillcrest Park	
8.1	Remove and dispose the existing Engineered Wood Fiber from the playground areas and replace it with new Engineered Wood Fiber (EWF) as described in the specifications and shown on the plans	COMPLETED
8.2	Remove and dispose the following existing Miracle Large Composite Structure Equipment from the 5-12 yrs. old playground area Replace the entire Large Composite Structure Equipment including complete installation of equipment	COMPLETED
8.3	Remove and dispose the following existing Small Composite Structure Equipment from the 2- 5 yrs. old playground area replace the entire Small Composite Structure Equipment including complete installation of equipment	COMPLETED
	Change Order Work - Removal of New EWF and Replace with new Poured - In - Place Rubber surfacing in the six foot fall zone of the newly installed Play Equipment	EWF REMOVED, P-I-P Surfacing Installation Scheduled for W/E Dec 19th (If color samples approved)
8.4	Site restoration and clean-up	
	Phase 3 - Augustine Memorial Park	
9.1	2-5 yrs. Play Area - Remove and dispose the existing sand and replace it with Engineered Wood Fiber (EWF).	TO BE SCHEDULED IN 2021
9.2	2-5 yrs. Play Area - Remove and dispose the existing Poured-in-Place (PIP), Synthetic Safety Surface from and install new PIP Surface as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
9.3	2-5 yrs. Play Area - Remove and dispose the existing 160 lf of GI chain-link fence in 2-5 yr. play area, and replace it with a new vinyl coated steel chain-link fence per the specification and in compliant with ASTM 2049-11 (2017)	TO BE SCHEDULED IN 2021
9.4	5-12 yrs. Play Area - Remove and dispose the existing Poured-in-Place (PIP), Synthetic Safety Surface and install new PIP Surface as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
9.5	5-12 yrs. Play Area - Remove and dispose the existing Free Standing Slide and Sliding Pole and replace it with a new Free Standing Slide only	TO BE SCHEDULED IN 2021

MILPITAS PLAYGROUND REHABILITATION PROJECT

Redwood Engineering Construction

Milpitas Playground Rehabilitation Project
City of Milpitas
MONTHLY PROGRESS STATUS

Month
Nov-2020

Bid Item	Description	Project Status
9.6	5-12 yrs. Play Area - Remove and dispose the existing Chin Up Bar from the Composite Structure area and replace it with a new free standing Chin Up Bar in another location of the play area that does not interfere with other fall zones.	TO BE SCHEDULED IN 2021
9.7	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - Cerano Park	
10.1	Remove and dispose the existing PIP, Poured-in-Place Synthetic Safety Surface and install new PIP as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
10.2	Remove and dispose the existing Net Climber from the 2-5 yr. old Composite Structure Equipment , and replace it with new sway net by Kompan	TO BE SCHEDULED IN 2021
10.3	Remove and dispose the existing Double Slide from the 2-5 yr. old Composite Structure Equipment , and replace it with new Double Plastic Slide by Kompan	TO BE SCHEDULED IN 2021
10.4	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - John McDermott Park	
11.1	Remove and dispose the existing Engineered Wood Fiber (EWF) from 5-12 yrs.(1160 SF), and 2-5 yrs.(500 SF) play areas and install new EWF as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
11.2	Repair the damaged sections of the existing PIP surface and edges. Color of repaired surface to match the existing color	TO BE SCHEDULED IN 2021
11.3	Roll coat the entire existing PIP surface. Color of surface to match the existing color	TO BE SCHEDULED IN 2021
11.4	Remove and dispose the existing Gametime Slide from the Composite Structure Equipment 5-12 yrs. play area, and replace it with a new Gametime Swerve Slide, or equal	TO BE SCHEDULED IN 2021
11.5	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - O'Toole Elms Park	TO BE SCHEDULED IN 2021
	2-5 yr. old play area	TO BE SCHEDULED IN 2021
12.1	Repair the damaged sections of the existing Poured-in Place (PIP) Surface and the edges. and roll coat per specification. Color of repaired PIP to match the existing PIP.	TO BE SCHEDULED IN 2021
12.2	Roll coat the existing Poured-in Place (PIP) surface for the 2-5 yr. old and 5-12 yr. old play areas. Color to match the existing PIP surface	TO BE SCHEDULED IN 2021
12.3	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - Pinewood Park	
13.1	Remove and dispose the existing Poured-in-Place (PIP) Surface from 2–5 yrs. old play area, and install new PIP, as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
13.2	Remove and dispose the existing PIP, Poured-in-Place Synthetic Safety Surface from 5-12 yr. old play area and install new PIP, as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
13.3	Remove and dispose the existing EWF from 2-5 yr. old play area and install new EWF, as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
13.4	Remove and dispose the existing EWF from 5-12 yr. old play area and install new EWF, as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
13.5.a	Remove and dispose the following existing Composite Structure Equipment from 5-12 old play area, and replace and install new structures	TO BE SCHEDULED IN 2021
13.5.b	Remove and dispose the following existing Composite Structure Equipment from 5-12 old play area, and replace and install new structures	TO BE SCHEDULED IN 2021
13.6	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - Selewyne Park	
14.1.a	Remove and dispose a) Barriers and b) Tower Climber (Chimney Climber) from the existing Composite Structure Equipment and replace and install a new Barrier and a Tower Climber. Barrier	TO BE SCHEDULED IN 2021
14.1.b	Remove and dispose a) Barriers and b) Tower Climber (Chimney Climber) from the existing Composite Structure Equipment and replace and install a new Barrier and a Tower Climber. Tower Climber	TO BE SCHEDULED IN 2021
14.2	Repair the damaged sections of the existing PIP surface and edges. Color of repaired surface to match the existing color	TO BE SCHEDULED IN 2021
14.3	Roll coat the entire existing PIP surface. Color of surface to match the existing color	TO BE SCHEDULED IN 2021
14.4	Remove and dispose the existing sand and replace it with Engineered Wood Fiber as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
14.5	Site restoration and clean-up	TO BE SCHEDULED IN 2021
	Phase 3 - Tom Evatt Park	TO BE SCHEDULED IN 2021
15.1	Remove and dispose the existing, Poured-in-Place (PIP) Synthetic Safety Surface and install new Poured-in-Place Synthetic Safety Surface as described in the specifications and shown on the plans	TO BE SCHEDULED IN 2021
15.2	Remove and dispose the following play equipment from the Play Structure: a) Diagonal Saucer Rope Climber b) Rocking Seat West No replacements necessary	TO BE SCHEDULED IN 2021
15.3	Site restoration and clean-up	TO BE SCHEDULED IN 2021

H

90% PS&E ESTIMATE FOR SANDALWOOD PARK

This section includes the 90% Plans, Specifications and Estimates for Sandalwood Park. The document was prepared by Gates + Associates in June 2020.

