#### Addendum

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#### Milpitas Park, Well, and Pedestrian Bridge

January 2020

In Consultation with

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J.PO

ASSOCIATES, INC.

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Prepared by

#### **TABLE OF CONTENTS**

Section	1.0 Introduction and Purpose	1
1.1	Background Information	1
1.2	Purpose	1
Section	2.0 Project Information	3
2.1	Project Title	3
2.2	Lead Agency Contact	3
2.3	Project Applicant	3
2.4	Project Location	3
2.5	Assessor's Parcel Numbers	7
2.6	General Plan Designation and Zoning District	7
2.7	Project-Related Approvals, Agreements, and Permits	7
Section	3.0 Project Description	9
3.1	Overview	9
3.2	Public Park	9
3.3	Production Water Well	.12
3.4	Pedestrian Bridge	.14
3.5	Construction Phasing	.14
Section	4.0 Environmental Checklist and Impact Discussion	.16
Section 4.1	4.0 Environmental Checklist and Impact Discussion Aesthetics	.16 .18
Section 4.1 4.2	4.0 Environmental Checklist and Impact Discussion Aesthetics Agriculture and Forestry Resources	.16 .18 .22
Section 4.1 4.2 4.3	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> </ul>	.16 .18 .22 .25
Section 4.1 4.2 4.3 4.4	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34
Section 4.1 4.2 4.3 4.4 4.5	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34 .43
Section 4.1 4.2 4.3 4.4 4.5 4.6	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34 .43 .46
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources</li> <li>Energy</li> <li>Geology and Soils</li> </ul>	.16 .18 .22 .25 .34 .43 .46 .49
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics.</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources.</li> <li>Energy.</li> <li>Geology and Soils.</li> <li>Greenhouse Gas Emissions.</li> </ul>	.16 .18 .22 .25 .34 .43 .46 .49 .54
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34 .43 .46 .49 .54
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources</li> <li>Energy</li> <li>Geology and Soils</li> <li>Greenhouse Gas Emissions</li> <li>Hazards and Hazardous Materials</li> <li>Hydrology and Water Quality</li> </ul>	.16 .18 .22 .25 .34 .43 .43 .46 .54 .57 .62
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources</li> <li>Energy</li> <li>Geology and Soils</li> <li>Greenhouse Gas Emissions</li> <li>Hazards and Hazardous Materials</li> <li>Hydrology and Water Quality</li> <li>Land Use and Planning</li> </ul>	.16 .18 .22 .25 .34 .43 .43 .46 .49 .54 .57 .62 .71
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34 .43 .43 .46 .49 .54 .57 .62 .71 .73
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12 4.13	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics.</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality.</li> <li>Biological Resources</li> <li>Cultural Resources.</li> <li>Energy.</li> <li>Geology and Soils.</li> <li>Greenhouse Gas Emissions.</li> <li>Hazards and Hazardous Materials</li> <li>Hydrology and Water Quality</li> <li>Land Use and Planning.</li> <li>Mineral Resources</li> <li>Noise and Vibration.</li> </ul>	.16 .18 .22 .25 .34 .43 .43 .46 .49 .54 .57 .62 .71 .73 .75
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12 4.13 4.14	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li> <li>Aesthetics</li> <li>Agriculture and Forestry Resources</li> <li>Air Quality</li> <li>Biological Resources</li> <li>Cultural Resources</li> <li>Energy</li> <li>Geology and Soils</li> <li>Greenhouse Gas Emissions</li> <li>Hazards and Hazardous Materials</li> <li>Hydrology and Water Quality</li> <li>Land Use and Planning</li> <li>Mineral Resources</li> <li>Noise and Vibration</li> <li>Population and Housing</li> </ul>	.16 .18 .22 .25 .34 .43 .43 .46 .49 .54 .57 .62 .71 .73 .75 .87
Section 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12 4.13 4.14 4.15	<ul> <li>4.0 Environmental Checklist and Impact Discussion</li></ul>	.16 .18 .22 .25 .34 .43 .43 .46 .49 .54 .57 .62 .71 .73 .75 .87 .89

4.17	Transportation/Traffic	95
4.18	Tribal Cultural Resources	98
4.19	Utilities and Service Systems	100
4.20	Wildfire	107
4.21	Mandatory Findings of Significance	109
Section :	5.0 References	112
Section	6.0 Lead Agency and Consultants	114
6.1	Lead Agency	114
6.2	Consultants	114

#### Figures

Figure 2.4-1:	Regional Map	4
Figure 2.4-2:	Specific Plan Vicinity Map	5
Figure 2.4-3:	Project Site Aerial Photograph and Surrounding Land Uses	6
Figure 3.2-1:	Public Park Site Plan	
Figure 3.2-2:	Public Park Grading Plan	
Figure 3.3-1:	Production Water Well Site Plan	
Figure 3.4-1:	Pedestrian Bridge Site Plan	
Figure 4.4-1:	Biological Study Area	
Figure 4.19-1:	Utility Plan	
•	•	

#### Tables

Table 3.5-1:	Preliminary Construction Schedule	15
Table 4.3-1:	Bay Area 2017 Clean Air Plan Applicable Control Measures	
Table 4.13-3:	Impacts from Combined Sources at Construction MEI	
Table 4.13-1:	Construction Equipment 50-foot Noise Emission Limits	77
Table 4.13-2:	Noise Levels for Park Construction Stages	78
Table 4.13-3:	Construction Noise Levels for Well Construction Stages	79
Table 4.13-4:	Noise Levels for Bridge Construction Stages	
Table 4.13-5:	Vibration Levels for Construction Equipment at Various Distances	

#### Appendices

- Appendix A Air Quality Analysis
- Appendix B Biotic Constraints Analysis
- Appendix C Hydraulic Analyses
- Appendix D Noise and Vibration Analysis

#### ACRONYMS AND ABBREVIATIONS

ADT	Average daily traffic
BART	Bay Area Rapid Transit
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
CalEEMod	California Emissions Estimator Model
CCR	California Code of Regulations
CDFW	California Department of Fish & Wildlife
CEQA	California Environmental Quality Act
CIP	Capital Improvement Project
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
DNL	Daily average basis
DPM	Diesel particulate matter
FEMA	Federal Emergency Management Agency
HHRAs	Human health risk assessments
HI	Hazard Index
MEIs	Maximally exposed individuals
MLD	Most Likely Descendent
MRP	Municipal Regional Permit
MSL	Mean Sea Level
MUSD	Milpitas Unified School District
NAHC	Native American Heritage Commission
NAVD	North American Vertical Datum of 1988
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
SCCDEH	Santa Clara County Department of Environmental Health
SLF	Sacred Lands File
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TASP	Transit Area Specific Plan
TDM	Travel demand management
USFWS	US Fish & Wildlife Service
VTA	Santa Clara Valley Transportation Authority

#### 1.1 BACKGROUND INFORMATION

#### 1.1.1 <u>Transit Area Specific Plan</u>

On June 3, 2008, the City Council approved the Transit Area Specific Plan (TASP). The approved TASP allows redevelopment of an approximately 437-acre area in the southern portion of the City that currently includes a number of industrial uses near the Great Mall shopping center. The area would be developed with 7,109 dwelling units, 993,843 square feet of office space, 340 hotel rooms and 287,075 square feet of retail space centered around the proposed Milpitas Bay Area Rapid Transit (BART) station and the Santa Clara Valley Transportation Authority (VTA) Light Rail system. The TASP includes development standards, goals and policies guiding development within the plan area. Because of the physical characteristics of the area, including major streets, railroads and creeks, the plan also established subdistricts with specific goals and policies to accommodate those unique characteristics.

The impacts from planned development under the TASP are evaluated in the Milpitas Transit Area Specific Plan (TASP) Final Environmental Impact Report (EIR), May 2008, amended 2011. The East Penitencia Channel pedestrian bridge and production water well were not in the 2008-13 Capital Improvement Project (CIP) or 2011 Plan amendment but both projects are included in the 2018-23 CIP.

#### 1.2 PURPOSE

This Addendum to the TASP EIR has been prepared by the City of Milpitas, as the lead agency, in conformance with the CEQA Guidelines (Title 14, California Code of Regulations Section 15000 et seq) and the regulations and policies of the City of Milpitas. This Addendum evaluates the projectand site-specific environmental impacts that may result from the implementation of the proposed project and determines whether the proposed project would result in any new significant impacts or substantially increase the severity of impacts previously identified in the certified TASP EIR.

The purpose of this Addendum is to inform decision makers and the general public of the environmental impacts that might reasonably be anticipated to result from development of the proposed project.

This Addendum and all documents referenced in it are available for public review in the Department of Planning at Milpitas City Hall, 455 E Calaveras Blvd, during normal business hours.

CEQA Guidelines Section 15162 states that when an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- 2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due

to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

- 3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
  - a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration;
  - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines Section 15164 states that the lead agency or a responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary, but none of the conditions described in Section 15162 (see above) calling for preparation of a subsequent EIR have occurred.

Given the proposed project description and knowledge of the project site (based on the proposed project, site-specific environmental review, and environmental review completed for the TASP EIR), the City has concluded that the proposed project would not result in any new impacts not previously disclosed in the EIR, would not result in a substantial increase in the magnitude of any significant environmental impact previously identified in the TASP EIR, and would not otherwise require a subsequent or supplemental EIR under CEQA Guidelines Section 15162. For these reasons, a supplemental or subsequent EIR to the TASP EIR is not required and this Addendum thereto adequately discloses the environmental impacts of the proposed project.

The TASP EIR is available on the City's website: http://www.ci.milpitas.ca.gov/planning-documents/transit-area-specific-plan/

#### SECTION 2.0 PROJECT INFORMATION

#### 2.1 **PROJECT TITLE**

McCandless Park Project No. 5102, Well Upgrade, McCandless Well Site Project No. 7076, and Lower Penitencia Creek Pedestrian Bridge Project No. 2005

#### 2.2 LEAD AGENCY CONTACT

Michael Fossati Senior Planner City of Milpitas | Planning Division | Planning & Neighborhood Services Planning Department 455 East Calaveras Boulevard Milpitas, CA 95035 (408) 586-3274 mfossati@ci.milpitas.ca.gov

#### 2.3 PROJECT APPLICANT

Maren G. Schram, P.E. Associate Civil Engineer City of Milpitas | Engineering Department 455 East Calaveras Boulevard Milpitas, CA 95035 (408) 586-3315 mschram@ci.milpitas.ca.gov

#### 2.4 **PROJECT LOCATION**

The project site is located along the east side of McCandless Drive, between Montague Expressway and Great Mall Parkway, in the southern part of the City of Milpitas. The site is bordered to the north by East Penitencia Channel<sup>1</sup>, to the east by residential development currently under construction, and to the south by the recently constructed Mabel Mattos Elementary School. In the project area, East Penitencia Channel flows east to west within a manmade earthen channel. The project site is currently undeveloped.

The proposed pedestrian bridge would be located approximately 500 feet east of McCandless Drive. At the pedestrian bridge location, the streambed is eight to 10 feet below grade and has steep banks. The creek channel is approximately 35 feet wide measured at the top of bank, and the banks of the creek channel are vegetated. Fencing and landscaping separate the creek, which is owned by Santa Clara Valley Water District (Valley Water), from the park parcel. Regional, vicinity and aerial maps of the TASP area are shown on Figure 2.4-1, Figure 2.4-2 and Figure 2.4-3, respectively.

<sup>&</sup>lt;sup>1</sup> East Penitencia Channel is one of the major tributaries joining the Lower Penitencia Creek and is a part of the Lower Penitencia Creek Watershed.







FIGURE 2.4-3

#### 2.5 ASSESSOR'S PARCEL NUMBERS

086-41-044 Park and Well 086-33-097 Pedestrian Bridge

#### 2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

The project site has a current General Plan designation of *Parks Open Space (POS)* and is currently zoned *Parks Open Space (POS)* with a Zoning Overlay of *Transit Oriented Development Overlay (TOD)*. The project is consistent with the General Plan designation; therefore, a General Plan amendment would not be required.

#### 2.7 PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

The project proponent is requesting the following approvals/permits for the development:

Agency	Review & Approval/Agreement/Permit			
California Department of Fish	• Section 1602 Notification of Lake or Streambed Alteration			
and Wildlife	Agreement Amendment to reapply for constructing the			
	pedestrian bridge later than stated in original permit –			
	during design phase.			
California Department of General	• Review & Approval of accessibility requirements for the			
Services, Division of State	<b>park's</b> joint-use lit sports field and all-inclusive play area			
Architect	within school property.			
City of San Jose Environmental	• Review & Approval of permanent <b>municipal well</b> sewer			
Services Department	discharge to City sewer system terminating at the San Jose-			
	Santa Clara Regional Wastewater Facility, operated by the			
	City of San Jose's Environmental Services Department			
Milpitas Unified School District	• Review & Approval of <b>park's</b> joint-use lit sports field and			
	all-inclusive play area within school property.			
San Francisco Bay Regional	Construction General Permit, Notice of Intent and			
Water Quality Control Board	Stormwater Pollution Prevention Plan for the <b>park</b> for			
	construction disturbance of one acre or more – prior to			
	construction.			
	• Provision C.3 Requirements for the <b>park</b> for stormwater			
	discharges of projects 10,000 square feet or more in size –			
	during design			
State of California, State Water	• Domestic Water Supply Permit Amendment to add proposed			
Resources Control Board,	large <b>municipal well</b> as a new groundwater source – in			
Division of Drinking Water	progress; process through project completion.			
State of California, State Water	• Review & Approval for use of recycled water for landscape			
Resources Control Board,	irrigation for the <b>park</b> – during design through project			
Division of Drinking Water	completion.			
State of California, State Water	Statewide Drinking Water Systems Discharge Permit			
Resources Control Board,	identification number 4DW0484 assigned to City on April			
Division of Water Quality	25, 2016, which is applicable to the <b>municipal well</b> – self-			
	monitoring during construction and reporting by City Public			
	Works Department at project completion.			
Santa Clara Valley Water District	• Encroachment Permit for <b>pedestrian bridge</b> work at creek			
	channel– during design phase.			

Agency	Review & Approval/Agreement/Permit
	<ul> <li>Joint-Use Agreement Amendment No. 2 to add proposed pedestrian bridge to existing agreement – during design phase.</li> </ul>
	<ul> <li>Review &amp; Approval of proposed improvements for the park, municipal well and pedestrian bridge within existing 50- foot easement within City owned parcel – coordination in progress.</li> </ul>
	<ul> <li>Three-way access agreement with City and Valley Water for access within existing easement for the park, municipal well and pedestrian bridge – coordination in progress.</li> <li>Well Construction Permit for the municipal well - during construction phase.</li> </ul>

#### 3.1 OVERVIEW

The City proposes three separate City-initiated projects on a 4.77-acre project site within the TASP. The three projects include: 1) construction of a City park, 2) installation of a production water well, and 3) installation of a pedestrian bridge across the East Penitencia Channel (refer to Figure 2.4-3). All three projects are identified in the approved 2018-2023 Capital Improvement Program. The park is defined in the adopted TASP Policy 3.49, which would provide for a joint-use park between the City and the Milpitas Unified School District (MUSD). The production water well, consistent with TASP Policy 6.13, would provide water to meet the increase in demand from planned growth in the TASP area. The pedestrian bridge, consistent with TASP Policy 3.26, would provide a safe connection from a residential development currently under construction and the multi-use trail north of the creek channel to the new park and elementary school south of the creek channel.

The Mabel Mattos Elementary School project constructed the joint-use parking and basketball courts.

#### 3.2 PUBLIC PARK

The park project (Project No. 5102), consistent with TASP Policy 3.49, provides for a new four-acre City park directly north of the newly constructed Mabel Mattos elementary school along McCandless Drive. The park would include a joint-use lit sports field and all-inclusive play areas for the City and the elementary school. All-inclusive play areas would be for all abilities and all ages. Key features of the play areas include inclusive interactive play equipment, fully accessible play structures and slide mounds, all-inclusive swings, musical garden/performing arts areas, barn-themed party area and whimsical shade structures. There would be permanent shade structures with picnic tables and charcoal barbeques within the park picnic area, a walking trail that loops around the park, a fenced community garden with storage shed, an eight-stall restroom building with equipment storage and drinking fountain, a fenced dog play area with separate areas for large and small dogs, parcourse fitness stations, landscaping and site safety lighting. The park site plan is shown on Figure 3.2-1.

An existing PG&E easement traverses the northern park site boundary. Underground utilities for water, recycled water, sewer, storm drain, electrical power and communication would be installed to serve the park. Landscaping would include butterfly food or habitat plants, native and ornamental plants, and shade trees and would be irrigated with recycled water. Landscaping within the existing PG&E easement would adhere to PG&E requirements. Refer to Figure 3.2-2 for the park grading plan.

Eight-foot chain link fencing and four-foot ornamental fencing would be installed as required for safety. The restroom building would be elevated to 39 feet above mean sea level (MSL) and out of the flood zone.

A paved access road from McCandless Drive through the park would be provided for the production water well and emergency and maintenance vehicles. Pathways would provide pedestrian access to the park from the elementary school and adjacent residential development. The park would be available from dawn to dusk, 365 days. It is expected that site safety lighting would be in place from dusk to dawn. The lit sports field would be available for use from dawn until 10:00 pm.





#### 3.3 **PRODUCTION WATER WELL**

The well project (Project No. 7076), consistent with TASP Policy 6.13, includes the construction of a production water well located within a fenced and secured 100-foot by 100-foot area at the southeast corner of the project site, adjacent to the park, see Figure 3.3-1. The production water well would be located at least 50 feet from the property lines in order to ensure it meets the State-required 50-foot control zone. The well property would be elevated to 39 feet above the MSL to be above the flood zone.

The well water oxidation and filtration system (above ground component) would include electrical instrumentation, chemical storage and feed systems, a filter vessel treatment system and a backwash tank. The wet chemical room and dry electrical/instrumentation room would be housed in a new one-story building (less than 1,000 square feet) with a full height wall separating the two areas. The proposed filter vessel includes three internal filter cells with two filter media layers in each filter cell. The three filter cells would be backwashed to provide relatively equivalent clean filter media conditions. The above ground backwash tank would capture the backwash from all three filter cells and would be sized accordingly. The accumulated backwash water would be discharged to a nearby sewer at a low flow rate to minimize impact on the existing main sewer system.

The building would store the following three chemicals in the contaminant area:

- Sodium hypochlorite liquid (12 percent) would be stored in a 150-gallon day tank and up to one full (330 gallon) tote, for a total of 480 gallons. The liquid would be fed at a rate of 30 gallons per day.
- Ferric chloride liquid (40 percent) would be stored in a 30-gallon day tank and up to two 55-gallon drums, for a total of 140 gallons. The chemical would be fed at a rate of five (5) gallons per day, if needed.
- Ammonium sulfate liquid (38 percent), would be stored in a 30-gallon day tank and up to two 55-gallon drums, for a total of 140 gallons. The chemical would be fed at a rate of seven (7) gallons per day.

The below-ground components include the submersible well pump and motor, concrete well head and well. The pump would be installed approximately 250 feet below ground surface. The motor would be sized to allow the pump to deliver approximately 1,000 gallons per minute. The well head would be a concrete structure with dimensions of approximately seven feet by seven feet by two feet tall to allow room for the sounding tubes and vent. The well is expected to be approximately 600 feet deep.

An antenna would be constructed on the site for radio communication between this site and another City pump station to the north. Underground utilities for water, sewer, storm drain, telecommunication and electrical power would also be installed to serve the well site. Backup power would be provided through an off-site generator transported onto the site on an emergency basis.

The well site would be fenced and paved and curbed so that all runoff would be directed to a storm drain. No landscaping would be provided within the fenced area. Site security and task lighting would be installed. A paved access road would be provided for regular maintenance use or material deliveries from McCandless Drive through the park, with a drive-through entrance and exit through the well site.



#### 3.4 PEDESTRIAN BRIDGE

The pedestrian bridge, consistent with TASP Policy 3.26, adds to and enhances the pedestrian network contemplated by the TASP. The pedestrian bridge project (Project No. 2005) would be a pre-fabricated pedestrian bridge spanning East Penitencia Channel midway between the Montague Expressway and McCandless Drive, approximately 500 feet east from McCandless Drive, see Figure 3.4-1. The south pedestrian bridge approach lands at the northeast corner of the park parcel. An accessible path from the bridge would be provided to the park and to the adjacent residential development to the east.

No work would occur within the creek channel. The pedestrian bridge would have elevated bridge abutments, retaining walls along the north side of the creek channel, fill slope along the south side of the creek channel, and raised trails on both sides of the creek channel. No structures or fill would be placed within the creek channel. All grading, abutments and support structures would be located outside the top of banks. The retaining walls and raised trails would be required in order for the existing trail to conform to the bridge deck, which would be three to five feet above existing grade. The elevated bridge abutments would extend three to five feet above the existing ground surface so that the bottom of the span adequately clears the 100-year flood elevation.

Site lighting would be installed on the park side, close to the bridge approach, and fencing and railing would be installed where necessary.

#### 3.5 CONSTRUCTION PHASING

Construction of the park, well, and pedestrian bridge projects would be phased to allow the belowground work to be completed before the above-ground work and site amenities are constructed. As shown in Table 3.5-1, the preliminary construction schedule is as follows:

Construction of the entire project is predicted to begin in approximately December 2019 and last 20 months. Construction of the production water well is estimated to start December 2019 and end in August 2021. The production well would be completed in two separate phases, one for belowground construction and one for aboveground construction. The park and bridge construction would both begin around June 2020. The bridge is predicted to finish during the year 2020, while the park construction would end early 2021. The three projects would overlap from the years 2020 to 2021.

Table 3.5-1: Preliminary Construction Schedule									
			202	20		2021			
		Jan Mar.	Apr Jun.	Jul Sep.	Oct Dec.	Jan Mar.	Apr Jun.	Jul Sep.	Oct Dec.
Park									
Woll	Belowground - Drilling								
wen	Aboveground - Equipping								
Pedestrian Bridge									



### SECTION 4.0 ENVIRONMENTAL CHECKLIST AND IMPACT DISCUSSION

Utilizing the updated December 2018 CEQA checklist, this section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

- 4.1 Aesthetics
- 4.2 Agriculture and Forestry
- 4.3 Air Quality
- 4.4 Biological Resources
- 4.5 Cultural Resources
- 4.6 Energy
- 4.7 Geology and Soils
- 4.8 Greenhouse Gas Emissions
- 4.9 Hazards and Hazardous Materials
- 4.10 Hydrology and Water Quality
- 4.11 Land Use and Planning

- 4.12 Mineral Resources
- 4.13 Noise and Vibration
- 4.14 Population and Housing
- 4.15 Public Services
- 4.16 Recreation
- 4.17 Transportation/Traffic
- 4.18 Tribal Cultural Resources
- 4.19 Utilities and Service Systems
- 4.20 Wildfire
- 4.21 Mandatory Findings of Significance

The discussion for each environmental subject includes the following subsections:

• **Environmental Checklist** – The environmental checklist, as recommended by CEQA, identifies environmental impacts that could occur if the proposed project is implemented.

The Environmental Checklist includes the following categories:

#### 1) Conclusion in Prior EIR and Related Documents

This column indicates the EIR's significance determination found relative to the environmental issue listed under each topic.

#### 2) Does the Proposed Project Involve New Impacts?

Pursuant to CEQA Guidelines Section 15162, subdivision (a)(1), this column indicates whether the project will result in new significant environmental impacts not previously identified or mitigated by the EIR, or whether the project will result in a substantial increase in the severity of a previously identified significant impact.

#### 3) New Circumstances Involving New Impacts?

Pursuant to CEQA Guidelines Section 15162, subdivision (a)(2), this column indicates whether there have been substantial changes with respect to circumstances under which the project is undertaken that will require major revisions to the EIR, due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

#### 4) New Information Requiring New Analysis or Verification?

Pursuant to CEQA Guidelines Section 15162, subdivision (a)(3)(A-D), this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

- A) The project will have one or more significant effects not discussed in the previous EIR;
- B) Significant effects previously examined will be substantially more severe than show in the previous EIR;
- C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternative; or
- D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative.

If the additional analysis completed as part of this environmental review finds that the conclusions of the Final EIR remain the same and no new significant impacts are identified, identified impacts are not found to be substantially more severe, additional mitigation is not necessary, and the conditions set forth in CEQA Guidelines Section 15162 are not otherwise met, then no subsequent or supplemental EIR is required.

• **Impact Discussion** – This subsection discusses the project's impact as it relates to the environmental checklist questions.

The TASP policy numbering in the 2008 TASP was changed in the amended 2011 version. This Addendum uses the policy numbering used in the TASP amended 2011 version.

#### 4.1 **AESTHETICS**

#### 4.1.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
W	ould the project:			•		
1.	Have a substantial adverse effect on a scenic vista?	Less Than Significant Impact	No.	No.	No.	None
2.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less Than Significant Impact	No.	No.	No.	None
3.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views <sup>2</sup> of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant impact. <sup>3</sup>	No.	No.	No.	None
4.	Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	Less than Significant Impact	No.	No.	No.	None. <sup>4</sup>

#### City of Milpitas Transit Area Specific Plan EIR – Aesthetics Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with TASP development standards, would not result in significant aesthetic impacts.

<sup>&</sup>lt;sup>2</sup> Public views are those that are experienced from publicly accessible vantage points.

<sup>&</sup>lt;sup>3</sup> This checklist question has been modified since the TASP EIR was certified in 2008, but the EIR did find a less than significant impact as the TASP would not substantially degrade the existing visual character or quality of the site and its surroundings.

<sup>&</sup>lt;sup>4</sup> The TASP EIR did not require any mitigation measures for this impact, but it did provide that compliance with Specific Plan Development Standards would reduce potentially significant long-term light and glare impacts to less than significant levels; the proposed Project here would also be required to comply with these standards.

### Impact AES-1:The project would not have a substantial adverse effect on a scenic vista.[Same Impact as Approved Project (Less than Significant Impact)]

The project site is not located on a hill, along a ridgeline, or within a designated scenic vista. The project site and surrounding area are flat. Due to the flat topography and existing development in the project area, views of the project site are generally limited to the immediate vicinity. Impacts on scenic vistas would be similar to those identified to occur in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. [Same Impact as Approved Project (Less Than Significant Impact)]

The project site is not visible from a designated scenic highway, nor does it include removal or substantial damage to rock outcroppings or historic buildings. Approximately five non-heritage sized trees along the north side of the site would be removed for the pedestrian bridge south landing. All tree removal and replacement would be completed in compliance with the City's Tree and Planting Ordinance. All trees planned to be removed would obtain a tree removal permit prior to removal and would be replaced in accordance with the City Ordinance. Impacts to scenic resources would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact AES-3: The project is located within an urbanized area. The project would not conflict with applicable zoning and other regulations governing scenic quality. (No Impact)

The surrounding area consists of urban development, including educational, commercial, and residential uses. As discussed below, the project would comply with all applicable zoning and other regulations related to scenic resources. Therefore, the project would not result in new impacts to scenic resources.

### Impact AES-4:The project would not create a new source of substantial light or glare<br/>which would adversely affect day or nighttime views in the area. [Same<br/>Impact as Approved Project (Less Than Significant Impact)]

There is no existing source of lighting at the project site. Ambient nighttime lighting in the site vicinity is created by vehicular traffic and street lights on the surrounding streets and security lighting on the surrounding development. The closest existing light source is from the adjacent parking lot along McCandless Drive that currently serves the school and is planned to serve the proposed project.

#### 4.1.1.1 Public Park

The proposed park would include security lighting and a lit athletic field with two light standards. The tall light standards are proposed in order to focus the light directly down on the field, instead of across the field at an angle (as would be necessary with shorter poles). Each light fixture would have a reflector, light hood, and visor to direct light onto the playing surface and minimize the amount of light escaping into the sky or off the field (called spill light). For these reasons, the proposed security lighting and athletic field lights would not substantially affect nighttime views in the surrounding neighborhoods.

Park security lighting would be in place from dusk to dawn and would be directed downward toward pedestrian pathways. The proposed light standards for the athletic field would have a maximum height of 70 feet and would be turned off each night by 10:00 PM.

#### 4.1.1.2 Production Water Well

#### Construction

Construction of the underground well would require 24-hour operations at the initiation of pilot hole drilling through construction of the well. 24-hour operations may also be necessary for other specific portions of well development and testing. Construction during nighttime hours may require lighting at the construction site for approximately 70 days. All lighting would be direction downward and focused on the construction area. In addition, the well construction area would be shielded by a temporary sound barrier, at least 24 feet high. The barrier would be generally configured along the west, north, and east boundaries of the work area, or as approved by the City, to minimize lighting and noise at nearby residential land uses.<sup>5</sup> Considering the short duration of the night construction and the noise barrier mitigation measures, **MM NOI-1.1**, the project would not adversely affect day or nighttime views in the area.

#### Operation

The well site would include a small concrete building with security and task lighting. All security lighting would be directed downward focused on the building. The lighting would not substantially affect nighttime views in the project area.

#### 4.1.1.3 *Pedestrian Bridge*

The proposed pedestrian bridge would not be lit. Security lighting would be installed on the park near the bridge approach. Bridge materials would be composed of wood, steel, and concrete. These materials would not generate glare effects. The project would not result in any new lighting or glare impacts and, therefore, would not alter the conclusions of the previously approved project.

All new lighting for the project would comply with TASP Development Standards noted below. Lighting and glare impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

<sup>&</sup>lt;sup>5</sup> Refer to Section 3.13 Noise and Vibration for additional details on the construction sound barrier.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Development Standards that Reduce Impacts**

Development Standard:	Lighting shall be designed and placed to direct lighting to appropriate surfaces and minimize glare onto adjacent areas. All external signs and lighting should be lit from the top and shine downward except where up-lighting is required for safety or security purposes. The lighting should be shielded to prevent direct glare and/or light trespass and directed to the focus area.
Development Standard:	The light source used in outdoor lighting should provide a white light for better color representation and to create a pedestrian-friendly environment.
Development Standard:	Low pressure sodium lamps are prohibited.
Development Standard:	To reinforce the pedestrian character of the area, light standards along sidewalks should be approximately 12 to 16 feet in height.
Development Standard:	The use of uplighting to accent interesting architectural features or landscaping is encouraged.

#### 4.2 AGRICULTURE AND FORESTRY RESOURCES

#### 4.2.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
W	ould the project:					
1.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	No Impact.	No.	No.	No.	None.
2.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact.	No.	No.	No.	None.
3.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No Impact.	No.	No.	No.	None.
4.	Result in a loss of forest land or conversion of forest land to non- forest use?	No Impact.	No.	No.	No.	None.

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non- agricultural use or conversion of forest land to non- forest use?	No Impact.	No.	No.	No.	None.

#### City of Milpitas Transit Area Specific Plan EIR–Agricultural and Forestry Resources Conclusion

The TASP is located in central Milpitas and developed with urban uses. There are no agricultural or forestry uses within or adjacent to the TASP. For these reasons, the TASP EIR did not specifically address the agricultural and forestry related impacts from implementation of the TASP.

# Impact AG-1:The project would not convert Prime Farmland, Unique Farmland, or<br/>Farmland of Statewide Importance, as shown on the maps prepared<br/>pursuant to the Farmland Mapping and Monitoring Program of the<br/>California Resources Agency, to non-agricultural use. [Same Impact as<br/>Approved Project (No Impact)]

The project site is not designated as farmland or used for agricultural purposes.<sup>6</sup> For these reasons, the proposed project would not result in significant impacts to agricultural resources.

### Impact AG-2:The project would not conflict with existing zoning for agricultural use,<br/>or a Williamson Act contract. [Same Impact as Approved Project (No<br/>Impact)]

The project site is not zoned for agricultural purposes and is not under a Williamson Act contract. For these reasons, the proposed project would not conflict with zoning for agricultural uses or a Williamson Act contract.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> California Department of Conservation. *Santa Clara Important Farmland Map 2016*. September 2018. Accessed May 21, 2019. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx

<sup>&</sup>lt;sup>7</sup> California Department of Conservation. *Williamson Act.* Accessed May 21, 2019.

https://www.conservation.ca.gov/dlrp/lca

### Impact AG-3:The project would not conflict with existing zoning for, or cause rezoning<br/>of, forest land, timberland, or timberland zoned Timberland Production.<br/>[Same Impact as Approved Project (No Impact)]

The project site and surrounding area are not zoned forest land or timberland.<sup>8</sup> Therefore, the proposed project would not conflict with zoning for forest land, timberland, or timberland zoned for Timberland Production.

### Impact AG-4:The project would not result in a loss of forest land or conversion of<br/>forest land to non-forest use. [Same Impact as Approved Project (No<br/>Impact)]

The project site and surrounding area do not contain forest land.<sup>9</sup> Therefore, the proposed project would not result in the loss of forest land.

# Impact AG-5:The project would not involve other changes in the existing environment<br/>which, due to their location or nature, could result in conversion of<br/>Farmland to non-agricultural use or conversion of forest land to non-<br/>forest use. [Same Impact as Approved Project (No Impact)]

As stated in **Impact AG-1** and **Impact AG-4**, the project site and surrounding area are not designated farmland or used for agricultural or forestry purposes. Therefore, the project would not result in changes that could result in new significant impacts.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

This resource topic was not discussed in the TASP EIR due to the lack of agricultural and forestry resources within the TASP. Therefore, there are no relevant policies in the TASP.

<sup>&</sup>lt;sup>8</sup> *Forest land* is land that can support 10 percent native tree cover and allows for management of one or more forest resources, including timber, fish, wildlife, and biodiversity (California Public Resources Code Section 12220(g)); *Timberland* is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing a crop of trees used to produce lumber and other forest products, including Christmas trees (California Public Resources Code Section 4526); and *Timberland Production* is land devoted to and used for growing and harvesting timber and other compatible uses (Government Code Section 51104(g)). <sup>9</sup> Cal Fire. *FRAP*. Accessed May 21, 2019. http://frap.fire.ca.gov/.

#### 4.3 AIR QUALITY

The following discussion is based, in part, on a Construction Health Risk Assessment prepared by *Illingworth & Rodkin, Inc.* in March 2019. A copy of the analysis is attached as Appendix A to this Addendum.

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		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Wo	ould the project:					
1.	Conflict with or obstruct implementation of the applicable air quality plan?	Significant and Unavoidable	No.	No.	No.	GP Policies 3.d-G-2, 3.d-I- 15, 3.d-I-18. TASP Policies 3.21, 3.23, 3.26, 3.28, 3.30
2.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non- attainment under an applicable federal or state ambient air quality standard?	Significant and Unavoidable	No.	No.	No.	GP Policies 3.d-G-2, 3.d-I- 15, 3.d-I-18. TASP Policies 3.21, 3.23, 3.26, 3.28, 3.30
3.	Expose sensitive receptors to substantial pollutant concentrations?	Less than Significant	No.	No.	No.	TASP Policies 5.16, 5.23
4.	Create substantial emissions (such as odors) adversely affecting a substantial number of people?	Less than Significant	No.	No.	No.	None.

#### City of Milpitas Transit Area Specific Plan EIR- Air Quality Conclusion

The TASP EIR concluded that implementation of the TASP would result in significant and unavoidable air quality impacts. Air quality impacts would be reduced at the project level with implementation of General Plan policies, Bay Area Air Quality Management District (BAAQMD) Best Management Practices, and project-specific mitigation measures.

### Impact AIR-1:The project would not conflict with or obstruct implementation of the<br/>applicable air quality plan. [Less Impact Than Approved Project (Less<br/>Than Significant)]

The TASP EIR identified a significant and unavoidable impact with respect to implementation of the Bay Area Ozone Strategy, since residential development under the TASP would exceed the population projections used to develop the Ozone Strategy. However, the TASP would be introducing land use designations that would place future residents in proximity to transit, which would reduce potential air quality and greenhouse gas emissions associated with traditional single-use vehicle. The proposed project would not result development that generates new population growth and, therefore, would not result in any new significant impacts.

The proposed project is the construction of a park, production water well, and pedestrian bridge. Construction activities for the park, well and bridge would generate criteria pollutant emissions. These emissions would be temporary and would not conflict with or obstruct long-term air quality improvement plans or policies and would not interfere with the goals and policies in the Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan for ozone compliance.

The proposed park is planned to serve the uses within the TASP area and would generate vehicle trips. Users from the existing surrounding neighborhood, however, would walk or bike to the park. The vehicle trips generated by the proposed park were accounted for in the TASP EIR trip generation assumptions. The proposed project's consistency with the Bay Area 2017 Clean Air Plan is summarized in Table 4.3-1, below.

Table 4.3-1:         Bay Area 2017 Clean Air Plan Applicable Control Measures				
Control	Description	Project Consistency		
Measures	7			
Transportation C	control Measures			
Trip Reduction	Encourage trip reduction policies and	The project includes the construction of a pedestrian		
Programs	programs in local plans, e.g., general	bridge to facilitate walking and bicycling as modes of		
	and specific plans. Encourage local	transportation within the project vicinity. The		
	governments to require mitigation of	proposed park would include bicycle racks to		
	vehicle travel as part of new	encourage park users to bike to the site. The project,		
development approval, to develop		therefore, is consistent with this measure.		
	innovative ways to encourage			
	rideshare, transit, cycling, and			
	walking for work trips.			
Bicycle and	Encourage planning for bicycle and	The proposed neighborhood park would include		
Pedestrian	pedestrian facilities in local plans,	internal pathways for park users, enhancing the		
Access and	e.g., general and specific plans, fund	pedestrian network within the project area. The project		
Facilities	bike lanes, routes, paths and bicycle	would construct a pedestrian bridge to facilitate safe		
	parking facilities.	walking and bicycling within the project area. The		
		project, therefore, is consistent with this measure.		
Land Use	Support implementation of Plan Bay	The proposed project would develop an infill site in a		
Strategies	Area, maintain and disseminate	transit-oriented neighborhood of Milpitas.		
	information on current climate action			
	plans and other local best practices.			

Table 4.3-1:         Bay Area 2017 Clean Air Plan Applicable Control Measures				
Control	Description	Project Consistency		
Measures	-	<b>v v</b>		
1				
<b>Building Contro</b>	l Measures			
Green Building	Identify barriers to effective local	The proposed production water well would include a		
	implementation of the CalGreen	small concrete building with security and task lighting.		
	(Title 24) statewide building energy	The project would comply with CalGreen standards,		
	code; develop solutions to improve	where applicable.		
	implementation/enforcement.			
	Engage with additional partners to			
	target reducing emissions from			
	specific types of buildings.			
Urban Heat	Develop and urge adoption of a	The limited number of parking spaces along		
Island	model ordinance for "cool parking"	McCandless Drive for future park users provides shade		
Mitigation	that promotes the use of cool surface	trees. New landscaping and trees would be planted		
	treatments for new parking facilities.	throughout the park. These features would reduce the		
	Develop and promote adoption of	project's heat island effect. The project, therefore, is		
	model building code requirements	consistent with this measure.		
	for new construction or re-			
	roofing/roofing upgrades for			
	commercial and residential multi-			
	family housing.			
Waste Management Control Measures				
Recycling and	Develop or identify and promote	The project would recycle construction materials to the		
Waste	model ordinances on community-	extent feasible. The project, therefore, is consistent		
Reduction	wide zero waste goals and recycling	with this measure.		
	of construction and demolition			
	materials in commercial and public			
	construction projects.			
Water Control Measures				
Support Water	Develop a list of best practices that	The project would comply with CalGreen and reduce		
Conservation	reduce water consumption and	outdoor water use by planting drought tolerant non-		
	increase on-site water recycling in	invasive landscaping. On-site landscaping would be		
	new and existing buildings;	integrated with recycled water. The project, therefore,		
	incorporate into local planning	would be consistent with this measure.		
	guidance.			