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90% PS&E FOR SANDALWOOD PARK

Gates + Associates
Landscape Architecture

Opinion of Probable Construction Costs

Sandalwood Park, Milpitas
90% PS&E

#	Description		Quantity	Unit	Unit Cost		Subtotal
A	*Project Start-Up*						
1	Construction Surveying		1	LS	$10,000.00	$10,000	
2	Traffic Control System and Construction Area Signs		1	LS	$2,500.00	$2,500	
3	Storm Water Pollution Prevention Plan		1	LS	$20,000.00	$20,000	
4	Temporary Construction Fence		1600	LF	$15.00	$24,000.00	
5	Tree Preservation		38	EA	$250.00	$9,500.00	
6	Landscape Maintenance During Construction		1	LS	$9,000.00	$9,000.00	
	Subtotal						$75,000
B	*DEMOLITION*						
	Softscape						
1	Clear & Grub		37,430	SF	$0.65	$24,330	
2	Remove & Dispose of Tree		9	EA	$1,500.00	$13,500	
3	Sod Demo (Spray Kill/ Rototill)		12,500	SF	$0.85	$10,625	
4	Remove & Dispose of Stump		4	EA	$607.50	$2,430	
5	Tree Pruning		2	EA	$500.00	$1,000	
	Hardscape						
6	Concrete Curbs		25	LF	$9.00	$223	
7	Concrete Paving		2,563	SF	$1.50	$3,844	
8	AC Paving at Driveway		40	SF	$1.50	$60	
9	BBQ		3	EA	$120.00	$360	
10	Benches		6	EA	$125.00	$750	
11	Bike Rack		1	EA	$120.00	$120	
12	Chainlink Fence		310	LF	$5.00	$1,550	
13	Misc. Structures		1	LS	$5,000.00	$5,000	
14	Sand Removal		200	CY	$62.50	$12,500	
15	Gravel Paths		9,850	SF	$1.00	$9,850	
16	Picnic Tables		3	EA	$250.00	$750	
17	Drinking Fountain		2	EA	$250.00	$500	
18	Existing Light Pole		1	EA	$1,200.00	$1,200	
	Sub-Total Demolition						$88,591
C	*EARTHWORK*						
1	Fine grade		42,911	SF	$1.00	$42,911	
2	Rough grade		16,792	SF	$1.00	$16,792	
	Sub-Total Earthwork						$50,000
D	*UTILITIES*						
1	6" P.V.C. drainline		359	LF	$35.00	$12,565	
2	8" PVC drainline		227	LF	$45.00	$10,215	
3	24" Catch Basin		3	EA	$2,500.00	$7,500	
4	24" Storm Drain Junction Box		3	EA	$2,500.00	$7,500	
5	Storm Drain Connection		2	EA	$2,500.00	$5,000	
6	11 1/8" Storm Sewer Cleanout		7	EA	$750.00	$5,250	
7	4" Perforated drainline		204	LF	$15.00	$3,060	
8	4" Sanitary Sewer Line		51	LF	$35.00	$1,776	
9	4" Sanitary Sewer Connection		1	LS	$2,500.00	$2,500	
10	11 1/8" Sanitary Sewer Cleanout		1	EA	$750.00	$750	
11	2" SCHEDULE 80 Potable Water Line		80	LF	$22.63	$1,800	
12	0.5" SCHEDULE 80 Potable Water Line		36	LF	$9.92	$361	
13	0.5" Water Valve		2	EA	$76.34	$153	
	Sub-Total Drainage						$58,430.23
E	*HARDSCAPE*						
1	Asphalt Paving - Vehicular (3.5" AC over 14.5" CL. II AB)		7,576	SF	$7.50	$56,821	
2	Porous Asphalt - Vehicular (6" AC over 14.5" AB)		2,601	SF	$15.00	$39,015	
3	Pedestrian Concrete Paving (4" P.C.C. over 6" CL. II AB)		2,031	SF	$15.00	$30,463	
4	Vehicular Concrete Driveway Ramp (6" P.C.C. over 6" CL. II AB)		167	SF	$25.00	$4,168	
5	Flush Curb						
6	6" Vertical Curb, Sidewalk						
7	AC Deep Lift						
5	Pervious Decomposed Granite		1,016	SF	$15.00	$15,240	
	Sub-Total Hardscape						$145,707
F	*PLANTING*						
1	Soil Preparation		34,150	SF	$0.65	$22,198	
2	Sod		34,150	SF	$2.00	$68,300	
3	Trees - 24" Box		17	EA	$250.00	$4,250	
4	Root Barrier		78	LF	$12.00	$936	
5	Mulch		60	SF	$1.00	$60	
6	Header		2,400	LF	$8.00	$19,200	
7	Plant Establishment Period		34,150	SF	$0.65	$22,198	
	Sub-Total Planting						$137,141
G	*IRRIGATION*						
1	Irrigation		34,150	SF	$7.00	$239,050	
2	Irrigation Tree Bubblers		17	EA	$ 120.00	$2,040	
	Sub-Total Irrigation						$241,090
H	*RESTROOM*						
1	Prefabricated Restroom		1	EA	$130,000.00	$130,000	
	Sub-Total Restroom						$130,000
I	*SITE FURNITURE*						
1	Barbeque		2	EA	$950.00	$1,900	
2	Group Barbeque		1	EA	$1,450.00	$1,450	
3	ADA Picnic Table		3	EA	$2,600.00	$7,800	

Page 1 of 2

90% PSE Sandalwood Park Estimate.xlsx

90% PS&E FOR SANDALWOOD PARK

Gates + Associates
Landscape Architecture

Opinion of Probable Construction Costs

Sandalwood Park, Milpitas
90% PS&E

#	Description		Quantity	Unit	Unit Cost		Subtotal
4	Standard Picnic Table		3	EA	$2,400.00	$7,200	
5	Bench		7	EA	$1,300.00	$9,100	
6	Bike Rack		1	EA	$1,000.00	$1,000	
7	Drinking Water Fountain		2	EA	$8,900.00	$17,800	
8	Trash Receptacles		3	EA	$1,500.00	$4,500	
9	Recycle Receptacle		3	EA	$1,500.00	$4,500	
10	Basketball Standard		1	EA	$8,500.00	$8,500	
11	Dog Waste Station		1	EA	$1,500.00	$1,500	
12	Park Rule Sign		2	EA	$5,000.00	$10,000	
	Sub-Total Site Furniture						**$75,250**
J	***PLAY AREAS***						
1	Poured in Place Rubber Surfacing		4,110	SF	$25.00	$102,750	
2	Concrete Curb		250	LF	$35.00	$8,750	
3	Ornamental Fence		245	LF	$85.00	$20,825	
	Maintenance Gate		1	EA	$6,500.00	$6,500	
4	Ornamental Gate		2	EA	$3,500.00	$7,000	
5	Play Structures		1	LS	$196,737.00	$196,737	
	Sub-Total Play Area						**$342,562**
K	***SIGNAGE***						
1	Park Sign		1	EA	$5,000.00	$5,000	
	Sub-Total Signage						**$5,000**
L	***SITE ELECTRICAL IMPROVEMENTS***						
1	Pole Light Fixture		4	EA	$6,500.00	$26,000	
2	Rework Electrical Wiring and Conduit		1	LS	$5,000.00	$5,000	
3	Restroom Power		1	LS	$15,000.00	$15,000	
	Sub-Total Site Electrical						**$46,000**
	SUBTOTAL						**$1,394,772**
	Mobilization/ Demobilization - 10%						$139,477
	ConstructionContingency 10%						$139,477
	Total of Construction						**$1,673,726**
	ADDITIVE ALTERNATE #1						
	Concrete Header @ Fitness Stations		190	LF	$35.00	$6,650	
	Fitness Stations		1	LS	$36,297.72	$36,298	
	Synthetic Play Surfacing @ Fitness		660	SF	$25.00	$16,500	
	ADDITIVE ALTERNATE #2						
	Shade Structure		2	EA	$15,000.00	$30,000	
	Sub-Total Add. Alternates						**$89,448**
	Total of Construction w/ Alternates						**$1,763,174**