The project would not conflict with the applicable plans and policies previously described in the TASP EIR and those identified in Table 4.3-1. The proposed project would not conflict with or obstruct implementation of the 2014 Clean Air Plan.

# Impact AIR-2:The project would not result in a cumulatively considerable net increase<br/>of any criteria pollutant for which the project region is non-attainment<br/>under an applicable federal or state ambient air quality standard. [Less<br/>Impact Than Approved Project (Less Than Significant)]

The Bay Area is considered a non-attainment area for ground-level ozone and  $PM_{2.5}$  under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for  $PM_{10}$  under the California Clean Air Act, but not the federal act. The Bay Area has attained both

state and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM<sub>10</sub>, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub>, and PM<sub>2.5</sub> and apply to both construction period and operational period impacts.

#### **Construction Period Emissions**

Project construction would take approximately 20 months to complete. Construction of the production water well is estimated to start December 2019 and end in August 2021. The production well would be completed in two separate phases, one for belowground construction and one for aboveground construction. The park and bridge construction would both begin around June 2020. The bridge is predicted to finish during the year 2020, while the park construction would end early 2021. Construction of all three project components would overlap between 2020 and 2021. The California Emissions Estimator Model (CalEEMod) was used to predict emissions from construction and operation of the proposed project.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM<sub>10</sub> and PM<sub>2.5</sub>. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. CalEEMod provides annual emission estimates for total PM<sub>10</sub> exhaust emissions for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all three stages of construction as 0.1070 tons (214 pounds). Fugitive PM<sub>2.5</sub> dust emissions were calculated by CalEEMod as 0.0958 tons (192 pounds) for the overall construction period. For both the total PM<sub>10</sub> exhaust emissions and fugitive PM<sub>2.5</sub> emissions, project construction emissions would be less than the BAAQMD thresholds of 82 pounds/day for PM<sub>10</sub> exhaust and 54 pounds/day for PM<sub>2.5</sub> exhaust. Criteria pollutant impacts during construction would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **Operation Period Emissions**

The BAAQMD operational-related criteria air pollutant screening threshold for the proposed project is, "City Park." The proposed park would be approximately four acres, which is below the BAAQMD screening threshold of 2,613 acres for a city park. The proposed production water well and pedestrian bridge do not have applicable operational screening threshold categories. Operation and maintenance of the proposed production water well would generate a limited amount of vehicle trips to and from the site, resulting in relatively minor criteria pollutant emissions. The bridge would require minimal maintenance (e.g., cleaning and painting); hence, minimal operational air quality impacts would occur. For these reasons, operation and maintenance of the proposed project would result in a less than significant criteria pollutant emission impact. Operation criteria pollutant impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact AIR-3:The project would not expose sensitive receptors to substantial pollutant<br/>concentrations. [Same Impact as Approved Project (Less than Significant<br/>Impact With Mitigation Incorporated)]

#### **Construction Toxic Air Contaminants (TAC)**

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminant (TAC). A community risk assessment was completed to evaluate potential health effects to nearby sensitive receptors from project construction TAC emissions. Diesel particulate matter (DPM) dispersion modeling was used to predict DPM concentrations at the nearby sensitive receptors, including the maximally exposed individuals (MEIs)<sup>10</sup> at the adjacent residences and school.

#### Residential Exposure

Table 4.3-2, below, shows the maximum cancer risks,  $PM_{2.5}$  concentrations, and health hazard indexes for project construction activities affecting the residential MEI. Absent mitigation, the cancer risk at the residential MEI exceed the BAAQMD threshold of significance. The cancer risks,  $PM_{2.5}$  concentration, and Hazard Index from construction at the other residences would be less than the MEI risk.

Table 4.3-2:         Construction Risk Impacts at the Offsite MEI			
Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
Project Construction			
Unmitigated	50.8 (infant)	0.84	0.05
Mitigated	6.6 (infant)	0.17	0.01
BAAQMD Single-Source Threshold	>10.0	>0.3	>0.1
Significant?			
Unmitigated	Yes	Yes	No
Mitigated	No	No	No

#### Mabel Mattos Elementary School Exposure

Mabel Mattos Elementary School is located directly south of the project site, with the closest school building located approximately 200 feet from the project boundary. Modeling was conducted to predict the cancer risks, non-cancerous health hazards, and maximum PM<sub>2.5</sub> that could impact sensitive receptors (i.e. school-aged children) attending Mable Mattos Elementary School. Results of this assessment indicate that the maximum cancer risks without any mitigation or construction emission controls would be 4.2 per million for child exposure, which is less than the BAAQMD threshold of significance of 10 per million and, therefore, less than significant. The maximum-

<sup>&</sup>lt;sup>10</sup> The maximally exposed individual (MEI) is the individual that is exposed to the highest concentration of a pollutant.

modeled annual  $PM_{2.5}$  concentration, which is based on combined exhaust and fugitive dust emissions, would be  $0.26 \ \mu g/m^3$ , and the maximum computed Hazard Index (HI), based on the DPM concentration, would be 0.02. These risk values do not exceed the BAAQMD single-source significance threshold for annual cancer risk,  $PM_{2.5}$  concentration, or HI.

#### Cumulative Impact on Construction MEI

Table 4.3-3 displays the project and cumulative community risk impacts at the construction MEI. Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include highways, busy surface streets, and stationary sources identified by BAAQMD. In the project area, BAAQMD identifies one stationary source with the potential to affect the project site. Traffic on nearby streets all have average daily traffic that is less than 10,000 vehicles per day and, therefore, are not considered sources of TACs.

Table 4.13-3:         Impacts from Combined Sources at Construction MEI			
Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
Project Construction			
Unmitigated	50.8 (infant)	0.84	0.05
Mitigated	6.6 (infant)	0.17	0.01
Courtesy Auto Service (no distance adjustment)	-	-	< 0.01
Combined Sources			
Unmitigated	50.8 (infant)	0.84	0.06
Mitigated	6.6 (infant)	0.17	0.02
BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
Significant?	No	No	No

With the mitigation measures listed below, the project would reduce maximum increased lifetime residential cancer risk from construction to 6.6 in one million or less for infant exposure,  $0.17 \ \mu g/m^3$  for the maximum annual PM<sub>2.5</sub> concentration, and the Hazard Index would be less than 0.01. This would reduce impacts to a less than significant level.

**MM AIR-1.1**: Per the Construction Health Risk Assessment (refer to Appendix A) completed for the project and consistent with Policy 5.16, the project shall implement the following mitigation measures to reduce the air quality impacts associated with grading and new construction to a less-than-significant level:

- During any construction period ground disturbance, the applicant shall ensure that the project contractors implement measures to control dust and exhaust. The contractor shall implement the following Best Management Practices that are required of all projects:
  - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- 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.
- 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 [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the City of Milpitas regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

**MM AIR-1.2**: The project contractor shall develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average 80-percent reduction in DPM exhaust emissions or greater. The plan shall be submitted to the City's Engineering Department for review and approval, prior to the start of construction. One feasible plan to achieve this reduction would include the following:

• All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 3 engines that include CARB-certified Level 3 Diesel Particulate Filters<sup>11</sup> or equivalent. Additionally, equipment that meets U.S. EPA Tier 4 standards for particulate matter or use of equipment that is electrically powered or uses non-diesel fuels would meet this requirement.

Consistent with TASP Policy 5.16, with implementation of the above-listed mitigation measures AIR-1.1 and AIR-1.2, the project would not result in new or greater to impacts related to exposure of sensitive receptors to substantial pollutant concentrations than impacts identified in the TASP EIR.

### Impact AIR-4:The project would not result in substantial emissions (such as odors)<br/>adversely affecting a substantial number of people. [Same Impact as<br/>Approved Project (Less Than Significant)]

<sup>&</sup>lt;sup>11</sup> California Air Resources Board. *Verification Procedure – Currently Verified.* http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm\_Accessed on April 3, 2019.

Project implementation would not result in the generation of permanent or long-term objectionable odors. While there may be perceptible odors associated with construction, odors would be temporary, not unique to this project and would not affect a substantial number of people. Once construction activities are complete, there would be no potential for odor impacts at surrounding sensitive receptors. Potential odors during project construction would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

General Plan Policies that Reduce Impacts			
Policy 3.d-G-2:	Provide adequate bicycle parking and end-of trip support facilities for bicyclists at centers of public and private activity.		
Policy 3.d-I-15:	Encourage new and existing developments to provide end-of-trip facilities such as secure bicycle parking, on-site showers and clothing storage lockers, etc.		
Policy 3.d-I-18:	Provide and accommodate recreational and transportation use of the trail system.		

#### **TASP Policies and Development Standards that Reduce Impacts**

Policy 3.21:	Provide continuous pedestrian sidewalks and safe bike travel routes throughout the entire Transit Area and within development projects.
Policy 3.23:	Encourage children to walk or bike to school by expanding existing safe walking and bicycling routes to schools into the Transit Area.
Policy 3.26:	Construct pedestrian/bicycle bridges over Montague Expressway to allow safe crossings of this regional roadway with heavy traffic volumes: (1) near Piper Drive, to connect the Light Rail station, BART station, and development sites on the south side with the Great Mall and the neighborhoods north of Montague Expressway; and (2) near the Penitencia Creek East channel to connect schools and neighborhoods north and south of Montague Expressway.
Policy 3.28:	Provide continuous bicycle circulation through the project site and to adjacent areas by closing existing gaps in bicycle lanes and bicycle routes.
Policy 3.30:	Maintain pedestrian and biking facilities.
Policy 5.16:	During review of specific development proposals made to the City, sponsors of individual development projects under the TASP shall implement the BAAQMD's approach to dust abatement.
	This calls for "basic" control measures that should be implemented at all construction sites, "enhanced" control measures that should be implemented in addition to the basic control measures at construction sites greater than four
acres in area, and "optional" control measures that should be implemented on a case-by-case basis at construction sites that are large in area, located near sensitive receptors or which, for any other reason, may warrant additional emissions reductions (BAAQMD, 1999).

Policy 5.23: Require project sponsors to inform future and/or existing sensitive receptors (such as hospitals, schools, residential uses, and nursing homes) of any potential health impacts resulting from nearby sources of dust, odors, or toxic air contaminants, and where mitigation cannot reduce these impacts.

### 4.4 BIOLOGICAL RESOURCES

The following discussion is based, in part, on Biotic Constraints Analysis prepared by *HT Harvey & Associates* in January 2019. A copy of the report is attached as Appendix B to this Addendum.

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					
<ol> <li>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 (CDFW) or United States Fish and Wildlife Service (USFWS)?</li> </ol>	Less than Significant	No.	No.	No.	GP Policies 4.b-I-4, 4.b-I- 5 TASP Policy 5.30
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 CDFW or USFWS?	Less than Significant	No.	No.	No.	GP Policies 4.b-I-4, 4.b-I-5 TASP Policy 5.30

### 4.4.1 <u>Impact Discussion</u>

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:	1	I		I	-
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant	No.	No.	No.	GP Policies 4.b-I-4, 4.b-I-5 TASP Policy 5.30
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species on with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	No Impact	No.	No.	No.	None
<ol> <li>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservatior policy or ordinance?</li> </ol>	Less Than Significant	No.	No.	No.	TASP Policy 5.28
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	No.	No.	No	None

### City of Milpitas Transit Area Specific Plan EIR – Biological Resources Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the City of Milpitas Tree Ordinance and General Plan policies, would not result in significant impacts to biological resources.

# Impact BIO-1: The project would not 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 CDFW or USFWS. [Same Impact as Approved Project (Less Than Significant Impact With Mitigation Incorporated)]

A reconnaissance survey was completed to 1) assess the existing biotic habitat and plant and animal communities in the project vicinity, 2) assess the site for its potential to support special-status species and their habitats, and 3) identify potential jurisdictional habitats. In addition, a protocol-level survey for suitable habitat for Congdon's tarplant was completed because the species can persist in disturbed grasslands and has been documented by the California Natural Diversity Database (CNDDB) in the project vicinity. The survey was completed during the blooming period for Congdon's tarplant. No individuals of this species were observed; therefore, this species is determined to be absent from the project area. For an aerial of the biological study area, refer to Figure 4.4-1.

### Plant Species

Most of the 4.77-acre site is dominated by the developed/landscaped habitat type. The sparse vegetation within the project site includes small patches of non-native species including stinkwort, wild oat, and a row of six-(6) to eight-(8) foot tall ornamental shrubs consisting of oleander and African sumac. Additional land cover/habitat types in the area include ruderal grassland levee slope and perennial stream/freshwater marsh.

### Wildlife Species

Due to a lack of suitable habitat types and the location of the project site within a developed landscape, most of the identified special-status species with potential to occur within the project vicinity<sup>12</sup> were eliminated from further study. Three special-status wildlife species were identified to have potential to occur on-site including the burrowing owl, western pond turtle, and San Francisco common yellowthroat.

### Burrowing Owl

The burrowing owl is a small, terrestrial owl that resides in flat or gently sloping open grassland or sparse shrubland ecosystems. Burrowing owls are found in close association with California ground squirrels, which provide nesting and refuge burrows. Ground squirrels also maintain areas of short vegetation height, which provide foraging habitat and allow for visual detection of avian predators by

<sup>&</sup>lt;sup>12</sup> A list of special-status animal species thought to have some potential for occurrence in the project area vicinity (a 5-mile radius centered on the project footprint) was compiled from CNDDB records (CNDDB 2018) and eBird data (Cornell Laboratory of Ornithology 2018), among other sources.



burrowing owls. The CNDDB reports historical occurrences of burrowing owls from multiple locations in the vicinity of the project site, suggesting that owls may have nested in this region prior to the extensive existing urban and commercial development.

The reconnaissance survey did not identify any burrowing owls or signs of burrowing owls. Although several ground squirrel burrows were detected within the ruderal grassland portions of the project area, it is extremely unlikely for burrowing owls to inhabit the site. There is potential for owls to utilize the site during migration and winter since, during those times, burrowing owls are found more broadly and in a broader array of habitats. Owls that would occur as migrants or wintering birds are not habitat limited and would be able to find other, more suitable habitat than the habitat of the site. Implementation of TASP Policy 5.26 would avoid impacts to burrowing owls and the project would not result in new or greater biological resource impacts than identified in the TASP EIR.

### Western Pond Turtle

The western pond turtle is a California species of special concern and is protected under the California Fish and Game Code. Suitable habitat for the western pond turtle consists of ponds or instream pools with available basking sites, such as logs, and nearby upland areas with clay or silty soils for nesting, and shallow aquatic habitat with emergent vegetation and invertebrate prey for juveniles. Although no western pond turtles were observed during the reconnaissance survey, individuals of the species could still occur in urban streams and ponds in the Santa Clara Valley and it is possible, although unlikely, that an individual western pond turtle could occur within the project vicinity. The loss of an individual western pond turtle could potentially reduce the viability of the local population.

**<u>MM BIO-1.1</u>**: In conformance with General Plan Policies 4.b-I-4 and 4.b-I-5, the following project specific mitigation measure shall be implemented to avoid impacts to western pond turtles:

• A preconstruction survey for western pond turtles shall be completed by a qualified biologist prior to initiation of any construction activities. The survey shall be completed within 48 hours prior to the start of construction activities. The entire project area, including any burrows, rocks, or woodpiles that may be impacted by construction activity, shall be inspected for the presence of western pond turtle. If western pond turtles are detected or observed, then CDFW shall be consulted to determine an appropriate construction avoidance buffer or other measure to ensure the protection of the species.

With implementation of the measure above, consistent with General Plan Policies 4.b-I-4 and 4.b-I-5, the project would avoid potential impacts to western pond turtles and the project would not result in new or greater biological resource impacts than identified in the TASP EIR.

### San Francisco Common Yellowthroat

The San Francisco common yellowthroat is a California species of special concern and is protected under the California Fish and Game Code. No individuals of the San Francisco common yellowthroat species were observed during the site reconnaissance. The scattered patches of emergent marsh vegetation on-site are too small and too fragmented, and relatively isolated from other patches of larger, contiguous patches of salt marsh habitat where this species is known to occur in the South Bay. However, dispersing individuals of this species could potentially occur on the sides of the levees along East Penitencia Channel. Impacts on individuals of this species and their habitat would not be considered a significant impact since the species is not listed under the Federal Endangered Species Act or California Endangered Species Act, and no approvals from the USFWS or CDFW related to this species would be necessary. Due to the degraded quality of on-site habitat, the loss of habitat is not considered significant. As discussed below, consistent with implementation of TASP Policy 5.26, nesting bird preconstruction surveys would be completed to avoid impacts to nesting San Francisco common yellowthroat.

### Nesting Birds

Nesting habitat for non-listed special-status raptor species and common nesting bird species occur on and near the project site. Many bird species utilize large ornamental trees for cover, nesting, or stop over locations during migration, especially with the availability of water from the drainages nearby. All native bird species that nest within the project area are protected under the Migratory Bird Treaty Act and California Fish and Game Code. Construction disturbance can cause nest abandonment resulting in indirect loss to avian species.

**MM BIO-2.1:** In conformance with TASP Policy 5.26, the following project-specific measures would be implemented to avoid impacts to nesting birds during construction and ensure compliance with the MBTA and California Fish and Game Code:

- Construction activities shall be avoided during the nesting season (i.e., February 1 through August 31).
- Potential nesting substrate (e.g., bushes, trees, snags, grass, and suitable artificial surfaces) that would be impacted by development shall be removed during the non-breeding season (i.e., they should be removed between September 1 and January 31), to help preclude nesting in the study area.
- If it is not feasible to schedule construction activities during the non-breeding season, then preconstruction surveys for nesting birds shall be conducted by a qualified ornithologist to ensure that no nests will be disturbed during construction activities. This survey shall be conducted no more than seven days prior to the initiation of construction activities. During this survey, the ornithologist shall inspect all trees, shrubs, and other potential nesting habitats in and immediately adjacent to the study area for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist shall determine the extent of a buffer zone to be established around the nest, typically 300 feet for raptors and 100 feet for other birds, to ensure that no nests of species protected by the MBTA or the California Fish and Game Code will be disturbed during construction activities.

With implementation of the measure above, consistent with TASP Policy 5.26, the project would avoid potential impacts to nesting birds and would not result in new or greater biological resource impacts than identified in the TASP EIR.

### Impact BIO-2:The project would not have a substantial adverse effect on any riparian<br/>habitat or other sensitive natural community identified in local or<br/>regional plans, policies, regulations or by the CDFW or USFWS. [Same<br/>Impact as Approved Project (Less Than Significant Impact)]

East Penitencia Channel is classified as "waters of the United States" and the bank and channel are under jurisdiction of the U. S. Army Corps of Engineers. Due to the highly developed nature of the project site, the bank and channel of East Penitencia Channel lacks high-quality riparian habitat and supports minimal native vegetation. The proposed bridge would fully span the creek channel. No construction would occur within the creek top of bank; the bridge abutments and protective retaining wall would be located at least three feet outside the top of bank. For these reasons, the proposed bridge would avoid temporary and permanent direct impacts to creek vegetation. The proposed park and production water well would not impact jurisdictional habitats.

Indirect impacts to existing vegetation include shading of the channel and impeding the growth of vegetation due to the shading. Since the vegetation present is predominantly ruderal and the creek channel itself is highly disturbed and of generally low value to fish and wildlife, these indirect impacts are expected to be less than significant. Impacts to sensitive natural communities would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact BIO-3: The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. [Same Impact as Approved Project (Less Than Significant)]

As described in Impact BIO-2, East Penitencia Channel is classified as "waters of the United States" and the bank and channel are under jurisdiction of the U. S. Army Corps of Engineers. All bridge construction activities would occur from outside of the bank and channel and the proposed bridge would fully span across the creek channel, avoiding impacts to wetland features within the banks or channel.

Since the project would be replacing more than 10,000 square feet of impervious surface area on the project site, the project would comply with the City of Milpitas Stormwater C.3 requirements and the Municipal Regional Permit (MRP) (see *Section 4.10 Hydrology and Water Quality*). Consistent with the Stormwater C.3 requirements and the MRP, the project would reduce potential impacts to water quality to a less than significant level, further reducing potential effects to East Penitencia Channel and its associated wetlands.

For these reasons, as stated above, construction activities would not impact federally protected wetlands. Impacts to wetlands would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact BIO-4: The project would not 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. [Same Impact as Approved Project (No Impact)]

As previously discussed, the project site is highly developed and of limited value to fish and wildlife because the East Penitencia Channel is not tidally influenced and is too shallow to support habitat for any of the special-status fish species known to occur in the area. Additionally, the proposed bridge crossing of East Penitencia Channel would fully span the creek channel, thus avoiding construction within the creek channel bed and bank. To the extent that the waterway and adjacent upland is used for fish and wildlife movement, the proposed project would not interfere substantially with these corridors. For these reasons, no impacts related to interference with wildlife movement corridors or waterways suitable for migratory fish are expected to occur from project construction. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. [Same Impact as Approved Project (Less Than Significant)]

The Tree and Planting Ordinance of the City of Milpitas protects significant trees, as defined by the Ordinance, including heritage trees, throughout the City. Under the City's Zoning Ordinance, heritage trees are defined as any tree with a diameter of 30 inches or more measured two (2) feet above ground level. There are no heritage trees within the project site. Approximately five non-heritage trees along the north side of the site would be removed for the pedestrian bridge south landing. All tree removal and replacement would be completed in compliance with the Tree and Planting Ordinance and TASP Policy 5.27. Tree impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

## Impact BIO-6:The project would not conflict with the provisions of an adopted Habitat<br/>Conservation Plan, Natural Community Conservation Plan, or other<br/>approved local, regional, or state habitat conservation plan. [Same<br/>Impact as Approved Project (Less Than Significant)]

The project site is not located within an adopted Habitat Conservation Plan or a Natural Community Conservation Plan. Therefore, the project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### **General Plan Policies that Reduce Impacts**

Policy 4.b-I-4: Require a biological assessment of any project site where sensitive species are present, or where habitats that support known sensitive species are present.

Policy 4.b-I-5: Utilize sensitive species information acquired through biological assessments, project land use, planning and design.

### **TASP Policies and Development Standards that Reduce Impacts**

- For any project sites that are either undeveloped or vacant and support vegetation, or Policy 5.26: project sites which are adjacent to such land, a pre-construction survey shall be conducted by a qualified biologist within 30 days of the onset of construction. This survey shall include two early morning surveys and two evening surveys to ensure that all owl pairs have been located. If preconstruction surveys undertaken during the breeding season (February 1st through August 31st) locate active nest burrows, an appropriate buffer around them (as determined by the project biologist) shall remain excluded from construction activities until the breeding season is over. During the non-breeding season (September 1<sup>st</sup> through January 31st), resident owls may be relocated to alternative habitat. The relocation of resident owls shall be according to a relocation plan prepared by a qualified biologist in consultation with the California Department of Fish and Wildlife (CDFW). This plan shall provide for the owl's relocation to nearby lands possessing available nesting habitat. Suitable developmentfree buffers shall be maintained between replacement nest burrows and the nearest building, pathway, parking lot, or landscaping. The relocation of resident owls shall be in conformance with all necessary state and federal permits.
- Policy 5.27: To mitigate impacts on non-listed special-status nesting raptors and other nesting birds, a qualified biologist will survey the site for nesting raptors and other nesting birds within 14 days prior to any ground disturbing activity or vegetation removal. Results of the surveys will be forwarded to the U.S. Fish and Wildlife Service (USFWS) and CDFW (as appropriate) and, on a case-by-case basis, avoidance procedures adopted. These can include construction buffer areas (several hundred feet in the case of raptors) or seasonal avoidance. However, if construction activities occur only during the non-breeding season between August 31 and February 1, no surveys will be required.
- Policy 5.28: Development under the TASP shall, to the maximum extent feasible (and with exceptions such as removal for emergency, health, or fire hazard purposes), retain the corridor of trees along McCandless Drive and corridors of trees in the vicinity both as a potential resource for habitat and as an important visual resource.
- Policy 5.29: Per Figure 5-23 G and Tables 5-1 and 5-2, a minimum 25-foot setback from the top of bank of any creek or drainage channel, or from a maintenance road if one exists, shall be provided.
- Policy 5.30: Prior to new development in areas that border creeks and with potential riparian habitat, applicants will be required to coordinate with the CDFW, as required by law. Coordination will include evaluation of existing riparian habitat and development of avoidance, minimization, and/or compensatory measures sufficient to procure a Streambed Alteration Agreement with the CDFW.

### 4.5 CULTURAL RESOURCES

The following discussion is based, in part, on an Archaeological Literature Search, prepared by *Holman & Associates* in January 2019. A copy of the report is on file with the City.

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:				•	
1. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	Less than Significant	No.	No.	No.	None
2. Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5?	Less than Significant	No.	No.	No.	TASP Policies 5.34
3. Disturb any human remains, including those interred outside of dedicated cemeteries?	Less than Significant	No.	No.	No.	TASP Policy 5.34

### 4.5.1 <u>Impact Discussion</u>

### City of Milpitas Transit Area Specific Plan EIR – Cultural Resources Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the City of Milpitas General Plan and the TASP policies, would not result in significant cultural resource impacts.

## Impact CUL-1:The project would not cause a substantial adverse change in the<br/>significance of a historical resource pursuant to CEQA Guidelines<br/>Section 15064.5. [Same Impact as Approved Project (Less Than<br/>Significant Impact)]

There are no historic resources identified on the project site. Therefore, the proposed project would not affect historic resources. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. [Same Impact as Approved Project (Less Than Significant Impact With Mitigation Incorporated)]

An archaeological literature search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) database was completed for the project site and surrounding area, and a field survey of the project site was completed by a qualified archaeologist. No resources were identified on the site during the field survey. Based on the results of the literature search and the site's proximity to East Penitencia Channel, the project site has a moderate to high sensitivity for buried archaeological resources. Project construction would require approximately 9,250 cubic yards of soil to be excavated and exported off-site. Grading and other excavation activities on the site could damage potentially unrecorded subsurface resources.

**MM CUL-1.1**: In conformance with TASP Policy 5.34, the following project specific measures would be implemented to avoid impact to unknown subsurface cultural resources:

- Prior to any ground-disturbing activities, a qualified archaeologist shall complete presence/absence mechanical testing at the project site to determine whether cultural resources or buried land surfaces are present. A local Native American monitor shall be present during presence/absence mechanical testing. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring will be required.
- If cultural deposits or features that appear potentially eligible to the California Register of Historical Resources are identified during any stage of exploration, cultural research design and work plan shall be prepared. The plan will be designed to facilitate cultural excavation and evaluate any cultural resources discovered to the California Register to assess if any are significant cultural resources.

With implementation of the measures above, consistent with TASP Policy 5.34, the project would reduce potential impacts to unknown buried archaeological resources to a less than significant level. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact CUL-3:The project would not disturb any human remains, including those<br/>interred outside of dedicated cemeteries. [Same Impact as Approved<br/>Project (Less Than Significant Impact)]

Project construction would require approximately 9,250 cubic yards of soil to be excavated and exported off-site. Per TASP Policy 5.34, if human remains are encountered, the City's contractor shall halt work in the immediate area and contact the Santa Clara County coroner and the City of Milpitas. If the remains are determined to be Native American, the coroner will then contact the Native American Heritage Commission (NAHC) which will in turn contact the appropriate Most Likely Descendent (MLD). The MLD will then have the opportunity to make a recommendation for the respectful treatment of the Native American remains and related burial goods.

Consistent with TASP Policy 5.34, the project would reduce the potential to disturb any human remains, including those interred outside of dedicated cemeteries to a less than significant level. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

### **TASP** Policies and Development Standards that Reduce Impacts

Policy 5.34: Any future ground disturbing activities, including grading, in the Transit Area shall be monitored by a qualified archaeologist to ensure that the accidental discovery of significant archaeological materials and/or human remains is handled according to CEQA Guidelines § 15064.5 regarding discovery of archeological sites and burial sites, and Guidelines §15126.4(b) identifying mitigation measures for impacts on historic and cultural resources. (California Public Resources Code § 21083.2 and § 21084.1.) In the event that buried cultural remains are encountered, construction will be temporarily halted until a mitigation plan can be developed. In the event that human remains are encountered, the developer shall halt work in the immediate area and contact the Santa Clara County coroner and the City of Milpitas. If the remains are determined to be Native American, the coroner will then contact the Native American Heritage Commission (NAHC) which will in turn contact the appropriate Most Likely Descendent (MLD). The MLD will then have the opportunity to make a recommendation for the respectful treatment of the Native American remains and related burial goods.

### 4.6 ENERGY

### 4.6.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
W	ould the project:					
1.	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	Less than Significant	No.	No.	No.	No.
2.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	N/A

### City of Milpitas Transit Area Specific Plan EIR – Energy Conclusion

The TASP EIR generally addressed the energy related impacts from implementation of the TASP in Section 3.12 Greenhouse Gas Emissions, concluding implementation of the TASP would not result in a significant energy impact.

Impact EN-1:	The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation. [Same Impact as Approved Project (Less Than Significant Impact)]
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The community-owned Silicon Valley Clean Energy (SVCE) is the electricity provider for the City of Milpitas.<sup>13</sup> SVCE sources the electricity and the Pacific Gas and Electric Company delivers it to customers over their existing utility lines. Customers are automatically enrolled in the GreenStart plan, which generates its electricity from 100 percent carbon free sources; with 50 percent from solar and wind sources, and 50 percent from hydroelectric. Customers have the option to enroll in the

<sup>&</sup>lt;sup>13</sup> SVCE. "Frequently Asked Questions". Accessed October 9, 2019. https://www.svcleanenergy.org/faqs.

GreenPrime plan, which generates its electricity from 100 percent renewable sources, such as wind and solar.

### Construction

Construction of the park, well and bridge would require energy for the manufacture and transportation of building materials, preparation of the project sites, and the construction of the project. Construction processes are generally designed to be efficient in order to avoid excess monetary costs. That is, equipment and fuel are not typically used wastefully on the site because of the added expense associated with renting the equipment, as well as maintenance and fuel. Further, construction with close access to roadways, construction supplies, and workers is already more efficient than construction occurring in outlying areas. For these reasons, the construction process is already efficient and opportunities for increasing energy efficiency during construction are limited.

Consistent with TASP Polices 5.4, 5.6, 5.8, and 5.16, the project would be required to implement BAAQMD Best Management Practices, included as conditions of approval in Section 4.3 Air Quality, restricting equipment idling times and requiring the applicant to post signs on the project site reminding workers to shut off idle equipment, thus reducing the potential for energy waste. Consistent with TASP Policy 6.23, projects would also comply with the City's requirements to recycle and/or salvage for reuse a construction and demolition waste, minimizing energy impacts from the creation of excessive waste. For these reasons, construction activities would not use fuel or energy in a wasteful manner.

### Operation

As disclosed in the TASP EIR, new development under the proposed TASP would result in the commitment of existing and planned sources of energy, which would be necessary for the construction and daily use of new facilities.

Operation of the pedestrian bridge would not use energy. The proposed park athletic field and security lighting would use energy. The athletic field lighting would be turned off at 10 PM during non-daylight hours. The park is estimated to use 11.5 MWh per year. The production water well would require energy for its operation and for security lighting on the structure and is estimated to use approximately 510 MWh per year.<sup>14</sup> This minor energy use would not be considered wasteful or inefficient given the required compliance with energy and lighting efficiency standards in Title 24 and CalGreen.

### Impact EN-2:The project would not conflict with or obstruct a state or local plan for<br/>renewable energy or energy efficiency. (Less than Significant Impact)

As described in Impact EN-1, construction and operation of the proposed project would not result in significant energy-related impacts. The TASP includes policies to encourage energy efficiency and green building techniques for project-level implementation. The TASP EIR concluded that implementation of the TASP would not result in significant energy-related impacts. Given the nature of the proposed use, project implementation would not result in significant energy impacts and would not obstruct implementation of any state or local renewable energy or energy efficiency plans.

<sup>&</sup>lt;sup>14</sup> Connell, Jim. Principal Engineer, West Yost Associates. Personal Communication, May 15, 2019.

### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

- Policy 5.4: New commercial or institutional buildings, or tenant improvements to commercial, industrial or institutional buildings shall follow the provisions of the City's future Green Building Ordinance. In the absence of any ordinance, all new projects should be encouraged to incorporate green building measures.
   Policy 5.6: Require the use of Energy Star appliances and equipment in new residential and
- Policy 5.6: Require the use of Energy Star appliances and equipment in new residential and commercial development, and new City facilities.
- Policy 5.8: Incorporate cost-effective energy conservation measures into all buildings being constructed by the City in the Transit Area, including construction, operations and maintenance. These measures can include but are not limited to:
  - Energy efficient light fixtures, including solar powered systems, for streetscapes, parks, and public buildings which have limited glare and spillover.

### 4.7 GEOLOGY AND SOILS

### 4.7.1 <u>Impact Discussion</u>

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:		•			
1. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:	Less than Significant	No.	No.	No.	GP Policy 5.d-I-2
<ul> <li>Rupture of a known earthquake fault, as described 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)?</li> <li>Strong seismic ground shaking?</li> <li>Seismic-related ground failure, including liquefaction?</li> </ul>					
- Landslides?	Less than	No	No	No	GP Policies
substantial soil erosion or the loss of topsoil?	Significant	110.	110.	110.	4.d-I-1 and 5.a-I-3

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
W	ould the project:					
3.	Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No Impact	No.	No.	No.	GP Policy 5.d-I-2
4.	Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	Less than Significant	No.	No.	No.	GP Policy 5.a-I-3
5.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal system where sewers are not available for the disposal of wastewater?	No Impact	No.	No.	No.	None.
6.	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	Less than Significant	No.	No.	No.	TASP Policy 5.32

### City of Milpitas Transit Area Specific Plan EIR– Geology & Soils Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the City of Milpitas General Plan and the TASP policies, would not result in significant geology and soils impacts.

Impact GEO-1: The project would not directly or indirectly cause 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. [Same Impact as Approved Project (Less than Significant Impact)]

While there are no faults running through the project site, the project would be subject to shaking during an earthquake in the area. As disclosed in the TASP EIR, the project would be required to comply with building codes and construction standards of the California Building Code, the soil investigation requirements of the City of Milpitas Municipal Code and Seismic Hazards Mapping Act, and the City of Milpitas General Plan policies related to seismically-induced ground shaking and liquefaction would reduce the impacts of ground shaking on future structures.

Conformance with the requirements above, consistent with the General Plan, would reduce impacts related to seismic activity and landslides to a less than significant level. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact GEO-2:The project would not result in substantial erosion or the loss of topsoil.[Same Impact as Approved Project (Less than Significant Impact)]

As disclosed in the TASP EIR, construction activities (e.g. grading and excavation) could temporarily increase sedimentation and erosion by exposing on-site soils to wind and runoff. The City of Milpitas Municipal Code requires building permit applications with a project-specific preliminary soils report. The report must address site soil conditions, including expansive soils, settlement, and erosion, and provide recommendations to offset potential soils problems.

Additionally, the project would be required to comply with General Plan Policies 4.d-I-1 and 5.a-I-3, listed below, to implement the construction activity erosion control Best Management Practices listed below. As also discussed in *Section 4.10 Hydrology and Water Quality*, **MM HYD-1.1**, the project would comply with the NPDES Construction General Permit requirements and prepare a Storm Water Pollution Prevention Plan (SWPPP) to minimize pollutants discharge of during construction, as required of all construction projects.

The proposed project, in conformance the building permit process and with implementation of the measures listed in **MM HYD-1.1**, consistent with General Plan Policy 4.d.I-1 and Policy 5.a.I-3, would not result in substantial erosion or the loss of topsoil. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact GEO-3: The project would not 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. [Same Impact as Approved Project (Less than Significant Impact)]

The project site is located within a liquefaction hazard zone.<sup>15</sup> As described under Impact GEO-1, the project would be required to comply with the building codes and construction standards in the California Building Code, the soil investigation requirements of the City of Milpitas Municipal Code and Seismic Hazards Mapping Act, and the City of Milpitas General Plan policies related to seismically-induced ground shaking and liquefaction. Conformance with these requirements would reduce impacts related to seismically-induced ground shaking and liquefaction to a less than significant level. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact GEO-4:The project would not be located on expansive soil, as defined in Section<br/>1803.5.3 of the California Building Code (2016), creating substantial<br/>direct or indirect risks to life or property. [Same Impact as Approved<br/>Project (Less than Significant Impact)]

As discussed in Impact GEO-3, the project would be required to comply with the building codes and construction standards in the California Building Code, the soil investigation requirements of the City of Milpitas Municipal Code and Seismic Hazards Mapping Act, and the City of Milpitas General Plan policies which would reduce impacts related to potential expansive soils on-site. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact GEO-5:The project would not have soils incapable of adequately supporting the<br/>use of septic tanks or alternative waste water disposal systems where<br/>sewers are not available for the disposal of waste water. [Same Impact as<br/>Approved Project (Less than Significant Impact)]

The project would connect to the existing sewer lines in McCandless Drive; therefore, the proposed project would not require the use of septic tanks or alternative wastewater disposal systems. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact GEO-6:The project would not directly or indirectly destroy a unique<br/>paleontological resource or site or unique geological feature. [Same<br/>Impact as Approved Project (Less than Significant Impact With<br/>Mitigation Incorporated)]

<sup>&</sup>lt;sup>15</sup> State of California. Seismic Hazard Zones Milpitas Quadrangle. October 19, 2004.

There are no known paleontological resources and no unique geologic features on the project site. Further, the site was previously disturbed during the remediation work and utility work completed for the project site and the adjacent school site. No resources were identified during the remediation or utility installation; therefore, it is unlikely that paleontological resources would be encountered during construction activities.

<u>MM GEO-1.1</u>: Consistent with TASP Policy 5.35, the following measure shall be implemented to avoid impacts to paleontological resources:

• A qualified paleontologist will attend a preconstruction meeting to ensure construction workers are able to identify potential paleontological resources. In the event fossils are encountered, construction shall be temporarily halted. The City's Planning Department shall be notified immediately, a qualified paleontologist shall evaluate the fossils, and steps needed to photodocument or to recover the fossils shall be taken. If fossils are found during construction activities, grading in the vicinity shall be temporarily suspended while the fossils are evaluated for scientific significance and fossil recovery, if warranted.