Page 2 of 2

90% PSE Sandalwood Park Estimate.xlsx

100% PS&E ESTIMATE FOR SANDALWOOD PARK

This section includes the 100% Plans, Specifications and Estimates for Sandalwood Park. The document was prepared by Gates + Associates in February 2021.

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100% PS&E FOR SANDALWOOD PARK

Gates + Associates
Landscape Architecture

Opinion of Probable Construction Costs

Sandalwood Park, Milpitas
100% PS&E

#	Description	Quantity	Unit	Unit Cost		Subtotal
A	*Project Start-Up*					
1	Construction Surveying	1	LS	$10,000.00	$10,000	
2	Traffic Control System and Construction Area Signs	1	LS	$2,500.00	$2,500	
3	Storm Water Pollution Prevention Plan	1	LS	$20,000.00	$20,000	
4	Temporary Construction Fence	1600	LF	$15.00	$24,000.00	
5	Tree Preservation	38	EA	$250.00	$9,500.00	
6	Landscape Maintenance During Construction	1	LS	$9,000.00	$9,000.00	
	Subtotal					**$75,000**
B	*DEMOLITION*					
	Softscape					
1	Clear & Grub	37,430	SF	$0.65	$24,330	
2	Remove & Dispose of Tree	9	EA	$1,500.00	$13,500	
3	Sod Demo (Spray Kill/ Rototill)	73,346	SF	$0.85	$62,344	
4	Remove & Dispose of Stump	4	EA	$607.50	$2,430	
5	Tree Pruning	2	EA	$500.00	$1,000	
	Hardscape					
6	Concrete Curbs	25	LF	$9.00	$223	
7	Concrete Paving	2,563	SF	$1.50	$3,844	
8	AC Paving at Driveway	40	SF	$1.50	$60	
9	BBQ	3	EA	$120.00	$360	
10	Benches	6	EA	$125.00	$750	
11	Bike Rack	1	EA	$120.00	$120	
12	Chainlink Fence	310	LF	$5.00	$1,550	
13	Misc. Structures	1	LS	$5,000.00	$5,000	
14	Sand Removal	200	CY	$62.50	$12,500	
15	Gravel Paths	9,850	SF	$1.00	$9,850	
16	Picnic Tables	3	EA	$250.00	$750	
17	Drinking Fountain	2	EA	$250.00	$500	
18	Existing Light Pole	1	EA	$1,200.00	$1,200	
	Sub-Total Demolition					**$140,310**
C	*EARTHWORK*					
1	Fine grade	42,911	SF	$1.00	$42,911	
2	Rough grade	16,792	SF	$1.00	$16,792	
	Sub-Total Earthwork					**$50,000**
D	*UTILITIES*					
1	6" P.V.C. drainline	359	LF	$35.00	$12,565	
2	8" PVC drainline	227	LF	$45.00	$10,215	
3	24" Catch Basin	3	EA	$2,500.00	$7,500	
4	24" Storm Drain Junction Box	3	EA	$2,500.00	$7,500	
5	Storm Drain Connection	2	EA	$2,500.00	$5,000	
6	11 1/8" Storm Sewer Cleanout	7	EA	$750.00	$5,250	
7	4" Perforated drainline	204	LF	$15.00	$3,060	
8	4" Sanitary Sewer Line	51	LF	$35.00	$1,776	
9	4" Sanitary Sewer Connection	1	LS	$2,500.00	$2,500	
10	11 1/8" Sanitary Sewer Cleanout	1	EA	$750.00	$750	
11	2" SCHEDULE 80 Potable Water Line	80	LF	$22.63	$1,800	
12	0.5" SCHEDULE 80 Potable Water Line	36	LF	$9.92	$361	
13	0.5" Water Valve	2	EA	$76.34	$153	
	Sub-Total Drainage					**$58,430.23**
E	*HARDSCAPE*					
1	Asphalt Paving - Vehicular (3.5" AC over 14.5" CL. II AB)	7,576	SF	$7.50	$56,821	
2	Porous Asphalt - Vehicular (6" AC over 14.5" AB)	2,601	SF	$15.00	$39,015	
3	Pedestrian Concrete Paving (4" P.C.C. over 6" CL. II AB)	2,031	SF	$15.00	$30,463	
4	Vehicular Concrete Driveway Ramp (6" P.C.C. over 6" CL. II AB)	167	SF	$25.00	$4,168	
5	Flush Curb					
6	6" Vertical Curb, Sidewalk					
7	AC Deep Lift					
5	Pervious Decomposed Granite	1,016	SF	$15.00	$15,240	
	Sub-Total Hardscape					**$145,707**
F	*PLANTING*					
1	Soil Preparation	73,346	SF	$0.65	$47,675	
2	Sod	73,346	SF	$2.00	$146,692	
3	Trees - 24" Box	17	EA	$250.00	$4,250	
4	Root Barrier	78	LF	$12.00	$936	

Page 1 of 2

2021 02 11 100% PSE Sandalwood Park Estimate.xlsx

100% PS&E FOR SANDALWOOD PARK

Gates + Associates
Landscape Architecture
Sandalwood Park, Milpitas
100% PS&E

Opinion of Probable Construction Costs

#	Description	Quantity	Unit	Unit Cost		Subtotal
5	Mulch	60	SF	$1.00	$60	
6	Header	2,400	LF	$8.00	$19,200	
7	Plant Establishment Period	73,346	SF	$0.65	$47,675	
	Sub-Total Planting					**$266,488**
G	*IRRIGATION*					
1	Irrigation (New Rotor Irrigation)	73,346	SF	$5.50	$403,403	
2	Irrigation Tree Bubblers	17	EA	$ 120.00	$2,040	
	Sub-Total Irrigation					**$405,443**
H	*RESTROOM*					
1	Prefabricated Restroom	1	EA	$130,000.00	$130,000	
	Sub-Total Restroom					**$130,000**
I	*SITE FURNITURE*					
1	Barbeque	2	EA	$950.00	$1,900	
2	Group Barbeque	1	EA	$1,450.00	$1,450	
3	ADA Picnic Table	3	EA	$2,600.00	$7,800	
4	Standard Picnic Table	3	EA	$2,400.00	$7,200	
5	Bench	7	EA	$1,300.00	$9,100	
6	Bike Rack	1	EA	$1,000.00	$1,000	
7	Drinking Water Fountain	2	EA	$8,900.00	$17,800	
8	Trash Receptacles	3	EA	$1,500.00	$4,500	
9	Recycle Receptacle	3	EA	$1,500.00	$4,500	
10	Basketball Standard	1	EA	$8,500.00	$8,500	
11	Dog Waste Station	1	EA	$1,500.00	$1,500	
12	Park Rule Sign	2	EA	$5,000.00	$10,000	
	Sub-Total Site Furniture					**$75,250**
J	*PLAY AREAS*					
1	Poured in Place Rubber Surfacing	4,110	SF	$25.00	$102,750	
2	Concrete Curb	250	LF	$35.00	$8,750	
3	Ornamental Fence	245	LF	$85.00	$20,825	
	Maintenance Gate	1	EA	$6,500.00	$6,500	
4	Ornamental Gate	2	EA	$3,500.00	$7,000	
5	Play Structures	1	LS	$196,737.00	$196,737	
	Sub-Total Play Area					**$342,562**
K	*SIGNAGE*					
1	Park Sign	1	EA	$5,000.00	$5,000	
	Sub-Total Signage					**$5,000**
L	*SITE ELECTRICAL IMPROVEMENTS*					
1	Pole Light Fixture	4	EA	$6,500.00	$26,000	
2	Rework Electrical Wiring and Conduit	1	LS	$5,000.00	$5,000	
3	Restroom Power	1	LS	$15,000.00	$15,000	
	Sub-Total Site Electrical					**$46,000**
	SUBTOTAL					**$1,740,191**
	Mobilization/ Demobilization - 10%					$174,019
	ConstructionContingency 10%					$174,019
	Total of Construction					**$2,088,229**
	ADDITIVE ALTERNATE #1					
	Concrete Header @ Fitness Stations	190	LF	$35.00	$6,650	
	Fitness Stations	1	LS	$36,297.72	$36,298	
	Synthetic Play Surfacing @ Fitness	660	SF	$25.00	$16,500	
	ADDITIVE ALTERNATE #2					
	Shade Structure	2	EA	$15,000.00	$30,000	
	Sub-Total Add. Alternates					**$89,448**
	Total of Construction w/ Alternates					**$2,177,676**

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2021 02 11 100% PSE Sandalwood Park Estimate.xlsx

PARKS CONDITION AND IMPROVEMENT COST

PARK NAME	CONDITION		Short-Term Improvments	Long-Term Improvements	Total Improvement	Additional O&M required
	FAIR-GOOD	POOR-CRITICAL				
Sunnyhills Albert Augustine Park		X	$ 647,000.00	$ 5,530,000.00	$ 6,177,000.00	$ 2,300.00
Alviso Adobe Park	X		$ 82,000.00	$ -	$ 82,000.00	$ -
Augustus Rathbone Park	X		$ 9,000.00	$ -	$ 9,000.00	$ -
Ben Rodgers Park		X	$ 102,000.00	$ 3,717,000.00	$ 3,819,000.00	$ 7,500.00
Bob McGuire Park	X		$ 84,000.00	$ -	$ 84,000.00	$ -
Calavera Ridge Park	X		$ -	$ 1,821,000.00	$ 1,821,000.00	$ 18,000.00
Calle Oriente Park	X		$ 371,000.00	$ -	$ 371,000.00	$ -
Cardoza Park phase I (softball fields)	X			$ 6,211,000.00	$ 6,211,000.00	$ 24,000.00
Cardoza Park Phase II (park site & picnic)	X		$ 340,000.00	$ 2,358,000.00	$ 2,698,000.00	
Cerano Park	X		$ 243,000.00	$ 109,000.00	$ 352,000.00	$ 800.00
Creighton Park	X		$ -	$ -	$ -	$ -
Dixon Landing Park	X		$ 380,000.00	$ 3,689,000.00	$ 4,069,000.00	$ 2,200.00
Foothill Park		X	$ 198,000.00	$ 2,707,000.00	$ 2,905,000.00	$ -
Hall Memorial Park	X		$ 475,000.00	$ 5,697,000.00	$ 6,172,000.00	$ -
Hidden Lake Park		X	$ 222,000.00	$ 2,576,000.00	$ 2,798,000.00	$ 7,500.00
Hillcrest Park	X		$ 134,000.00	$ 2,459,000.00	$ 2,593,000.00	$ 7,500.00
John McDermott Park	X		$ 125,000.00	$ 446,000.00	$ 571,000.00	$ 1,300.00
Jose Higuera Adobe Park	X		$ 128,000.00	$ -	$ 128,000.00	$ -
McCandless Park			$ -	$ -	$ -	$ 77,000.00
Milpitas Dog Park	X		$ 39,000.00	$ -	$ 39,000.00	$ -
Milpitas Sport Center	X		$ 875,000.00	$ 1,811,000.00	$ 2,686,000.00	
Murphy Park		X	$ 301,000.00	$ 4,770,000.00	$ 5,071,000.00	$ 2,900.00
Oliver W. Jones Memorial Park		X	$ 43,000.00	$ 1,992,000.00	$ 2,035,000.00	$ -
o'Toole Elms Park	X		$ 217,000.00	$ -	$ 217,000.00	$ -
Parc Metro Central	X		$ 29,000.00	$ 583,000.00	$ 612,000.00	
Parc Metro East	X		$ 157,000.00	$ 824,000.00	$ 981,000.00	$ -
Parc Metro West		X	$ 140,000.00	$ 954,000.00	$ 1,094,000.00	$ -
Pecot Park	X		$ 54,000.00	$ 569,000.00	$ 623,000.00	
Peter Gill Memorial Park	X		$ 414,000.00	$ 3,325,000.00	$ 3,739,000.00	$ 1,300.00
Pinewood Park	X		$ 436,000.00	$ -	$ 436,000.00	$ -
Robert E. Browne Park		X	$ 69,000.00	$ 3,382,000.00	$ 3,451,000.00	$ -
Sandalwood Park		X	$ 56,000.00	$ 1,763,000.00	$ 1,819,000.00	$ 7,600.00
Selwyn Park	X		$ 127,000.00	$ 1,028,000.00	$ 1,155,000.00	$ -
Sinnott Park		X	$ 374,000.00	$ 5,666,000.00	$ 6,040,000.00	$ 2,200.00
Skate Park	X		$ -	$ -	$ -	$ -
Starlite Park		X	$ 411,000.00	$ 4,055,000.00	$ 4,466,000.00	$ 5,000.00
Strickroth Park		X	$ 242,000.00	$ 5,107,000.00	$ 5,349,000.00	$ 13,500.00
Tom Evatt Park	X		$ 431,000.00	$ -	$ 431,000.00	$ -
TOTAL			**$ 7,955,000.00**	**$ 73,149,000.00**	**$ 81,104,000.00**	**$ 180,600.00**