The proposed project, with implementation of **MM GEO-1.1** per TASP Policy 5.35, would not result in significant impacts to paleontological resources. The project would not result in new or greater paleontological resource impacts than those disclosed in the TASP EIR.

### **General Plan Policies that Reduce Impacts**

Policy 4.d-I-1:	Continue implementing the National Pollutant Discharge Elimination System (NPDES) requirements of the Regional Water Quality Control Board – this is implemented through Chapter 16 of the City's Zoning Ordinance.
Policy 5.a.I-3:	Require projects to comply with the guidelines prescribed in the City's Geotechnical Hazards Evaluation manual.
Policy 5.d-I-2:	Design critical public facilities to remain operational during emergencies.

### **TASP** Policies and Development Standards that Reduce Impacts

Policy 5.35: All grading plans for development projects involving ground displacement shall include a requirement for monitoring by a qualified paleontologist to review underground materials recovered. In the event fossils are encountered, construction shall be temporarily halted. The City's Planning Department shall be notified immediately, a qualified paleontologist shall evaluate the fossils, and steps needed to photodocument or to recover the fossils shall be taken. If fossils are found during construction activities, grading in the vicinity shall be temporarily suspended while the fossils are evaluated for scientific significance and fossil recovery, if warranted.

#### 4.8 GREENHOUSE GAS EMISSIONS

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impac on the environment?	Less than Significant	No.	No.	No.	None.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	Less than Significant	No.	No.	No.	Policies 3.21, 3.23, 3.28, 5.6, 5.8

### 4.8.1 <u>Impact Discussion</u>

### City of Milpitas Transit Area Specific Plan EIR- Greenhouse Gas Emissions Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the TASP policies, would not result in significant greenhouse gas emissions impacts.

### Impact GHG-1:The project would not generate GHG emissions, either directly or<br/>indirectly, that may have a significant impact on the environment. [Same<br/>Impact as Approved Project (Less than Significant Impact)]

### Construction

Short-term GHG emissions from the construction phase of the project would consist of primarily heavy equipment exhaust, worker travel, materials delivery, and solid waste disposal. Neither the City of Milpitas nor BAAQMD have an adopted threshold of significance for construction related GHG emissions. BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Consistent with TASP Policies 5.4, 5.6, 5.8, and 5.16, the project would be required to implement BAAQMD Best Management Practices, included as conditions of approval in Section 4.3 Air Quality, restricting equipment idling times and requiring the applicant to post signs on the project site reminding workers to shut off idle equipment, thus reducing the potential for energy waste. Consistent with TASP Policy 6.23, projects would also comply with the City's requirements to recycle and/or salvage for reuse construction and demolition waste, minimizing energy impacts from the creation of excessive waste. Because project

construction would be temporary and would not result in a permanent increase in emissions that would interfere with long-term GHG reduction goals, the temporary increase in emissions would be less than significant and the proposed project would not result in new or greater greenhouse gas emission impacts than identified in the TASP EIR.

### **Operation Emissions**

The City of Milpitas has an adopted Climate Action Plan. In order to conform to the Climate Action Plan, projects must be consistent with the Land Use/Transportation Diagram and incorporate features into the project that meet the mandatory implementation policies. Consistent with the project site's existing General Plan land use designation (*Parks and Open Space*) and zoning district (*Parks and Open Space with a Transit Oriented Development Overlay*) the project proposes to construct a park, production water well, and pedestrian bridge on the site. The proposed project is consistent with the project site's existing General Plan land use designation and, therefore, is consistent with the land use assumptions of the Milpitas GHG Reduction Strategy.

The project site is currently undeveloped; therefore, the proposed project would intensify the uses on the project site, increasing vehicle trips and energy usage compared to existing conditions. With SVCE providing 100 percent carbon free electricity, the project generated GHG emissions would be limited to vehicle traffic to and from the site. The park was evaluated in the TASP EIR and is intended to serve the local neighborhood that would walk or bike to the park and is not anticipated to generate significant new vehicle trips, beyond what was anticipated in the TASP EIR.

The proposed project is consistent with the development assumptions in the TASP. As such, the post-2020 GHG emissions from the project have been accounted for and already disclosed less than significant impact and accepted by the City Council in adopting the TASP. Therefore, completion of the proposed project would not result in a new or greater GHG emission impacts than identified in the TASP EIR.

### Impact GHG-2:The project would not conflict with an applicable plan, policy or<br/>regulation adopted for the purpose of reducing the emissions of GHGs.<br/>[Same Impact as Approved Project (Less than Significant Impact)]

The project would generate a relatively small amount of GHG emissions. The City of Milpitas Climate Action Plan identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals. The measures center around five strategies: energy, water, transportation and land use, solid waste, and off-road equipment. CEQA clearance for all development proposals are required to address project consistency with the goals and policies in the Climate Action Plan designed to reduce GHG emissions.

The proposed project would comply with the City's Climate Action Plan and applicable TASP Policies: 3.21, 3.23, 3.28, 3.31, 5.6, and 5.8. as outlined in the TASP EIR and listed below. For these reasons, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs and would not result in new or greater GHG emission impacts than identified in the TASP EIR.

### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

- Policy 3.21: Provide continuous pedestrian sidewalks and safe bike travel routes throughout the entire Transit Area and within development projects. Policy 3.23: Encourage children to walk or bike to school by expanding existing safe walking and bicycle routes to schools into the Transit Area. Policy 3.28: Provide continuous bicycle circulation through the project site and to adjacent areas by closing existing gaps in bicycle lanes and bicycle routes, per Figure 3-5 [of the TASP]. Policy 3.31: Require provision of bicycle and pedestrian facilities such as weather protected bicycle parking, direct and safe access for pedestrians and bicyclists to adjacent bicycle routes and transit stations, showers and lockers for employees at the worksite, secure short-term parking for bicycles, etc. Policy 5.6: Require the use of Energy Star appliances and equipment in new residential and commercial development, and new City facilities. Policy 5.8: Incorporate cost-effective energy conservation measures into all buildings being constructed by the City in the Transit Area, including construction, operations and maintenance. These measures can include but are not limited to: • Energy efficient light fixtures, including solar powered systems, for streetscapes, parks, and public buildings which have limited glare and spillover;
  - Automatic lighting systems in public buildings and offices; and
  - Life-cycle costing of capital projects so that the environmental, societal, and economic costs are evaluated over the project's long-term operation.

### 4.9 HAZARDS AND HAZARDOUS MATERIALS

### 4.9.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would	the project:					1
1. Crea signi to th the e throu routi use, haza mate	atte a ificant hazard e public or environment ugh the ine transport, or disposal of irdous erials?	Less than Significant	No.	No.	No.	None.
2. Crea signi to the the e throu reaso fores and a cond invo relea haza mate envin	tte a ificant hazard e public or environment ugh onably seeable upset accident litions lving the ase of rrdous erials into the ronment?	Less than Significant	No.	No.	No.	None.
3. Emit emis hand or ac haza mate subsi wast quar exist prop	t hazardous ssions or file hazardous cutely ardous erials, tances, or te within one- ter mile of an ting or posed school?	Less than Significant	No.	No.	No.	None.
4. Be lo site v inclu of ha mate comp pursu Gove Secti and, will signi to the	ocated on a which is uded on a list azardous erials sites piled uant to ernment Code ion 65962.5 as a result, it create a ificant hazard e public or environment?	No Impact.	No.	No.	No.	Policy 5.20

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					
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, result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	No.	No.	No.	None.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	No.	No.	No.	None.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	This criterion was not evaluated in the TASP EIR (2008).	No.	No.	No.	None.

### City of Milpitas Transit Area Specific Plan EIR – Hazards & Hazardous Materials Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the TASP policies, would not result in significant hazards and hazardous materials impacts.

### Impact HAZ-1:The project would not create a significant hazard to the public or the<br/>environment through routine transport, use, or disposal of hazardous<br/>materials. [Same Impact as Approved Project (Less Than Significant<br/>Impact)]

During construction, hazardous materials typically associated with construction activities, such as fuel, oil, and lubricants would be used at the project site. The production water well would store chemicals to maintain water quality for well operations. Proposed chemicals to be stored on-site include up to 480 gallons of sodium hypochlorite liquid (12 percent), up to 140 gallons of ferric

chloride liquid (40 percent), and up to 140 gallons of ammonium sulfate liquid (38 percent). All chemicals would be stored in accordance with current state and federal laws and regulations. The proposed project would be subject to hazardous materials programs and ordinances administered by the Milpitas Fire Department and the Santa Clara County Department of Environmental Health (SCCDEH), including the Milpitas Hazardous Materials Storage and Toxic Gas Ordinances and the Santa Clara County Household Hazardous Waste Program. Mandatory project compliance with federal, state, and local regulations and TASP Policy 5.20 would reduce potential impacts associated with future hazardous material use, transport, and disposal to a level of less than significant. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact HAZ-2: The project would not 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. [Same Impact as Approved Project (Less Than Significant Impact)]

During project construction, the Milpitas Fire Department and the SCCDEH require implementation of best management practices to prevent release of hazardous materials (e.g. fuels, oils, hydraulic fluids, adhesives, etc.). Although the project is not anticipated to result in accidental spills or create hazardous conditions, the best management practices would minimize the potential for accidental spills during construction and would provide measures to contain accidental spills should one occur.

The project site does not contain historic or current leaking underground storage tank sites, historic or current DTSC State Response, Federal Superfund, or Certified with Operation and Maintenance sites, and does not contain other historic or current solid waste disposal, cease and desist or cleanup and abatement order, or corrective action sites.<sup>16</sup>

The proposed project, in compliance with federal, state, and local regulations, would not result in hazardous material use, transport, and disposal impacts. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

## Impact HAZ-3:The project would not emit hazardous emissions or handle hazardous or<br/>acutely hazardous materials, substances, or waste within one-quarter<br/>mile of an existing or proposed school. [Same Impact as Approved<br/>Project (Less Than Significant Impact)]

The nearest schools to the project site are Mabel Mattos Elementary School, located directly south of the project site at 1750 McCandless Drive, and Pearl Zanker Elementary School, located at 1585 Fallen Leaf Drive, approximately 0.3 miles west of the project site.

<sup>&</sup>lt;sup>16</sup> Milpitas Unified School District. *McCandless Drive Elementary School Project Draft Environmental Impact Report*. November 2015. Pages 9-15.

The production water well would store chemicals to maintain water quality for well operations. Proposed chemicals to be stored on-site include up to 480 gallons of sodium hypochlorite liquid (12 percent), up to 140 gallons of ferric chloride liquid (40 percent), and up to 140 gallons of ammonium sulfate liquid (38 percent). All chemicals would be stored in accordance with current state and federal laws and regulations. The proposed project would be subject to hazardous materials programs and ordinances administered by the Milpitas Fire Department and the Santa Clara County Department of Environmental Health (SCCDEH), including the Milpitas Hazardous Materials Storage and Toxic Gas Ordinances and the Santa Clara County Household Hazardous Waste Program. Mandatory project compliance with federal, state, and local regulations would reduce potential impacts to nearby schools to a less than significant level. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

# Impact HAZ-4: The project would not 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, create a significant hazard to the public or the environment. [Same Impact as Approved Project (Less Than Significant Impact)]

The project site is not listed on any federal, state, or local compiled lists searched by the database review, including lists compiled under Government Code Section 65962.5.<sup>17</sup> Due the previous onsite remediation, it is unlikely that the project could result in a significant hazard to the public or the environment; however, in the event that hazardous materials are encountered, implementation of TASP Policy 5.20 would reduce potential impacts to a less than significant level. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

# Impact HAZ-5:The project would not be located within an airport land use plan or,<br/>where such a plan has not been adopted, within two miles of a public<br/>airport or public use airport. The project would not result in a safety<br/>hazard or excessive noise for people residing or working in the project<br/>area. [Same Impact as Approved Project (Less Than Significant Impact)]

The project site is located approximately three miles southwest of the San José International Airport and is not located within its Airport Planning Area. Construction activities would be confined to the project site and would not involve the use of any equipment that would affect aircraft activity at the San José International Airport. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact HAZ-6:The project would not impair implementation of or physically interfere<br/>with an adopted emergency response plan or emergency evacuation plan.<br/>[Same Impact as Approved Project (Less Than Significant Impact)]

<sup>&</sup>lt;sup>17</sup> CalEPA. "Cortese List Data Resources". Accessed April 5, 2019. <u>https://calepa.ca.gov/sitecleanup/corteselist</u>.

The proposed park, production water well, and bridge projects do not have characteristics that would impair the implementation of or physically interfere with the City's Multi-Hazard Emergency Plan. The TASP EIR involved coordination with the Milpitas Fire Department's Office of Emergency Services to ensure compatibility with adopted City emergency response and evacuation plans. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. These impacts would be similar to those identified in the TASP EIR. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

Impact HAZ-7:	The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
	[Same Impact as Approved Project (No Impact)]

The project site is located within an urbanized area of Milpitas. The site is not located within or near an area subject to wildland fires. For these reasons, project implementation would not expose people or structures to significant wildfire. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### **TASP** Policies and Development Standards that Reduce Impacts

Policy 5.20: Property owners shall work with the City of Milpitas Fire Department, the Santa Clara County Department of Environmental Health (SCCDEH), the California Department of Toxic Substances Control (DTSC), and/or the State Water Resources Control Board (SWRCB), whichever has jurisdiction, to resolve issues related to contamination that could potentially impact future land uses in the project area. The lateral and vertical extent of contamination shall be determined, remediation activities completed, and land use restrictions implemented, as necessary, prior to the issuance of development permits on parcels with known contamination. For parcels with known contamination, appropriate human health risk assessments (HHRAs) shall be conducted based on proposed land uses by a qualified environmental professional. The HHRAs shall compare maximum soil, soil gas, and groundwater concentrations to relevant environmental screening levels (ESLs) and evaluate all potential exposure pathways from contaminated groundwater and soil. Based on the findings of the HHRAs, if appropriate, engineering controls and design measures shall be implemented to mitigate the potential risk of post-development vapor intrusion into buildings. For parcels with no identified contamination, a Phase I study shall be completed to review potential for ground water, soil, or other contamination related to previous land uses. If any potential for contamination is determined to exist that could adversely affect human health for residential uses, a Phase II level analysis shall be conducted per City, State, and Federal requirements. If contamination is found to exist, procedures for contaminated sites as described in the paragraph above shall be followed.

### 4.10 HYDROLOGY AND WATER QUALITY

The following discussion is based, in part, on hydraulic analyses prepared for the proposed park and pedestrian bridge by *Schaaf & Wheeler* in April 24, 2019 and December 15, 2017, respectively. Copies of the reports are attached as Appendix C to this Addendum.

### 4.10.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented		
W	Would the project:							
1.	Violate any water	Less than	No.	No.	No.	GP Policy		
	quality standards	Significant				4.d-I-1		
	or waste discharge					TASP		
	requirements or					Policies 5.36,		
	otherwise					5.37 and 6.5		
	substantially							
	degrade surface or							
	ground water							
	quality?							
2.	Substantially	Less than	No.	No.	No.	None		
	decrease	Significant						
	groundwater							
	supplies or							
	interfere							
	substantially with							
	groundwater							
	recharge such that							
	the project may							
	ımpede							
	sustainable							
	groundwater							
	management of							
	the basin?							

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:			•		•
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or	Less than Significant	No.	No.	No.	General Plan Policy 4.d-I-1
through the addition of impervious surfaces, in a manner which would:					
<ul> <li>result in substantial erosion or siltation on or off-site;</li> <li>substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;</li> <li>create or contribute runoff water which would exceed the capacity of</li> </ul>					
existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or - impede or redirect flood flows?					

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented			
W	Would the project:								
4.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	TASP Policies 6.1 and 6.2			
5.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	General Plan Policy 4.d-I-1			

### City of Milpitas Transit Area Specific Plan EIR – Hydrology and Water Quality Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the City's General Plan and the TASP policies, would not result in significant hydrology and water quality impacts.

### Impact HYD-1:The project would not violate any water quality standards or waste<br/>discharge requirements or otherwise substantially degrade surface or<br/>ground water quality. [Same Impact as Approved Project (Less than<br/>Significant Impact With Mitigation Incorporated)]

### Construction

During construction of all project components, ground-disturbing activities at the project site would have the potential to release sediment into East Penitencia Channel and Lower Penitencia Creek. Other contaminants, such as fuels for construction equipment, could also be introduced to surface water during construction.

The project would be required to comply with TASP Policies 5.33, 5.34 and 6.5 and General Plan Policy 4.d-I-1 to ensure that construction water quality impacts are minimized during project construction.

**MM HYD-1.1**: The project is required to implement NPDES Construction General Permit Best Management Practices, listed below to ensure compliance with General Plan Policy 4.d-I-1.

- Burlap bags filled with drain rock will be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities would be suspended during periods of high winds.
- All exposed or disturbed soil surfaces would be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind would be watered or covered.
- All trucks hauling soil, sand, and other loose materials would be covered and all trucks would be required to maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites would be swept daily (with water sweepers). In addition, a tire wash system may be required.
- Vegetation in disturbed areas would be replanted as quickly as possible.
- All unpaved entrances to the site would be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.
- A Storm Water Permit will be administered by the State Water Resources Control Board (SWRCB). Prior to construction grading for the proposed project, the construction project manager will file a "Notice of Intent" (NOI) to comply with the Construction General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) that includes measures to be implemented by the project to minimize and control construction and post-construction runoff.
- The construction project manager will submit a copy of the draft SWPPP to the City of Milpitas for review and approval prior to start of construction on the project site. The certified SWPPP will be posted at the project site and will be updated to reflect current site conditions.
- When construction is complete, a Notice of Termination (NOT) for the Construction General Permit will be filed with the Regional Water Quality Control Board and the City of Milpitas. The NOT will document that all elements of the SWPPP have been executed, construction materials and waste have been properly disposed of, and a post-construction storm water management plan is in place as described in the SWPPP for the site.

### Operation

The project site is currently undeveloped and covered with pervious surfaces. The proposed project would increase the impervious area through the construction of pathways, driveways, hardscape play surfaces and structures. The proposed project would comply with the General Plan Policy 4.d-I-1 and Provision C.3 of the RWQCB Municipal Regional Stormwater Permit (MRP). Stormwater runoff

from the proposed development would drain into treatment areas, including bioretention areas, prior to entering the storm drain system. Treatment facilities would have sufficient capacity to treat the runoff before entering the storm drainage system consistent with the National Pollutant Discharge Elimination System (NPDES) requirements. Details of specific site design, pollutant source control, and stormwater treatment control measures demonstrating compliance with Provision C.3 of the MRP would be included in the final project design, to the satisfaction of the Director of Engineering/City Engineer.