PARK IN LIEU FEE COMPARISON

	MILPITAS	SUNNYVALE	PALO ALTO	LOS ALTO	SANTA CLARA	CAMPBELL	FREMONT	CUPERTINO
TASP/Midtown	$64 per sq. ft $2,787,840 per acre							
Citywide, Excluding TASP/Midtown	$53 per sq. ft $2,308,680 per acre							
Multi-Family		$130 per sq. ft	$ 43,136.00	$ 55,000.00	$ 32,000 - $ 38,000	$ 17,370.00		
Single Family		$130 per sq. ft	$ 62,583.00	$ 87,300.00	$ 40,000- $ 47,000	$ 24,480.00		
Studio							$ 13,981.00	
1 Bedroom							$ 18,915.00	
2 Bedrooms							$ 28,078.00	
3 Bedrooms							$ 35,950.00	
4 Bedrooms							$ 42,177.00	
Additional per Bedroom rate, for >4							$ 8,341.00	
0-5 DU/AC (Cost Per DU)								$ 105,000.00
6-10 DU/AC (Cost per DU)								$ 60,000.00
10-20 DU/AC (Cost per DU)								$ 54,000.00
20+ DU/AC (Cost per DU)								$ 30,000.00
Senior Citizen Housing (Cost per DU)								$ 30,000.00
Notes			Palo Alto also has a park fee on commercial, hotel, industrial and institutional		Varie by zip code New Valuation will increase by 25%		The fee calculated per bedroom	

CITY OF MILPITAS
AGENDA REPORT
(AR)

Item Title:	**Receive a presentation on a Return to the Workplace Plan for the City of Milpitas**
Category:	Leadership and Support Services
Meeting Date:	6/15/2021
Staff Contact:	**Ashwini Kantak, Assistant City Manager, 408-586-3053**
Recommendation:	Receive a presentation on a Return to the Workplace Plan for the City of Milpitas

Background:
In March 2020, due to the rampant spread of the Coronavirus (Pandemic), a state of emergency was declared at the local, state, and federal levels and stay-at-home orders issued, which had an enormous impact on the local, State and national economy as well as the City's finances. The stay-at-home orders also resulted in all City employees who could perform their job duties remotely to move to teleworking.

Today, the country is in a much better place than it was last fall and winter. A combination of the vaccines and natural immunity from past COVID-19 infections is suppressing the virus. As COVID-19 hospitalizations are decreasing and vaccination rates are increasing across the country, Federal Executive and CDC recommendations have been continually revisited. There has been a relaxing in protective measure recommendations for sector specific and outdoor venues regarding social distancing and face coverings. In addition to the federal government, the California Department of Public Health and Santa Clara County Public Health Orders provide the directives, guidance and recommendations to be followed at the state and regional levels respectively. When these directives conflict with each other, the more restrictive directives apply.

On May 18th, CDC issued Interim Public Health recommendations for fully vaccinated people, allowing activities without face coverings or social distancing except where prohibited by local health authorities.

The California Department of Public Health had issued a Guidance for Use of Face Coverings for vaccinated and unvaccinated persons in indoor and outdoor settings on May 3. The purpose of this guidance was to provide information about when face coverings are required for members of the general public, the guidance does not apply to workplace settings. This May 3 guidance was later revised after the issuance of the CDC guidance, and includes different requirements after June 15.

Currently, State CDPH guidance is operative through June 15th and face coverings are required when in public-indoors unless eating or drinking, while on public transit and at crowed venues. If vaccinated and with social distancing masks are not required outdoors. Vaccine verification and negative testing are required for indoor mega events and recommended for outdoor mega events.

In the workplace, employers subject to the California Occupational Safety and Health Standards (Cal/OSHA) COVID-19 Emergency Temporary Standards (ETS), first adopted in November 2020, must ensure that all workers are provided and properly wear face coverings as required by the ETS. At the June 3 meeting, the Cal/OSHA Board voted on proposed changes to the ETS, including changes to requirements for face coverings, distancing, and other workplace restrictions. However, these revisions were subsequently rescinded at the emergency Board meeting held on June 9. As such, the November 2020 protocols will remain in place until a new set of ETS recommendations are brought forth by the OSHSB on June 17.

On May 18, due to the decrease in new COVID-19 cases and successful vaccination efforts in Santa Clara County, the County Health Officer Dr. Sara Cody announced the lifting of most of the local rules currently in place, including requirements that businesses maximize the number of staff who are teleworking, replacing prior rules with a limited local health order. The new order will require continued reporting of COVID-19 cases in workplaces and schools. It also requires employers to determine the vaccination status of their employees (and onsite contractors and volunteers) in order to comply with current and anticipated County and State rules related to COVID-19 safety in the workplace and follow up on the status of all those are not vaccinated every 14 days thereafter (Certification Vaccination Status Form). The order includes a mandatory directive for compliance with the CDPH's guidance for face coverings.

The new County Order replaces the County's October 5, 2020 Revised Risk Reduction Order and retires many of its requirements, including the following:

- **Maximizing telework is no longer required:** Businesses are no longer required to maximize the number of people who work remotely.
- **Social Distancing Protocols are no longer required:** Businesses and governmental entities are no longer required to submit Social Distancing Protocols to the County Public Health Department. Instead, they must comply with any State rules applicable to their business, including the Cal/OSHA's COVID-19 Emergency Prevention Regulations applicable to most businesses.
- **The local Mandatory Directive on Capacity Limitations has been eliminated:** There are no local rules related to capacity.

On May 19, the county entered the least restrictive "Yellow Tier" under the State's Blueprint for a Safer Economy (https://covid19.ca.gov/safer-economy/). However, the Tiers are no longer anticipated be in effect starting on June 15.

On June 4, 2021, the Bay Area Health Officers representing the counties of Alameda, Contra Costa, Marin, Monterey, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Sonoma, and the city of Berkeley supported the opening of California schools for full time in-person instruction for all grades in the fall of 2021. Public health researchers, the Centers for Disease Control and Prevention, the California Department of Public Health, and local health departments have learned from the research and the experiences of classroom instruction from the fall of 2020 through the winter and spring of 2021.that the risk of trans Data shows that transmission among children wearing masks is very low, even with reduced spacing between desks.

Face Covering Ordinance
The Council adopted a face covering ordinance in April 2020. With the May 3 guidance from CDPH and May 18 Public Health Order from the County, this Order will not be enforced, and City staff will explore repealing the Order to ensure consistency with the State.

Analysis:
Although many employees have continued to work onsite, providing essential services throughout the pandemic, other City employees have worked remotely for more than a year to limit the spread of the virus. With the change in the local Public Health Order, and restrictions easing, the necessity to work remotely has also changed.

On June 15 the Governor is expected to lift capacity and distancing restrictions for most businesses and activities. Large scale indoor events (over 5,000) or mega outdoor events (over 10,000) will require vaccination or negative tests at least until October 1. CDPH's guidance on face coverings and travel will be in effect. Requirements in the workplace will continue to be governed by Cal/OSHA.

Beginning June 15th, per CDPH's revised guidance, face coverings will not be required for fully vaccinated individuals except in the following settings, which require all individuals to be masked regardless of vaccination status: on public transit and in transportation hubs, indoors in K-12 schools, childcare and youth settings, healthcare settings including long term care facilities, state and local correctional facilities and detention centers, homeless shelters, emergency shelters, and cooling centers. Face coverings are required for

unvaccinated persons in outdoor settings any time physical distancing cannot be maintained and also required in indoor public settings and businesses.

In settings where masks are required only for unvaccinated individuals; businesses, venue operators or hosts may choose to:

- Provide information to all patrons, guests and attendees regarding vaccination requirements and allow vaccinated individuals to self-attest that they are in compliance prior to entry.
- Implement vaccine verification to determine whether individuals are required to wear a mask.
- Require all patrons to wear masks.

No person can be prevented from wearing a mask as a condition of participation in an activity or entry into a business.

At the June 9 emergency Cal/OSHA Board meeting, the CDPH presented its new guidance on face coverings. It is anticipated that a new set of recommendations aligning with CDC and CDPH recommendations will be recommended by Cal/OSHA, however, it is unclear at this time what the social distancing and final guidance with respect to vaccinated and unvaccinated people will be. If the OSHSB takes action to adopt new ETS on June 17, and if approved by the Administrative Office of Law, the ETS would be effective on June 28, 2021. Thus, although the City has developed a preliminary plan for all employees to return to on-site work, the plan may need to be revised based on the Cal/OSHA actions.

Return to the Workplace

The City's approach for Returning to the Workplace is guided by federal, state, and regional directives and guidance, by an employee survey, Council and community interests, and operational considerations.

COVID-19 Prevention Program and Plan for Phasing in City Operations

In accordance with the ETS (Title 8, Division 1, Chapter 4), a COVID-19 Prevention Program (CPP) has been developed, along with site specific plans for each department. The CPP includes a system for communicating with employees, identification and evaluation of COVID-19 hazards and will be updated as needed, based on the proposed revisions outlined in the ETS. In 2020, staff had also developed a Plan for Phasing in City Operations.

Employee Survey

An employee survey was conducted between May 18 and May 27. Employees were provided copies of both the CPP and the Plan for Phasing in City Operations. The survey received 199 responses, almost a 50% response rate. Key findings of the survey were:

- Nearly all employees acknowledged receiving the City's Phased in Operations Plan and CPP, with nearly 80% stating they read the plans.
- Majority of respondents understand their responsibilities to follow COVID-19 protocols to keep themselves and their colleagues safe and majority feel confident that their coworkers will follow rules to maintain a safe work environment.
- Majority of respondents trust the leadership team to make decisions to protect staff.
- Majority of respondents are comfortable returning to the workplace and serving the public.
- Majority of employees have confidence that the appropriate safety protocols will be in place when they return to the workplace
- 56% of respondents indicate they are receiving an appropriate level of communication regarding COVID-19 and returning to the workplace.
- 71% of respondents feel supported by their manager regarding their COVID-19 needs with 73% of employees stating their manager is accessible for questions or concerns related to COVID-19.
- Approximately 75% of employees wanted a 4 week notice before being required to return to work.
- Many employees would like continued telework and staggered work schedules.
- Staff opinions are split on mask mandates.
- 37% of respondents are fearful of carrying the virus home to their family members and 36% of employees responding to the survey are not. Similarly, 69 employees have no fear of contracting COVID from coworkers while 74 employees are afraid of catching COVID-19 from their coworkers.

When it comes to working with customers, we see a similar split, although the fear is stronger (86 employees responding to the survey indicated a fear of catching COVID from customers and 59 said they had no fear)

- 71 employees indicated COVID-19 has adversely impacted their well-being while 77 employees were neutral, and 47 employees disagreed or strongly disagreed with this statement. Employees were asked to provide suggestions for how the City can help to address these challenges.
- Of the respondents who are not teleworking and of those who are reporting to the office on occasion, the majority don't feel a need for refresher COVID-19 training; however, for those who are teleworking a majority of those respondents felt like refresher training was needed. Combined, approximately 1/3 of the respondents felt refresher training was needed.

COVID Safe Controls in Facilities

Staff is working on a number of measures to help prevent and reduce transmission of the COVID-19 virus and maintain healthy business operations and work environments for staff to return to the workplace. These measures consist of the following:

- **Ventilation in City Buildings:** Staff is working with Engie to make several improvements at City facilities, which include rebalancing and adjusting HVAC systems to increase total airflow in all City buildings. These facilities include City Hall, Community Center, Sports Center, Senior Center, Police/Public Works/IT Building, and at all Fire Stations.
- **Filter Upgrades**: Staff is working with the City's HVAC maintenance contractor to upgrade the filters in the City's HVAC systems to increase the Minimum Efficiency Reporting Values (MERV) of all filters. The upgraded filters provide an effective means for removing the coronavirus from filtered air.
- **Cleaning and Disinfecting Facilities:** Staff will continue using contract services for daytime enhanced cleaning and deep cleaning, as needed. Staff will also procure cleaning supplies and make these available for staff to wipe down their personal spaces and common areas as needed.
- **Hand Sanitizer stations:** Sanitizer stations are being installed at the entrance to all common areas to increase hand cleaning and prevent staff from spreading germs to others.
- **Acrylic Shields:** Acrylic shields will be designed and installed in the Committee Room and Council chambers to allow for in person meetings. Shields have already been installed at public counters, additional shields may need to be installed based on revised ETS requirements.
- **Signage:** This measure involves the placement of COVID-19 safety signage in common areas in the buildings.

On June 8, the City Council concurred that ARPA funding should be allocated for COVID-19 Safe Facility measures in the amount of $375,000. On the consent calendar for the June 15, 2021 City Council meeting agenda, staff placed a staff report recommending the appropriation of ARPA funds for these measures.

Vaccination Reports and Protocols

In accordance with the County's Public Health Order Directive, the City is collecting information to determine the vaccination status of all City employees. All unvaccinated employees or those who decline to state their vaccination status, will be required to complete a Vaccination Record Form every two weeks, until the Order is modified or repealed. It is anticipated that future ETS protocols will be different for fully vaccinated and unvaccinated employees.

The Equal Employment Opportunity Commission (EEOC) has determined that employers can mandate employees to be vaccinated, as long as there are reasonable accommodations made for those who cannot be vaccinated due to religious beliefs or health reasons. The California Department of Fair Employment and Housing has also ruled that employers can mandate vaccination except for religious or disability exemptions. However, according to the City Attorney's Office there may be unresolved legal issues with requiring vaccinations at this time and the City is not currently contemplating mandating vaccinations.