With implementation of mitigation measure **MM HYD-1.1** above, consistent with General Plan Policy 4.d-I-1, the project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. [Same Impact as Approved Project (Less than Significant Impact)]

The project site is located in an urban area and is not within a designated groundwater recharge zone for the groundwater basin. The park would utilize recycled water for all facilities with the exception of drinking fountains. The proposed park would use a maximum of 3.11 million gallons of recycled water per year.<sup>18</sup>

The project site overlies the Santa Clara Plain Subbasin (California Department of Water Resources [DWR] Subbasin 2-9.02). Valley Water manages groundwater pumping within the Santa Clara Plain Subbasin pursuant to its powers as a California Special District and as a Groundwater Sustainability Agency under the Sustainable Groundwater Management Act of 2014 (SGMA).<sup>19, 20</sup> Valley Water adopted its 2016 Groundwater Management Plan and submitted it to the DWR on December 21, 2016 as an alternative Groundwater Sustainability Plan (GSP) under SGMA<sup>21</sup>. DWR approved the alternative GSP on July 17, 2019. The 2016 Groundwater Management Plan (i.e., approved alternative GSP) documents the sustainability goal for the Santa Clara Plain Subbasin and provides the framework for managing the Santa Clara Plain Subbasin to avoid undesirable results for the six SGMA sustainability indicators:

- Chronic Lowering of Groundwater Levels
- Reduction of Groundwater Storage
- Seawater Intrusion
- Degraded Water Quality
- Land Subsidence

<sup>&</sup>lt;sup>18</sup> Schram, Maren. Personal Communication. May 3, 2019.

<sup>&</sup>lt;sup>19</sup> Valley Water was created by an act of the California Legislature and operates as a California Special District, with jurisdiction throughout Santa Clara County. Section 26 of the Santa Clara Valley Water District Act authorizes the Valley Water to charge customers for groundwater.

<sup>&</sup>lt;sup>20</sup> California Water Code, Division 6, Part 2.74 (Section 10720, et. seq.)

<sup>&</sup>lt;sup>21</sup> Appendix B of the Valley Water 2016 Groundwater Management Plan documents the functional equivalency of the plan as a GSP.

• Depletions of Interconnected Surface Water

Undesirable results occur when minimum thresholds are exceeded for any of the sustainability indicators, as documented in the 2016 Groundwater Management Plan.

Per Valley Water's 2016 Groundwater Management Plan, total groundwater pumping for the Santa Clara Plain Subbasin should be less than approximately 200,000 acre-feet per year (afy) to maintain operational storage and avoid undesirable results to the basin.<sup>22</sup> The long-term average groundwater pumping in the Santa Clara Plain Subbasin ranges from 71,000 afy to 110,000 afy with an average of 92,000 afy. The water budget for the Santa Clara Plain Subbasin is currently in balance and the long-term average yields are sustainable. Valley Water manages the Santa Clara Plain Subbasin to maintain sustainable conditions now and in the future.<sup>23</sup>

The 2016 Groundwater Management Plan projects the 2030 groundwater demand in the Santa Clara Plain Subbasin to be 97,000 acre-feet. This projected 2030 groundwater demand includes the City of Milpitas's projected 2030 demands, including the demands of the TASP area. The projected 2030 groundwater demand in the Santa Clara Plain Subbasin is within the range of historical pumping and less than half of the Valley Water's 200,000 acre-feet per year guideline to maintain operational storage and avoid undesirable results.<sup>24,25</sup>

As evaluated in the TASP EIR, the planned growth envisioned under the TASP would increase water demand in the City by approximately 1.1 million gallons per day (mgd). Based on the analysis in the TASP EIR, the increased demand would be adequately offset by supplies available from Valley Water, which include groundwater.<sup>26,27</sup>

Although owned and operated by the City, the proposed well would pump groundwater provided by Valley Water and projected to be used by the City in Valley Water's planning documents. The proposed production water well would be operated to produce approximately 0.72 mgd to meet the demand of planned growth within the TASP. Therefore, demand of the proposed production water well (i.e., 0.72 mgd, or approximately 807 afy) would not exceed the water demand evaluated in the TASP EIR (i.e., 1.1 mgd or approximately 1,232 afy). It should also be noted the total estimated future City water demand in 2030 identified in the TASP EIR (i.e., 17.10 mgd, or approximately 19,154 afy), would continue to be below Valley Water's estimated 2030 water demand (i.e., 19.28 mgd, or approximately 21,596 afy) for the City.<sup>28</sup>

<sup>&</sup>lt;sup>22</sup> Valley Water Groundwater Management Plan, Section 4.4.1.1, Groundwater Pumping. December 21, 2016. Note that Valley Water "...does not manage to a particular value for sustainable yield, but instead manages groundwater to maintain sustainable conditions through annual operations and long-term water supply planning. Annual operations planning considers available water supplies and projected demands in determining the source and volume of water to be delivered for managed recharge, drinking water treatment, or other use."

<sup>&</sup>lt;sup>23</sup> Ibid, Section 4.4.1.1.

<sup>&</sup>lt;sup>24</sup> Ibid, Table 4-7.

<sup>&</sup>lt;sup>25</sup> Santa Clara Valley Water District, 2015 Urban Water Management Plan, Table 4-1. May 2016.

<sup>&</sup>lt;sup>26</sup> Draft Environmental Impact Report, Milpitas Transit Area Specific Plan, State Clearinghouse No. 2006032091, October 2007.

<sup>&</sup>lt;sup>27</sup> Milpitas Transit Area Specific Plan, Chapter 6, Utilities and Public Facilities. June 2008, Amended 2011.

<sup>&</sup>lt;sup>28</sup> Valley Water, 2005 Urban Water Management Plan, Table 6-1. December 20, 2005.

Valley Water Ordinance 90-1 requires permitting for drilling a water well that intersects the groundwater aquifers of Santa Clara County. The permit is obtained from the Valley Water's Wells and Water Production Unit. Well designs and construction must meet Valley Water's permit requirements. Therefore, construction and operation of the proposed well would be subject to Valley Water oversight and permitting requirements and pumping fees to ensure the well does not impede sustainable groundwater management of the basin. For these reasons and those stated above, the proposed project would not impede sustainable groundwater management of the basin and would not result in new or greater groundwater impacts than identified in the TASP EIR.

Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; 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 which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. [Same Impact as Approved Project (Less than Significant Impact)]

A hydraulic analysis was prepared, *Schaaf & Wheeler* in December 2017 (refer to Appendix C) to assess potential impacts to water surface elevations in East Penitencia Channel from construction of the proposed bridge. Results of the evaluation determined that bridge construction would not significantly impact water surface elevations with the channel or in the surrounding overbank areas.

As stated under Impact HYD-1, the bridge would fully span the waterway and would avoid impacts within the bank or channel. While ground-disturbing activities during project construction would have the potential to release sediment into the channel, adherence to the General Plan Policy 4.d-I-1 would reduce the potential for erosion or siltation to occur on- or off-site to a less than significant level. Under existing conditions, runoff sheet flows untreated into the creek channel. As discussed above under Impact HYD-1, the proposed project would be required to comply with both the NPDES Construction General Permit and the MRP. In compliance with the MRP, on-site stormwater treatment areas would be installed in the proposed park. The on-site stormwater treatment areas would reduce the rate and volume of stormwater runoff generated by the proposed project, which would improve the drainage pattern of the site compared to existing conditions. Consistent with General Plan Policy 4.d-I-1, the proposed project would not result in stormwater runoff impacts. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact HYD-4: The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. (Less Than Significant Impact)

The project site and surrounding areas are within a Federal Emergency Management Agency (FEMA) defined Special Flood Hazard Area (Zone AO), and are subject to an average flood depth of
one-foot above grade<sup>29</sup>. A site-specific floodplain analysis (Appendix C) indicated base flood elevations in the vicinity of the proposed project site range from 39.1 feet NAVD<sup>30</sup> on the east side of the project site to 36.6 ft NAVD on the west side of the project site.<sup>31</sup>

The proposed project increases the base flood elevation by a maximum of 0.5 feet adjacent to the bridge approach, and the impacts do not extend to other parcels on the left bank of the East Penitencia Channel. Therefore, the project would not cause an impact of greater than one foot. The flow path on the project site has been designed to be able to convey the peak 100-year design flow across the site of 965 cubic feet per second; therefore, the impact to the upstream residential development (Houret) and the Mabel Mattos Elementary school, and downstream residential (Harmony) development are less than one-foot and are considered insignificant. Consistent with TASP Policies 6.1 and 6.2, the project proposes to elevate all structures one foot above the floodplain to avoid impacts to proposed structures.

The project site has low susceptibility to tsunami, seiches, and mudflow events. According to the Association of Bay Area Government's interactive tsunami mapping, areas near the bay are not considered susceptible to tsunami inundation. There are no inland water bodies in the project vicinity that are susceptible to seiches, thereby precluding the possibility of a seiche inundating the project site. The surrounding vicinity does not contain any steep slopes that would produce a mudflow.

Consistent with TASP Policies 6.1 and 6.2 and for the reasons stated above, the project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact HYD-5:The project would not conflict with or obstruct implementation of a<br/>water quality control plan or sustainable groundwater management plan.<br/>(Less than Significant Impact)

As stated under Impact HYD-2, the project site is located in an urban area and is not within a designated groundwater recharge zone for the groundwater basin.

<sup>30</sup> North American Vertical Datum of 1988.

<sup>&</sup>lt;sup>29</sup> Federal Emergency Management Agency. *Flood Insurance Rate Map Santa Clara County, California. Map No.* 06085C0067J. February 19, 2014. Accessed April 15, 2019.

<sup>&</sup>lt;sup>31</sup> Schaaf & Wheeler. City Park 100-year Floodplain Analysis. April 2, 2019.

As discussed above, the project would be required to comply with General Plan Policy 4.d-I-1 and would implement Best Management Practices to ensure that construction water quality impacts are minimized during project construction. The project would comply with the NPDES Construction General Permit and the MRP, and the SCVWD well permitting process to ensure compliance with all applicable water quality regulations. As discussed above, the project would not conflict with the implementation of a water quality control plan or sustainable groundwater management plan. For these reasons, the project would not conflict with or obstruct implementation of a water quality control plan. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

Policy 4.d-I-1: Continue implementing the National Pollutant Discharge Elimination System (NPDES) requirements of the Regional Water Quality Control Board – this is implemented through Chapter 16 of the City's Zoning Ordinance.

#### **TASP** Policies and Development Standards that Reduce Impacts

Policy 5.36:	Require construction projects that disturb one or more acres to prepare a Stormwater Pollution Prevention Plan (SWPPP) that, when properly implemented, would reduce or eliminate impacts on surface water quality during construction.
Policy 5.37:	Require construction projects that disturb one or more acres to prepare a Stormwater Control Plan, as stipulated in Provision C.3 of the Santa Clara County National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges.
Policy 6.1:	Minimize damage associated with flooding events and comply with regulations stipulated by FEMA and the National Flood Insurance Program.
Policy 6.5:	Ensure that runoff in storm drains does not lower water quality within or outside of the Transit Area by implementing Best Management Practices in new developments within the Transit Area.
Policy 6.2:	New development within a FEMA-designated flood hazard zone must follow the City's construction standards for such areas, as currently laid out in Section XI-15 'Floodplain Management Regulations' of the Milpitas Municipal Code.

#### 4.11 LAND USE AND PLANNING

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					
a) Physically divide an established community?	No Impact	No.	No.	No.	None
<ul> <li>b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</li> </ul>	Less than Significant	No.	No.	No.	None

#### 4.11.1 Impact Discussion

#### City of Milpitas Transit Area Specific Plan EIR – Land Use and Planning Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the TASP policies, would not result in significant land use impacts.

### Impact LU-1:The project would not physically divide an established community. [Same<br/>Impact as Approved Project (No Impact)]

Impacts to an established community can occur if the project physically divides a community. Examples of projects that have the potential to physically divide an established community typically include linear projects such as freeways, railways, and aqueducts. The project site is located in central Milpitas in an area developed with residential, commercial, and educational uses. The layout and design of the proposed project does not include any features that would physically divide the surrounding community. The proposed pedestrian bridge across East Penitencia Channel would enhance bicycle and pedestrian connectivity within the project area and the proposed park would serve the project area. The proposed project would not physically divide an established community. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

## Impact LU-2:The project would not cause a significant environmental impact due to a<br/>conflict with any land use plan, policy, or regulation adopted for the<br/>purpose of avoiding or mitigating an environmental effect. [Same Impact<br/>as Approved Project (Less Than Significant Impact)]

The project site has a current General Plan designation of *Parks Open Space (POS)* and is currently zoned *Parks Open Space (POS)* with a *Transit Oriented Development Overlay (TOD)* Zoning Overlay. The proposed project is consistent with the site's General Plan designation and zoning and the uses envisioned for the project site in the TASP. For these reasons, the proposed project would not conflict with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP** Policies and Development Standards that Reduce Impacts

None.

#### 4.12 MINERAL RESOURCES

4.12.1	Impact Discussion

W	ould the project:	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
1.	Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	No Impact.	No.	No.	No.	None
2.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact.	No.	No.	No.	None.

#### City of Milpitas Transit Area Specific Plan EIR – Mineral Resources Conclusion

The TASP is located in central Milpitas and developed with urban uses. There are no mineral resources uses within or in the vicinity of the TASP. For these reasons, the TASP EIR did not specifically address the mineral resources impacts from implementation of the TASP.

### Impact MIN-1:The project would not result in the loss of availability of a known mineral<br/>resource that would be of value to the region and residents of the state.<br/>[Same Impact as Approved Project (No Impact)]

The project site is located in central Milpitas in an area developed with residential and commercial uses. There are no known mineral resources within the project area; therefore, project implementation would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. The proposed project would not result in new or greater mineral resource impacts than identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

# Impact MIN-2:The project would not result in the loss of availability of locally important<br/>mineral resource recovery site delineated on a local general plan, specific<br/>plan or other land use plan. [Same Impact as Approved Project (No<br/>Impact)]

The project site is located in central Milpitas in an area developed with residential and commercial uses. The project area is not delineated in the General Plan, Specific Plan, or other land use plan as a mineral resource recovery site. For these reasons, the project would not result in the loss of availability of a mineral resource recovery site. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP** Policies and Development Standards that Reduce Impacts

None.

#### 4.13 NOISE AND VIBRATION

The following discussion is based, in part, on a construction Noise & Vibration Assessment prepared by *Illingworth & Rodkin, Inc.* in March 2019. A copy of the analysis is attached as Appendix D to this Addendum.

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
V	Vould the project result in:					
1.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than Significant	No.	No.	No.	TASP Policies 5.10 and 5.15, City of Milpitas Noise Abatement Ordinance, City Regulation Policy 6-I-13
2.	Generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	No.	No.	No.	Milpitas Noise Abatement Ordinance
3.	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 Impact.	No.	No.	No.	None.

#### 4.13.1 Impact Discussion

#### City of Milpitas Transit Area Specific Plan – Noise and Vibration Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the City's Noise Abatement Ordinance, General Plan and TASP policies, would not result in significant noise and vibration impacts.

Impact NOI-1:	The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. [Same Impact as Approved Project (Less than Significant Impact With Mitigation Incorporated)]
	F

#### **Existing Noise Environment**

A noise monitoring survey was completed to quantify and characterize ambient noise levels at the site and in the project vicinity. Noise monitoring was conducted from February 21 to 25, 2019,

during spring break at Mabel Mattos Elementary School, and from March 7 to 8, 2019, during a 24hour period when school was in session. The monitoring survey included two long-term noise measurements (LT-1 and LT-2) and three short-term measurements (ST-1, ST-2, and ST-3). Refer to Appendix D for the noise measurement locations.

Hourly average noise levels ranged from 45 to 69 dBA  $L_{eq}$  during the day and from 39 to 64 dBA  $L_{eq}$  at night at the two long-term noise measurement locations. The day-night average noise levels at the long-term noise measure locations ranged from 53 to 64 dBA DNL during the February noise monitoring survey. Short term noise measurements ranged from 52 to 56 dBA  $L_{eq}$ .

#### **Construction Noise**

The project would comply with the applicable City restrictions for construction activities, as outlined in the General Plan and TASP Policies below. Such restrictions include limiting construction to between the hours of 7:00 AM and 7:00 PM on weekday and weekends, and no construction on holidays. Neither the City of Milpitas nor the State of California specify quantitative thresholds for the impact of temporary increases in noise due to construction. The threshold for speech interference indoors is 45 dBA. Assuming a 15-dB exterior-to-interior reduction for standard residential construction with windows open and a 25-dB exterior-to-interior reduction for standard commercial construction, assuming windows closed, this would correlate to an exterior threshold of 60 dBA  $L_{eq}$ at residential land uses and 70 dBA  $L_{eq}$  at commercial land uses. A significant temporary construction noise impact would occur if project construction activities exceeded 60 dBA  $L_{eq}$  at nearby residences or exceeded 70 dBA  $L_{eq}$  at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA  $L_{eq}$  or more for a period longer than one year.

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Project construction would be phased to allow the underground work to be completed before the above ground and site amenities are constructed. Construction activities within each phase would be carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Table 4.13-1. Most demolition and construction noise fall in the range of 80 to 90 dBA at 50 feet from the source. Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors.

Table 4.13-1:         Construction Equipment 50-foot Noise Emission Limits						
Equipment Category	Lmax Level (dBA) <sup>1,2</sup>	Impact/Continuous				
Arc Welder	73	Continuous				
Auger Drill Rig	85	Continuous				
Backhoe	80	Continuous				
Boring Jack Power Unit	80	Continuous				
Chain Saw	85	Continuous				
Compressor <sup>3</sup>	70	Continuous				
Compressor (other)	80	Continuous				
Concrete Mixer	85	Continuous				
Concrete Pump	82	Continuous				
Concrete Saw	90	Continuous				
Concrete Vibrator	80	Continuous				
Crane	85	Continuous				
Dozer	85	Continuous				
Excavator	85	Continuous				
Front End Loader	80	Continuous				
Generator	82	Continuous				
Generator (25 KVA or less)	70	Continuous				
Gradall	85	Continuous				
Grader	85	Continuous				
Grinder Saw	85	Continuous				
Horizontal Boring Hydro Jack	80	Continuous				
Hydra Break Ram	90	Impact				
Impact Pile Driver	105	Impact				
Insitu Soil Sampling Rig	84	Continuous				
Jackhammer	85	Impact				
Mounted Impact Hammer (hoe ram)	90	Impact				
Paver	85	Continuous				
Pneumatic Tools	85	Continuous				
Pumps	77	Continuous				
Rock Drill	85	Continuous				
Scraper	85	Continuous				
Slurry Trenching Machine	82	Continuous				
Soil Mix Drill Rig	80	Continuous				
Street Sweeper	80	Continuous				
Tractor	84	Continuous				
Truck (dump, delivery)	84	Continuous				
Vacuum Excavator Truck (vac-truck)	85	Continuous				
Vibratory Compactor	80	Continuous				
Vibratory Pile Driver	95	Continuous				
All other equipment with engines larger than 5 HP	85	Continuous				
Notes:						
<sup>1</sup> Measured at 50 feet from the construction equipment.						

 $^{2}$  Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

<sup>3</sup> Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

Source:

Mitigation of Nighttime Construction Noise, Vibrations and Other Nuisances, National Cooperative Highway Research Program, 1999.

#### Park Construction

Construction of the park is anticipated to take 281 days over the course of 15 months to complete, beginning in approximately June 2020. Construction of the park would include demolition, site preparation, grading and excavation, trenching, building construction, paving, and landscaping.

Table 4.13-2 shows the anticipated noise levels during construction of the proposed park.<sup>32</sup> At 50 feet from the noise source, maximum instantaneous noise levels generated by park project construction equipment are calculated to range from 78 to 85 dBA  $L_{max}$  and hourly average noise levels are calculated to range from 75 to 85 dBA  $L_{eq}$ .