Teleworking

In January 2021 Council signed on to the Bay Area Air Quality Management District's Cut the Commute Pledge which commits the City to reducing solo commutes by 25% for those employees whose jobs allow remote work. In order to achieve this goal, staff is recommending one day of teleworking for all employees

whose job can be performed remotely and without any impact to City operations. In order to operationalize this in a way that works well for departments and still allows onsite collaboration, staff is recommending making Friday a teleworking day to the extent possible and having City Hall and public counters open to the public Monday-Thursday, with Fridays being virtual City Hall days with services being provided online. This will not apply to services that have to be provided in person such as public safety, utilities, maintenance of streets, trees, landscaping and lights, inspections, youth programs, in-person recreation programs, and senior services.

This proposed teleworking plan was based on the assumption that distancing requirements would not be in place starting August 1, as outlined in the June 4 revisions to the ETS. However, if this provision is not included in the future revisions to the ETS, staggered work schedules and increased teleworking days may be required in some departments.

Technology Improvements

At the start of the pandemic, the Governor issued Executive Order N-29-20, modifying the Brown Act teleconferencing provisions to provide flexibility to local agencies to conduct their business through virtual public meetings during the COVID-19 pandemic. On June 2, in response to an inquiry from several interested stakeholders, the Governor's Office provided clarification that although the Governor is planning to terminate the capacity and distancing restrictions in the Blueprint for a Safer Economy on June 15, he will not be rescinding Executive Order N-29-20. Additionally, his office will provide adequate notice to all interested stakeholders before rescinding this Executive Order to allow agencies to be prepared to meet statutory and logistical requirements.

It is anticipated that on June 15 although state restrictions related to social distancing may be lifted, the ETS still calls for social distancing in the workplace and thus the City will limit the number of people in the Council Chambers. Furthermore, the virtual format has allowed community members that may otherwise not be able to attend the meetings to participate. Thus, staff is planning for hybrid meetings that allow the public the continued convenience of being able to participate in meetings virtually. Technology improvements will be needed in the Council Chambers as well as the Committee meeting room to enable this. Additionally, as several employees will be offered the opportunity of teleworking at least one day a week, the City will need to invest in conferencing technology and mobile devices to enable this hybrid work environment.

Proposed Return to the Workplace Plan

In order to safely phase in the return of all employees to on-site operations and to open all City facilities to the public staff is recommending the following approach:

Proposed Timeline

June-July: Complete all HVAC and other facility improvements, complete technology improvements needed to conduct hybrid public meetings and enable departments to work in a hybrid work environment.

August: All employees who have been teleworking begin returning back to on-site work; phasing will be managed by each department to ensure compliance with Cal/OSHA requirements. Council meetings, starting in August, will transition to a hybrid format, with on-site and virtual participation. City facilities will be opened to the public, by appointment only, in mid-August and open to all by late August/early September.

Proposed Protocols and Employee Communications

All employees, on-site contractors, volunteers, and visitors will be required to wear face coverings in accordance with the current Cal/OSHA ETS, however this may change based on anticipated changes to the ETS on June 17. Also, there is still a lack of clarity on certain protocols related to vaccinated and unvaccinated employees. Staff is tracking the continually evolving guidance closely and will keep Council apprised of any changes in a timely manner and also update the Return to the Workplace Plan as needed.

Employees will continue to use the COVID-19 self-health check-in app to ensure that employees with COVID-19 symptoms do not inadvertently put other employees at risk.

All unvaccinated employees will be required to provide information on their vaccination status every 14 days per the County Order.

Frequent communication to the workforce will be a key component of successfully transitioning back to the workplace. Citywide emails from the City Manager, an employee town hall, employee trainings and videos, signage in common areas, and department and division level meetings will occur between the months of June-August to ensure employees have resources and information available to make their transition back to on-site work as smooth as possible. Additionally, there will be proactive communication to those employees that have continued to work on-site through the pandemic, about any changes to protocols with the new guidance and orders.

Also, it is important to note that although new directives and guidance go into effect on June 15, the virus has not been eradicated. Thus, employees and the community in general, should still be respectful of the situational need and take appropriate precautions with regards to social distancing, hygiene, and masking.

Policy Alternative:
Not applicable

Fiscal Impact:
Bringing back all employees to the workplace is going to require improvements to City Facilities including HVAC, signage, and technology improvements. Approximately $375,000 will be needed for immediate improvements and an appropriation action will be brought for Council consideration on June 15. Staff is proposing using American Rescue Plan Act funding for these COVID-19 Safe improvements.

California Environmental Quality Act:
Approval of the recommendation is not a Project under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3) (Common Sense Exemption) as it can be seen with certainty that a discussion about plans for returning to work at City facilities will not have a significant effect on the environment. Further, the item is not a Project pursuant to CEQA Guidelines Section 15378(b)(5) as it involves organizational or administrative activities of a local government entity that will not result in direct or indirect physical changes in the environment.

Recommendation:
Receive a presentation on a Return to the Workplace Plan for the City of Milpitas.

Attachments:

AGENDA REPORT AND ATTACHMENTS WILL BE MADE AVAILABLE

PRIOR TO THE 6/15/2021

CITY COUNCIL MEETING

Item No. 30

Recommendations from Mayor Tran for Appointments for City Commissions (Contact: Mayor Tran, 408- 586-3029)

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

NOTE: Deferred and completed items are not listed

2021	OPEN				
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**
1	City to proclaim August 21 as yard sale day in the City of Milpitas	Dominguez	A	6/8/2021	
2	Explore having a number for people experience mental health or substance abuse crisis to call to get a referral for help	Dominguez	CCM	6/1/2021	
3	Presentation on the Police Department's Response to substance abuse.	Chua	CCM	6/1/2021	
4	City partner with the Chamber of Commerce to promote the City with a City event like an Art and Wine Festival, Rancho Days, Little Cornfield's day, or Frontier day	Montano	A	6/1/2021	
5	City create a mural for the Veterans	Montano	A	6/1/2021	
6	Job fair with 20 local businesses held soon and an additional one in the fall with the Chamber taking a larger role and the City providing some support	Chua	A	06/01/201	
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

7	Discussion in the next fiscal year, to have a sliding scale permitting program for seniors and low-income residence for necessary safety renovations	Tran	A	5/4/2021	To be discussed at next quarterly prioritization of Council requests
8	Information showing that the ordinance requiring developers to provide art features is being followed and an update on the Art developer fees.	Montano	A	5/4/2021	To be discussed at next quarterly prioritization of Council requests
9	Report on Transit Occupational Tax (TOT) status	Montano	A	5/4/2021	Info Memo to be prepared
10	Purchase a display cabinet for City Hall with safety glass	Montano	A	5/4/2021	City Manager to explore options
11	Discussion to reduce the City's Senior Center facilities deposit	Montano	A	5/4/2021	To be discussed at next quarterly prioritization of Council requests
12	Discussion on a policy that makes human trafficking training mandatory in the hospitality industry	Dominguez	A	4/20/2021	To be discussed at next quarterly prioritization of Council requests
13	Clean-up on Earth Day	Montano	A	4/20/2021	To be discussed at next quarterly prioritization of Council requests
14	Requested that the City have mini-libraries in the low-income areas of the City.	Montano	A	4/20/2021	To be discussed at next quarterly prioritization of Council requests
15	Discussion on developing a pilot neighborhood association program	Dominguez	A	4/6/2021	Councilmember to work with City Manager on this request and provide a memo to the City Council
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**
16	Staff to create a plan on how to increase the number of local businesses doing business with the City	Chua	A	4/6/2021	Info memo will be prepared

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

17	Staff to look into creating a rose garden with a children's memorial site	Montano	A	4/6/2021	To be discussed at next quarterly prioritization of Council requests
18	Staff to look into creating "Welcome to Milpitas" signs in key areas of in the City	Montano	A	4/6/2021	To be agendized at a future City Council meeting
19	Staff to provide information to place a measure on the ballot to change the directly elected Mayor to a rotational at-large position	Tran	CCM	3/16/2021	To be agendized at a future City Council meeting, along with discussion of Mayor and Councilmember term limits
20	Staff to provide information on a landmark policy for the City of Milpitas	Tran	A	3/16/2021	Policy to be sent to Council if existing, or a new policy to be brought for Council consideration by December
21	Discussion on exploring a mural program and requested information on the framework or best practices	Montano	A	3/16/2021	To be agendized for the June 15 City Council meeting
22	Discussion to memorialize those that have passed due to COVID19 in Milpitas	Dominguez	A	3/2/2021	To be discussed at next quarterly prioritization of Council requests
23	Discussion to explore opportunity housing and prohibit single family zoning	Phan	A	2/16/2021	To be discussed at next quarterly prioritization of Council requests
24	Discussion to explore opportunity housing and prohibit single family zoning	Phan	A	2/16/2021	To be discussed at next quarterly prioritization of Council requests

2021	**ACTIVE**				
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

25	Presentation on an City's action items opening City Hall for ARPA funding purposes	Chua	A	5/18/2021	Agendized for the 06/15/2021 City Council meeting; continued discussion on 06/21/2021
26	Collaborative video with the City Council to send a message to help break the stigma against mental health	Dominguez	A	5/18/2021	In progress
27	Closed session presentation from a member of the executive team to receive an update on the City's preparedness against cyber-crime	Chua	A	4/20/2021; 5/11/2021	No closed session. Staff offering 1:1 briefing to interested Councilmember
28	Discussion to explore the opportunity to create middle-income workforce housing such as a program through the California Statewide Communities Development Authority	Phan	A	5/4/2021	Agendized for 5/11/2021; return with more information at a future meeting
29	Requested that the City provide a second round of small business grants using CDBG/Federal funds to help the small business community.	Montano	A	3/2/2021	Agendized for discussion on 4/06/2021; CC direction to Agendize for 5/11/2021; include in future ARPA discussion 6/08/2021
30	Amendment to the existing ordinance for third-party food delivery vendor services to prohibit regulatory response fees	Phan	A	2/16/2021	Agendized for discussion on 3/16/2021, deferred to 4/06/2021; CC direction for City Attorney to prepare a report
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**
31	Performance Evaluation (Contract) of City Attorney	Tran	A	1/5/2021	2/2/2021; 3/2/2021; 4/6/2021 closed session item; agendized for 5/4/2021. Mayor requests to extend to June 1 budget adoption; agendized for 6/15/2021
32	Emergency power resources during COVID-19	Phan	A	1/19/2021	No closed session. Staff offering 1:1 briefing to intersted Councilmember

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

32	Amend Accessory Dwelling Units (ADU) ordinance to address unpermitted ADUs	Chua	A	1/5/2021	Target date: 3/16/2021; Council approved to move forward on 4/6/2021
33	Form "Beautify Milpitas" subcommittee - for a future Task Force or Commission	Chua	A	12/15/2020	Info Memo to Council in March
34	Amend ordinance to remove affordable housing in-lieu fee; status update on this item	Chua	A	12/15/2020; 06/01/2021	Agendized on 1/5/21, CC direction to agendize for further meeting
35	Ordinance to ban vaping in the City	Montano	A	12/15/2020	Staff to bring back an Ordinance
36	Review City policy on speed bumps	Tran	A	12/15/2020	Presented to Transportation Subcommittee on 2/12
37	Discussion of Minute Man as City's image, when City branding comes back	Phan	A	8/18/2020	Discuss when report on "Branding" is on CC agenda in 2021; agendized for
38	Discuss a "safety first" or other event in lieu of National Night Out (per CAC)	Phan	A	10/20/2020	Dec. 15: Returning to Nat. Night Out in August
Request No.	**Topic**	**Submitted by**	**A, F, CM, or CCM**	**Date requested or Rec'd Form**	**STATUS and/or DATE scheduled on City Council meeting agenda:**
39	Bring back update report & discuss status of playing fields for girls' softball in Milp.	Dominguez	A	10/20/2020	To City/Schools Subcomm. then CC. See C. Montano 10/14 Bobby Sox softball memo; staff to bring an amendment to
40	Consider naming "Milpitas Hills"	Dominguez	A	10/20/2020	to Econ. Dev. Commission first. Return later to City Council
41	Require implicit bias training for City Council, Commissioners & staff	Dominguez	A	6/16/2020	approved 8/18/2020

MILPITAS CITY COUNCIL
AGENDA ITEM REQUESTS

42	Discussion/staff report on Beautify Milpitas, graffiti abatement, resources	Montano	A	6/30/2020	8/18/20: Directed to staff develop program requiring min. staff resource & return to CC
43	Consider change in term limits for Mayor + Councilmembers	Montano	A	6/16/2020	8/4/2020: Voted 3 -2 to pursue; 2/02/2021 to agendize for a future meeting; 3/16/2021 voted 3-1-1 to move forward
44	Restrict smoking in multi-unit bldgs	Montano	A	1/7/2020	Ordinance pending. Discussed 3/03/2020 Affirmed 6/02/2020; Agendized for 6/01/2021; Second reading agendized for 6/15/2021
45	Consider Community Museum and Park on Main St.	Phan	F	8/20/2019	to Rules 8/23/2019. Moved to Specific Plan Community Conversation events.

CCM: City Council Meeting

A: @Announcements

F: on a Form

CM: to/from City Manager

MILPITAS CITY COUNCIL
AGENDA PREVIEW LIST

August 5, 2021

CLOSED SESSION

INVOCATION (assigned to Vice Mayor Montano)

PRESENTATION

CONSENT CALENDAR

1. Receive City Council calendar for August 2021 (City Clerk)

2. Approve City Council meeting minutes of June 14, 2021, Special meeting and June 15, 2021 Regular meeting (City Clerk)

PUBLIC HEARING

3. Weed Abatement

COMMUNITY DEVELOPMENT

COMMUNITY SERVICES

4. Mural program

PUBLIC SAFETY

5. Emergency Operations Plan

LEADERSHIP

6. American Rescue Plan Act Update

REPORTS

7. Prioritization of Councilmember requests

8. Review list of Future Agenda Items Requested by City Councilmembers (Mayor & CC/City Clerk)

PREVIEW NEXT AGENDA

9. Preview list of items for August 17, 2021 (City Clerk)