Table 4.13-2: Noise Levels for Park Construction Stages					
Construction Phase	At Distance of 50 ft.				
Construction 1 hase	L <sub>eq</sub> , dBA	L <sub>max</sub> , dBA			
Demolition (15 days)	81	82			
Site Preparation (15 days)	83	85			
Grading/Excavation (60 days)	85	85			
Trenching (60 days)	78	81			
Building-Exterior (90 days)	75	81			
Building-Interior (15 days)	75	78			
Paving (30 days)	82	82			

Park construction would be located approximately 25 feet from the nearest residences under construction to the east, 110 feet from residences to the north, 180 feet from residences to the west, and about 210 feet from Mabel Mattos Elementary School classroom buildings to the south. Construction would comply with the City of Milpitas' Municipal Code specified hours of construction. However, noise levels due to construction activities would exceed 60 dBA Leq and ambient levels by more than five dBA  $L_{eq}$  at all surrounding residential uses and at the adjacent school buildings for a period exceeding one year.

As identified in the Noise and Vibration Assessment (refer to Appendix D), with implementation of the mitigation measures listed below consistent with TASP Policy 5.15, construction of the proposed park would not significantly impact nearby sensitive receptors.

#### Production Water Well Construction

Construction of the production water well is estimated to start December 2019 and end in August 2021. The production well would be completed in two separate phases, one for belowground construction and one for aboveground construction. Construction of the well is anticipated to take 251 days to complete. Stages of construction would include well drilling (below ground), well

<sup>&</sup>lt;sup>32</sup> The noise levels were calculated using the Federal Highway Administration software, Roadway Construction Noise Model (RCNM).

equipping (above ground), grading and excavation, trenching, building construction, construction of the backwash tank, filter installation, and concrete paving. Only finish grading would be required, as initial site grading would have occurred as part of the park project. Site preparation includes installation of a security fence, construction trailer, and temporary utilities.

Table 4.13-3:       Construction Noise Levels for Well Construction Stages					
Construction Phase	At Distan	ce of 50 ft.			
	Leq, dBA	L <sub>max</sub> , dBA			
Well Drilling – Below Ground (70 days) <sup>1</sup>	80	81			
Well Equipping & Site Preparation (10 days)	74	77			
Grading/Excavation (20 days)	79	82			
Trenching (10 days)	74	77			
Building-Exterior (40 days)	79	81			
Building-Interior (40 days)	78	81			
Backwash Tank (40 days)	75	81			
Filter Installation (1 day)	73	81			
Concrete Paving (20 days)	75	78			

The projected noise levels from construction activities associated with the production water well construction is displayed in Table 4.13-3, below.

Project construction would be located as close as approximately 65 feet from the residences under construction to the east. At this distance, noise levels would be approximately two dBA lower than those displayed in Table 4.13-3 and would range from approximately 71 to 78 dBA  $L_{eq}$ . Therefore, noise levels due to construction activities would exceed 60 dBA  $L_{eq}$  and ambient levels by more than five dBA  $L_{eq}$  at adjacent residential uses to the east over a period exceeding one year

As identified in the Noise and Vibration Assessment (refer to Appendix D), with implementation of the mitigation measures listed below consistent with TASP Policy 5.15, construction of the proposed production water well would not significantly impact nearby sensitive receptors.

#### Pedestrian Bridge Construction

Construction of the bridge is anticipated to take 83 days over the course of 9 months to complete, beginning in approximately June 2020. Stages of construction would include demolition, site preparation, grading and excavation, trenching, bridge and retaining wall construction, and paving. Table 4.13-4 shows the anticipated noise levels during construction of the proposed bridge. At 50 feet from the noise source, maximum instantaneous noise levels generated by project construction

equipment are calculated to range from 80 to 87 dBA  $L_{max}$  and hourly average noise levels are calculated to range from 80 to 87 dBA  $L_{eq}$ .

Table 4.13-4:         Noise Levels for Bridge Construction Stages					
Construction Phase	At Distance of 50 ft.				
Construction r nase	L <sub>eq</sub> , dBA	L <sub>max</sub> , dBA			
Demolition (2 days)	82	82			
Site Preparation (2 days)	85	85			
Grading/Excavation (5 days)	87	87			
Trenching (2 days)	82	82			
Bridge and Retaining Wall Construction (70 days)	83	84			
Paving (2 days)	80	80			

Bridge construction would be located as close as approximately 25 feet from residences to the north. At this distance, noise levels would be about six dBA higher than those summarized in Table 4.13-4, resulting in hourly average construction noise levels in the range of 86 to 93 dBA  $L_{eq}$ . Construction would comply with the City of Milpitas' Municipal Code specified hours of construction. However, noise levels due to construction activities would exceed 60 dBA  $L_{eq}$  and ambient levels by more than five dBA  $L_{eq}$  at adjacent residential uses to the north and residences under construction to the east. Although bridge construction would be completed over a period of less than one year, the combined exposure of these residences to bridge and park construction would exceed one year.

<u>MM NOI-1.1</u>: As identified in the Noise and Vibration Assessment (refer to Appendix D) and consistent with TASP Policy 5.15, the project would implement the following measures to reduce construction noise on existing sensitive receptors.

- Unless the contractor requests in writing, and receives in advance, written approval from the City's Director of Public Works for a modified construction schedule, the City requires that construction activities be limited to 12-hour shifts between 7:00 AM and 7:00 PM, Monday through Friday and construction shall not take place on weekends or City holidays. Per the City's Noise Ordinance, work shall not be conducted on the following City holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
- 24-hour operations shall be required from, at latest, the initiation of pilot hole drilling through construction of the well, and shall require the contractor to request in writing, and receive in writing, approval from the City's Director of Public Works for 24-hour operations prior to the initiation of 24-hour operations. 24-hour operations may also be advantageous for other specific portions of well development and testing, and if this is the desire of the contractor, will also require the contractor to request in writing and to receive a response in writing from the City's Director of Public Works for 24-hour operations, prior to initiation of 24-hour operations. The contractor shall arrange with the City for any 24-hour, weekend, or holiday operations intended and/or required for the successful completion of the project. The

Contractor shall notify the City at least 72 hours prior to any proposed work outside the normal working times defined above, including any proposed work on weekends or holidays. The City will take contractor's request under consideration and make a decision within 48 hours.

- The Contractor shall complete the temporary sound barrier design<sup>33</sup> and associated calculations and apply for a Building Permit from the City's Building Department as first order of work from receiving notice to proceed.
- The work shall be carried out as quietly as possible to prevent possible annoyance to adjacent residents. Unnecessary noise shall be avoided at all times.
- Sound attenuation measures will be required due to the proximity of the work area to dwellings. Sound attenuation measures shall include providing construction equipment and performing construction activities in a manner that minimizes noise generation and conforms to General Conditions Article 28, Hours of Work, and the instructions of the City/Engineer.
- Night-time drilling operations when authorized, shall be conducted in a manner to reduce noise peaks and avoid rapid changes in noise levels<sup>34</sup>. All drilling personnel shall be advised to avoid noise generation wherever possible. In particular, the changing of drill pipe and the throttling of the drill rig shall be done in such a manner that appreciably lessens the noise produced by these activities as compared to the daytime. All deliveries of pipe and other materials and supplies, and all removal of debris, drilling cuttings, drilling fluids, equipment, materials, and supplies from the well site shall take place during day-time hours, unless approved in writing by the City.
- Construction of a temporary sound barrier shall include all work necessary to design, furnish, install, maintain and remove a temporary sound barrier, and conduct a full-scale sound test.
- The temporary sound barrier shall be self-supporting and at least 24 feet high. The sound barrier shall be generally configured along the west, north, and east boundaries of the work area, or as approved by the City, to minimize noise at residential land uses. The temporary sound barrier shall be engineered to reduce noise levels to the maximum extent possible.
- For construction of the well, a full-scale drilling noise test simulating drilling activities will consist of noise level emissions measurements taken at the work area boundary, at the nearest sensitive receptor, and at 75 feet and 150 feet from the drilling location. Construction noise levels measured by the Contractor at the nearest sensitive receptor shall not exceed 60 dBA from the hours of 7:00 AM to 7:00 PM and 55 dBA from the hours of 7:00 PM to 7:00 AM without prior written approval of the City.
- Drilling operations shall not proceed until noise emissions conform to these Specifications. Should noise levels exceed the above levels, appropriate noise attenuation measures shall be implemented prior to resuming work, to reduce the offensive noise levels at the sensitive receptors.

<sup>&</sup>lt;sup>33</sup> Illingworth & Rodkin, Inc. Milpitas Park, Bridge and Water Supply Well Noise and Vibration Assessment. March 2019.

<sup>34</sup> Ibid

- Construction scheduling shall be undertaken with consideration for school activities and hours. Schedule high noise generating construction activities that are located nearest school facilities during periods when school is not in session, such as summer, school breaks, weekends, and after school dismissal. Coordination of construction activity times with school officials may be necessary.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Notify all adjacent noise sensitive land uses of the construction schedule in writing.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

With implementation of the mitigation measures above, consistent with TASP Policy 5.15, construction would not generate a substantial temporary or permanent increase in ambient noise levels in the project vicinity that exceeds the standards established in the local general plan or noise ordinance, or other applicable standards. Therefore, the proposed project would not result in new or greater noise impacts than identified in the TASP EIR.

#### **Operational Noise**

The proposed park includes a joint-use lit athletic field and all-inclusive play areas for use by residents and the adjacent Mabel Mattos Elementary School, a picnic area, a walking trail, a community garden, a fenced dog play area, fitness stations, and a restroom building. Joint-use parking and basketball courts were previously constructed as part of the Mabel Mattos Elementary School project. The park would be available from dawn to dusk, 365 days per year. It is expected that site safety lighting would be in place from dusk to dawn. The lit athletic field would be available for use until 10:00 PM. The primary noise sources associated with park operations include activities at the provided park amenities and facilities, parking, and increased traffic on the surrounding roadways. The well would be located underground, and the pumping equipment would be housed in a concrete building. The noise assessment determined there would be no noise impacts due to

operation of the well. There are no operational noise sources associated with the pedestrian bridge and production water well components.

#### Park Noise

The main noise-generating uses at the proposed park would be the outdoor play areas and lit athletic field. The addition of the picnic area, walking trail, community garden, dog play area, and fitness stations are not anticipated to generate substantial noise at residents. The noise associated with the use of outdoor play areas is typically characterized by children yelling and playing. Noise levels at a play area with four to six children and four to six adults range from 60 to 61 dBA  $L_{eq}$  at 20 feet from the edge of the playground.<sup>35</sup> The nearest residences are located approximately 170 feet north and 230 feet west of the nearest play area(s). Play area noise could reach 50 dBA  $L_{eq}$  at residences to the north during periods with heavy usage and would be anticipated to range from 46 to 47 dBA  $L_{eq}$  during typical usage. Noise levels would be about three dBA lower at residences to the west. Noise levels would be significantly lower on a daily average basis (DNL).

The proposed lit athletic field would be available for use until 10:00 PM. It is anticipated that the field would be used by the school and community for field hockey, baseball, softball, soccer, lacrosse, etc. Based on attended measurements conducted during high school sporting events, softball and baseball games can generate noise levels of up to about 57 dBA Leq at 100 feet from the infield (assumes 100 to 200 spectators in attendance). Maximum noise levels of about 65 dBA Lmax at 100 feet typically result from balls being hit and shouting from players and spectators. Hourly average noise levels during field hockey, soccer, and lacrosse events would be anticipated to be about 60 dBA Leq at 100 feet from the center of the field. Noise levels generated during practices and during middle and elementary school aged activities would be lower. The nearest noise sensitive land uses to the sports field include residences under construction about 270 feet east of the center of the field and existing residences located about 370 feet to the west. Baseball and softball games with high attendance would be anticipated to generate noise levels as high as 48 dBA Leq at the residences under construction to the east and 46 dBA Leq at residences to the west. Hourly average noise levels during field hockey, soccer, and lacrosse events would be anticipated to be about 51 dBA Leq at the residences under construction to the east and 49 dBA Leq at residences to the west. Activities would not extend into the nighttime period from 10:00 PM to 7:00 AM and would therefore be significantly lower on a daily average basis.

Based on the Noise and Vibration Assessment and as summarized above, noise levels generated by park activities would typically be below the existing ambient noise levels in the protect area and below the 65 dBA DNL threshold.

<sup>&</sup>lt;sup>35</sup> Illingworth & Rodkin, Inc. *Milpitas Park, Pedestrian Bridge, and Water Supply Well Noise and Vibration Assessment*. March 12, 2019.

#### Project Generated Traffic Noise

McCandless Drive has an average daily traffic (ADT) volume of 2,880 vehicles per day.<sup>36</sup> Typically, the peak hour traffic volume in suburban areas is equivalent to about 10 percent of the ADT, or in this case, 288 vehicles per hour. There are approximately 40 existing parking spaces available for use by Mabel Mattos Elementary School and the proposed park. Traffic noise levels were calculated to increase by less than one dBA DNL along the roadway network in the project vicinity as a result of the proposed project, which is below the City's three dBA DNL threshold for a permanent noise increase and not considered substantial.

#### **Future Exterior Noise Environment**

The future exterior noise environment at the project site would result primarily from distant and local traffic and occasional aircraft. Noise sensitive outdoor use areas at the proposed park would include the sports field, play areas, picnic area, walking trail, community garden, fenced dog play area, and fitness stations. These outdoor use areas would be located as close as 130 feet from the center of McCandless Drive. There are no noise sensitive areas associated with the pedestrian bridge and production water well and no noise sensitive indoor uses proposed by the project.

Based on the noise monitoring survey and assuming a one dBA DNL noise increase under future conditions, the park would be exposed to future noise levels as high as 58 dBA DNL. Noise levels would be consistent with the City's 70 dBA DNL threshold for schools, playgrounds, and neighborhood parks. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

## Impact NOI-2:The project would not result in generation of excessive groundborne<br/>vibration or groundborne noise levels. [Same Impact as Approved<br/>Project (Less than Significant Impact)]

#### **Construction Vibration**

Project construction may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Table 4.13-5 presents typical vibration levels from construction equipment at 25, 110, 180, and 210 feet to represent distances from surrounding structures to construction located near the site boundary. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels are highest close to the source and decrease with distance.

Table 4.13-5:         Vibration Levels for Construction Equipment at Various Distances							
Equipment		PPV at 25 ft. (in/sec)	PPV at 110 ft. (in/sec)	PPV at 180 ft. (in/sec)	PPV at 210 ft. (in/sec)		
Clam shovel drop		0.202	0.040	0.023	0.019		
Hydromill	0.008	0.002	0.001	0.001	0.002		

<sup>&</sup>lt;sup>36</sup> City of Milpitas. *City of Milpitas Traffic Volumes Map*. Available at http://app.ci.milpitas.ca.gov/\_pdfs/trans\_traffic\_volume\_map.pdf, Accessed on March 12, 2019.

(slurry wall)	0.017	0.003	0.002	0.002	0.004	
Vibratory Roller		0.210	0.041	0.024	0.020	
Hoe Ram		0.089	0.017	0.010	0.009	
Large bulldozer		0.089	0.017	0.010	0.009	
Caisson drilling		0.089	0.017	0.010	0.009	
Loaded trucks		0.076	0.015	0.009	0.007	
Jackhammer		0.035	0.007	0.004	0.003	
Small bulldozer		0.003	0.001	0.000	0.000	
Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office						
of Planning and Environment, Federal Transit Administration, October 2018 as modified by Illingworth &						

Rodkin, Inc., March 2019.

Project construction activities, such as drilling, the use of jackhammers, rock drills and other highpower or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity of construction activities. However, as indicated in Table 4.13-5, none of these construction activities would be anticipated to exceed 0.3 in/sec PPV at the nearest structures. Vibration levels may be perceptible to building occupants but would not be anticipated to cause cosmetic or structural damage to the nearest buildings and would not be considered excessive. Vibration levels would decrease as construction moves away from the project site boundaries. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **Operational Vibration**

Operation of the proposed park, production water well, and pedestrian bridge would not generate vibration. The project is, therefore, consistent with the findings of the TASP EIR. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

Impact NOI-3:	The project would not be located within the vicinity of a private airstrip or 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. The project would not expose people residing or working in the project area to
	excessive noise levels. [Same Impact as Approved Project (No Impact)]

The project is not located within the vicinity of a private airstrip and is not located within the San José International airport land use plan. The project, therefore, would not expose people residing or working within those areas to excessive noise levels. For these reasons, as stated above, the project would not expose people residing or working in the project area to excessive noise levels. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

Policy 6-I-13: Restrict the hours of operation, technique, and equipment used in all public and private construction activities to minimize noise impact. Include noise specifications in requests for bids and equipment information.

#### **TASP** Policies and Development Standards that Reduce Impacts

- Policy 5.10: New development in the Transit Area shall adhere to the standards and guidelines in the Milpitas General Plan that govern noise levels.
- Policy 5.15: Prior to issuance of building permits, applicants shall demonstrate that noise exposure to sensitive receptors from construction activities has been mitigated to the extent feasible pursuant to the City's Noise Abatement Ordinance.

#### 4.14 POPULATION AND HOUSING

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
1.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or	Less Than Significant Impact.	No.	No.	No.	None.
2.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less Than Significant Impact.	No.	No.	No.	None.

#### 4.14.1 <u>Impact Discussion</u>

#### City of Milpitas Transit Area Specific Plan EIR – Population & Housing Conclusion

The TASP EIR concluded implementation of the TASP, would result in less than significant population and housing impacts.

The project would not induce substantial unplanned population growth
in an area, either directly (for example, by proposing new homes and
businesses) or indirectly (for example, through extension of roads or
other infrastructure). [Same Impact as Approved Project (Less Than
Significant Impact)]

The proposed project would not involve the construction of new housing, nor would it generate any long-term employment opportunities that would cause substantial population growth. The construction workers needed for the project would be relatively few and these jobs would likely be filled by the local work force. No new long-term employment opportunities or substantial population growth would result from construction activities.

The proposed project would construct a production water well. The purpose of the well is to generate water to meet the demand of planned growth in the TASP. As evaluated in the TASP EIR and discussed in Section 4.10 Hydrology and Water Quality, the planned growth envisioned under the TASP would increase water demand in the City by approximately 1.1 million gallons per day (mgd). The proposed production water well would be operated to produce approximately 0.72 mgd. Well production (i.e., 0.72 mgd) would not exceed the TASP water demand (i.e., 1.1 mgd). Therefore, the proposed production water well would not induce substantial unplanned population growth, either

directly or indirectly. No impacts beyond what was previously disclosed in the TASP EIR have been identified.,

### Impact POP-2:The project would not displace substantial numbers of existing people or<br/>housing, necessitating the construction of replacement housing elsewhere.<br/>[Same Impact as Approved Project (Less Than Significant Impact)]

The project site is currently undeveloped. Project implementation would, therefore, not displace substantial numbers of existing people or housing. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP** Policies and Development Standards that Reduce Impacts

None.

#### 4.15 PUBLIC SERVICES

#### 4.15.1 <u>Impact Discussion</u>

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation Measures Implemented
Would the project result in substantial					
adverse physical impacts associated					
with the provision of new or					
physically altered governmental					
facilities, the need for new or					
physically altered governmental					
facilities, the construction of which					
could cause significant environmental					
impacts, in order to maintain					
acceptable service ratios, response					
times or other performance objectives					
for any of the public services:					
1. Fire Protection?	Less than	No.	No.	No.	None
	Significant				
2. Police Protection?	Less than	No.	No.	No.	None
	Significant				
3. Schools?	Significant	No.	No.	No.	None
	Unavoidable				
4. Parks?	No Impact	No.	No.	No.	None
5. Other public facilities?	No Impact	No.	No.	No.	None

#### City of Milpitas Transit Area Specific Plan EIR – Public Services Conclusion

The TASP EIR concluded implementation of the TASP, despite conformance with the City's General Plan and the TASP policies, would result in significant and unavoidable public services impacts. Specifically, the TASP EIR identified a significant impact from increased demand on school facilities. Impacts to fire and police protection services, parks, and other public facilities were determined to be less than significant.

Impact PS-1:	The project would not result in substantial adverse physical impacts
	associated with the provision of new or physically altered governmental
	facilities, the need for new or physically altered governmental facilities,
	the construction of which could cause significant environmental impacts,
	in order to maintain acceptable service ratios, response times or other
	performance objectives for fire protection services. [Same Impact as
	Approved Project (Less Than Significant)]

The impacts upon fire protection services from planned development under the TASP, which included construction of a park, were evaluated in the TASP EIR. The proposed project would not increase demand upon fire protection services above that evaluated in the TASP EIR. The proposed project would be reviewed by the City of Milpitas Fire Department to ensure the project is designed and built per applicable Fire Code standards and includes features to reduce potential fire hazards (e.g., sprinklers). These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services. [Same Impact as Approved Project (Less Than Significant)]

The impacts upon police protection services from planned development under the TASP, which included construction of a park, are evaluated in the TASP EIR. The proposed project would not increase demand upon police protection services above that evaluated in the TASP EIR. The proposed project would be constructed in conformance with current codes, and the project design would be reviewed by the City of Milpitas Police Department to ensure that it incorporates appropriate safety features to minimize criminal activity. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

Impact PS-3:The project would not result in substantial adverse physical impacts<br/>associated with the provision of new or physically altered governmental<br/>facilities, the need for new or physically altered governmental facilities,<br/>the construction of which could cause significant environmental impacts,<br/>in order to maintain acceptable service ratios, response times or other<br/>performance objectives for schools. [Less Impact than Approved Project<br/>(Less Than Significant Impact)]

The proposed construction of a park, production water well, and pedestrian bridge would not induce population growth and, therefore, would not adversely affect schools serving the project area including the adjacent Mabel Mattos Elementary School. Therefore, the proposed project would not result in new or greater impacts to schools than those identified in the TASP EIR.

#### Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks. [Same Impact as Approved Project (Less Than Significant)]

The proposed project would construct a park, production water well, and pedestrian bridge. The project would not induce population growth that would increase demand on parks. The proposed project includes the development of a neighborhood park. The proposed park would increase the City's parkland per capita service ratio and reduce existing demand on parks in the project area. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

Impact PS-5:The project would not result in substantial adverse physical impacts<br/>associated with the provision of new or physically altered governmental<br/>facilities, the need for new or physically altered governmental facilities,<br/>the construction of which could cause significant environmental impacts,<br/>in order to maintain acceptable service ratios, response times or other<br/>performance objectives for other public facilities. [Same Impact as<br/>Approved Project (Less Than Significant)]

The proposed construction of a park, production water well, and pedestrian bridge would not induce population growth and, therefore, would not adversely affect other public facilities serving the project area such as libraries or community centers. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP** Policies and Development Standards that Reduce Impacts

None.

#### 4.16 **RECREATION**

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
1.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	No Impact.	No.	No.	No.	TASP Policies 3.36, 3.46, and 3.51
2.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact.	No.	No.	No.	TASP Policies 3.36, 3.46, and 3.51

#### 4.16.1 <u>Impact Discussion</u>

#### 4.16.2 <u>City of Milpitas Transit Area Specific Plan EIR – Recreation Conclusion</u>

The TASP EIR concluded implementation of the TASP, in conformance with the City of Milpitas General Plan and the TASP policies, would not result in significant recreation impacts.

## Impact REC-1:The project would not increase in the use of existing neighborhood and<br/>regional parks or other recreational facilities such that substantial<br/>physical deterioration of the facility would occur or be accelerated. [Same<br/>Impact as Approved Project (Less than Significant Impact)]

The proposed project would construct a park, production water well, and pedestrian bridge. The project would not induce population growth that would increase demand on parks. The project includes construction of a neighborhood park. The proposed park would increase the City's parkland per capita service ratio, reducing existing demand on parks in the project area. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

## Impact REC-2:The project would not include recreational facilities or require the<br/>construction or expansion of recreational facilities which might have an<br/>adverse physical effect on the environment. [Same Impact as Approved<br/>Project (Less than Significant Impact)]

The proposed project includes the development of a park, a water supply well and a pedestrian bridge. The project would not induce population growth that would require construction or expansion of recreational facilities. The project's physical effects on the environment, including construction and operation of the park and trail, are addressed in this Addendum. As discussed in the respective sections of this Addendum, impacts during construction and operation of the proposed project would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

<u>Design Standard</u>: Provide parks and trails in locations and acreage amounts as shown in Transit Area Plan. In addition, 20 percent of landscape buffers count towards park requirements, if they include trails or wide sidewalks connected to the Citywide Trail System.

#### **TASP** Policies and Development Standards that Reduce Impacts

- Policy 3.26: Construct pedestrian/bicycle bridges over Montague Expressway to allow safe crossings of this regional roadway with heavy traffic volumes: (1) near Piper Drive, to connect the Light Rail station, BART station, and development sites on the south side with the Great Mall and the neighborhoods north of Montague Expressway; and (2) near the Penitencia Creek East channel to connect schools and neighborhoods north and south of Montague Expressway.
- Policy 3.39: Develop between 32 and 47 acres of public park space in the Transit Area, with a goal of around 36 acres.
- Policy 3.49: The park site in the McCandless/Centre Point subdistrict shall include a school and/or community center along with play fields and areas for passive recreation. The park site in the McCandless/Centre Point subdistrict shall include a school and/or community center along with play fields and areas for passive recreation. Work with the Milpitas Unified School District to increase the size of the park and school site from seven (7) acres (as shown Small urban neighborhood parks. Create parks to serve as staging areas for access to the citywide trail system. Provide play fields in larger parks in the McCandless/Centre Point and Trade Zone/ Montague subareas. Milpitas Transit Area Specific Plan 3-36 in Figures 3-1 and 3-6) to ten (10) acres. The additional three acres and the facilities to be included on those three acres are to be funded by SB 50 fees, school district grants, possible level two fees, as well as Midtown Specific Plan development fees. Negotiate a Memorandum of Understanding and subsequently a Joint Use Agreement between the City of Milpitas and the Milpitas Unified School District to allow for joint use of recreational facilities within the park and school site.

A school should be built on the park site in the McCandless/Centrepoint Area, with recreation facilities that can be jointly used by the City and the School District. The play fields could serve the school on weekdays and be open to the community as a park on evenings and weekends. The school building could also function as a community center on evenings and weekends. If a public school is built in the planning area, shared indoor and outdoor recreation areas- available to the City's Recreation Services Department for events and/or general public use outside of school hours—will be counted toward the planning area's open space requirement.

Policy 3.54: Include a network of trails along Penitencia Creek and railroad right of ways.

#### 4.17 TRANSPORTATION/TRAFFIC

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
W	ould the project:	•				•
1.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian facilities?	Not evaluated in TASP EIR (2008)	N/A	N/A	N/A	N/A
2.	For a land use project, conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Not evaluated in TASP EIR (2008)	N/A	N/A	N/A	N/A
3.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);	Not evaluated in TASP EIR (2008)	N/A	N/A	N/A	N/A
4.	Result in inadequate emergency access?	No Impact	No.	No.	No.	None

#### 4.17.1 <u>Impact Discussion</u>

#### City of Milpitas Transit Area Specific Plan EIR – Transportation Conclusion

The TASP EIR concluded implementation of the TASP, despite conformance with TASP policies, would result in significant and unavoidable transportation impacts. Specifically, the TASP EIR identified significant intersection operation impacts in the project vicinity and freeway segment operation impacts.

### Impact TRN-1:The project would not conflict with a program, plan, ordinance, or policy<br/>addressing the circulation system, including transit, roadways, bicycle<br/>lanes and pedestrian facilities. (Less than Significant Impact)

The vehicle trips generated by the proposed park were accounted for in the TASP EIR traffic analysis trip generation assumptions. The park and pedestrian bridge would facilitate pedestrian and bicycle

movement within the TASP area by enhancing the network of pedestrian and bicycle facilities. For these reasons, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact TRN-2:The project would not conflict or be inconsistent with CEQA Guidelines<br/>Section 15064.3, subdivision (b). (Less than Significant Impact)

The proposed park would serve existing and planned development in the TASP area, reducing vehicle miles travelled by future park users in the project vicinity that currently travel to parks outside the project area. The project is located within a Transit Priority Area<sup>37</sup> and is served by two VTA bus routes, Route 77 and 321. Bus stops for both routes are located within one-half mile of the proposed park.

Parks, trails, bridges and utilities at the current scale were generally included in the TASP and the TASP EIR, but the proposed bridge and its proposed location was not specifically identified. As discussed above, under Impact TRN-1, the proposed park and pedestrian bridge would facilitate pedestrian and bicycle movement within the TASP area by enhancing the network of pedestrian and bicycle facilities. For these reasons, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified. This analysis is provided for informational purposes only. Pursuant to CEQA Guidelines Section 15064.3, subdivision (c), the provisions of Section 15064.3 do not apply until July 1, 2020; the City has not elected to be bound by this section before that date.

# Impact TRN-3:The project would not substantially increase hazards due to a geometric<br/>design feature (e.g., sharp curves or dangerous intersections) or<br/>incompatible uses (e.g., farm equipment). [Same Impact as the Approved<br/>Project (Less than Significant Impact)]

The proposed neighborhood park and pedestrian bridge is designed to serve and be compatible with the surrounding neighborhood. The park would install internal pathways to facilitate circulation within the park, and the proposed bridge would include safety features (e.g. railing) for bridge users. The existing parking lot along McCandless Drive would serve the park; the project does not propose new full access driveways onto McCandless Drive. For these reasons, the proposed project would not increase hazards due to a geometric design feature or incompatible uses. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

### Impact TRN-4:The project would not result in inadequate emergency access. [Same<br/>Impact as Approved Project (No Impact)]

<sup>&</sup>lt;sup>37</sup> Plan Bay Area 2040. Priority Development Area (PDA) and Transit Priority Area (TPA) Map for CEQA Streamlining. https://www.planbayarea.org/pda-tpa-map. Accessed April 5, 2019.

As shown on the site plan (refer to Figure 3.2-1), two driveways, one onto McCandless Drive and another from the existing parking lot along McCandless Drive would provide emergency vehicle access to the project site. The proposed pedestrian bridge would also improve access to the site. Given the nature of the proposed park, production water well, and pedestrian bridge (i.e., relatively open and accessible) and the proposed emergency vehicle access, the project would not result in inadequate emergency access. Therefore, no impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP** Policies and Development Standards that Reduce Impacts

None.

#### 4.18 TRIBAL CULTURAL RESOURCES

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation Measures Implemented
<ul> <li>Would the project result in:</li> <li>1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?</li> </ul>	This checklist question did not exist at the time the EIR was certified (2008)	No.	No.	No.	No.
<ol> <li>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 Public Resources Code Section 5024.1? In applying this criteria, the significance of the resource to a California Native American tribe shall be considered.</li> </ol>	This checklist question did not exist at the time the EIR was certified (2008)	No.	No.	No.	TASP Policy 5.34

#### 4.18.1 Impact Discussion

#### City of Milpitas Transit Area Specific Plan EIR – Tribal Cultural Resources Conclusion

The CEQA Guidelines did not specifically address impacts to tribal cultural resources at the time the TASP EIR was certified and, therefore, impacts to tribal cultural resources were not evaluated in the TASP EIR.

Impact TCR-1:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (Less than Significant Impact)
Impact TCR-2:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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 Public Resources Code Section 5024.1. (Less than Significant Impact)

On December 10, 2018, Native American consultation was initiated by *Holman & Associates*, *Archaeological Consultants* to assist the City. The Native American Heritage Commission (NAHC) was contacted to request a review of the Sacred Lands File (SLF) for any evidence of cultural resources or traditional properties of potential concern that might be known on lands within or adjacent to the project area. No resources were identified by the NAHC SLF search. The NAHC provided a list of six local Native Americans to be contacted for additional consultation. Each of the six individuals were emailed a letter describing the project with a map of the area and inquiring whether they had concerns. Follow up phone calls and emails were made/sent to those that did not respond. A total of three individuals responded. One indicated the project was outside their tribal territory and, therefore, they had no comments. The other two expressed concerns and recommended a Native American monitor be present during subsurface activities. At the time of preparation of this Addendum, no additional comments were received. At no time during the initial consultation process was a cultural resource identified within or adjacent to the project area.

As discussed in Section 4.5 Cultural Resources and in conformance with TASP Policy 5.34, a presence/absence survey for archaeological resources would be completed to reduce potential adverse effects on unknown archaeological resources and Native American burials to less than significant. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

Policy 5.34: Any future ground disturbing activities, including grading, in the Transit Area shall be monitored by a qualified archaeologist to ensure that the accidental discovery of significant archaeological materials and/or human remains is handled according to CEQA Guidelines § 15064.5 regarding discovery of archeological sites and burial sites, and Guidelines §15126.4(b) identifying mitigation measures for impacts on historic and cultural resources. (California Public Resources Code § 21083.2 and § 21084.1.) In the event that buried cultural remains are encountered, construction will be temporarily halted until a mitigation plan can be developed. In the event that human remains are encountered, the developer shall halt work in the immediate area and contact the Santa Clara County coroner and the City of Milpitas. If the remains are determined to be Native American, the coroner will then contact the Native American Heritage Commission (NAHC) which will in turn contact the appropriate Most Likely Descendent (MLD). The MLD will then have the opportunity to make a recommendation for the respectful treatment of the Native American remains and related burial goods.

#### 4.19 UTILITIES AND SERVICE SYSTEMS

#### 4.19.1 <u>Impact Discussion</u>

	Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
Would the project:					-
<ol> <li>Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</li> </ol>	Less than Significant	No.	No.	No.	TASP Policies 6.13, 6.16, 6.17, 6.19, 6.20, 6.21, 6.22, and 6.23
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less than Significant	No.	No.	No.	TASP Policies 6.13, 6.18, 6.19, and 6.21
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than Significant	No.	No.	No.	TASP Policies 6.8 and 6.10

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
<b>w</b> 4.	Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant	No.	No.	No.	TASP Policies 6.23 and 6.24
5.	Negatively impact the provisions of solid waste services or impair the attainment of solid waste reduction goals.	Less than Significant	No.	No.	No.	TASP Policies 6.23 and 6.24
6.	Be noncompliant with federal, state, and local management and reduction statues and regulation related to solid waste?	Less than Significant	No.	No.	No.	TASP Policies 6.23 and 6.24

#### City of Milpitas Transit Area Specific Plan EIR – Utilities and Service Systems Conclusion

The TASP EIR concluded implementation of the TASP, in conformance with the TASP policies, would result in less than significant utilities and service system impacts.

#### Impact UTL-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant Impact)

The proposed project would connect to existing water, wastewater, stormwater drain, electric power, and telecommunications serving the site and surrounding area. The existing utilities have capacity to serve the project. The project would not install or upgrade off-site utilities. New and existing connections to water, wastewater, stormwater drain, electric power and natural gas utilities are shown on Figure 4.19-1.

The proposed project includes construction of a production water well. The production water well is a response to meet the increased demand from planned growth in the TASP area. As discussed in the respective sections of this Addendum, construction and operation of the production water well would

not result in new or greater impacts than identified in the TASP EIR. For these reasons and those stated above, the proposed project would result in a less than significant impact related to construction of new or relocation of existing utilities and would not result in new or greater utilities impacts than identified in the TASP EIR.

#### Impact UTL-2: The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. [Same Impact as Approved Project (Less than Significant Impact)]

The Water Supply Assessment prepared for the TASP EIR found that in normal rainfall years, sufficient water supplies would be available for future development under the EIR. During extended droughts, the City can run emergency wells for additional supply and can increase the use of recycled water to offset potable water demand.

#### 4.19.1.1 Public Park

In compliance with TASP Policies 6.13, 6.18, 6.19, and 6.20, the park would utilize recycled water with the exception of drinking fountains. The park would be supplied through existing water connections through the site that were installed as part of the adjacent McCandless School Project. The park would use less than the maximum allowable water allowance of 3.11 million gallons per year of water. Based on the park's minimal water demand and consistent with TASP recycled water policies, the park project would be adequately served by projected water supplies from current sources. As such, the impact of the increase in demands is deemed less than significant with the additional water supply allocations. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### 4.19.1.2 Production Water Well

The purpose of the production water well is to generate water to meet the water demands due to planned growth in the TASP area. A new 12-inch waterline would be installed from the well to McCandless Drive. The production water well is estimated to produce approximately 262 million gallons per year. Well water would be used to backwash/rinse the treatment system. Once water is treated, it goes to the distribution system. The increase in water demand is deemed less than significant. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

#### 4.19.1.3 Pedestrian Bridge

The proposed bridge does not include any uses, features, or facilities that would generate additional demands and require new or expanded utilities or service systems. Therefore, the proposed bridge would not result in impacts related to new or expanded water usage and would not result in new or greater utility impacts than identified in the TASP EIR.



# Impact UTL-3: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. [Same Impact as Approved Project (Less than Significant Impact)]

The production water well could generate up to 5.5 million gallons of wastewater per year. The park restrooms would also generate a small amount of wastewater. The wastewater generated by the proposed project would not require additional wastewater utilities beyond what previously were disclosed in the TASP EIR. The project, with implementation of TASP Policies 6.8 and 6.10, would result in a less than significant wastewater treatment impact. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

# Impact UTL-4: The project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. [Same Impact as Approved Project (Less than Significant Impact)]

Using a solid waste generation rate of 0.09 tons/acre/year, the proposed project would generate approximately 0.36 tons per year of solid waste<sup>38</sup>. Primarily from operation of the park and production water well. The project solid waste generation was considered in the TASP EIR. The project would not alter the conclusions analyzed in the TASP EIR and, with compliance with TASP Policies 6.23 and 6.24, would result in a less than significant impact on solid waste goals. This is consistent with the conclusions in the TASP EIR. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

The project would not negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals. [Same Impact as Approved Project (Less than Significant Impact)]
The project would not be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste. [Same Impact as Approved Project (Less than Significant Impact)]

Through compliance with TASP Policy 6.23, the project would not negatively impact the provision of solid waste services or impair attainment of the City's solid waste reduction goals. Consistent with the TASP, the project would comply with all management and reduction statutes and regulations related to solid waste. No solid waste impacts beyond those disclosed in the TASP EIR have been identified. These impacts would be similar to those identified in the TASP EIR. No impacts beyond what was previously disclosed in the TASP EIR have been identified.

<sup>&</sup>lt;sup>38</sup> California Air Pollution Control Officers Association. *California Emissions Estimator Model, Appendix D, Default Date Tables*. October 2017.
#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

- Policy 6.8: Construct the improvements to the wastewater collection system within the Transit Area that were identified in the 2007 Sewer Master Plan Update.
  Policy 6.10: The City of Milpitas will acquire up to 1.0 mgd of wastewater treatment capacity at the WPCP if necessary. The final amount to be acquired, if any, and the timing of the acquisition will be based on studies of actual usage and the pace of development in the city. The City shall monitor the increase in actual sewage flows and the amount of
- new development approved on an annual basis to determine when additional capacity is required.Policy 6.13: Provide water supply for the Transit Area from the Santa Clara Valley Water District
- Policy 6.13: Provide water supply for the Transit Area from the Santa Clara Valley Water District per the Water Supply Assessment.
- Policy 6.16: Reduce water consumption through a program of water conservation measures, such as use of recycled water, water-saving features, and drought-tolerant landscaping.
- Policy 6.17: The City of Milpitas will require that water saving devices, as required by the California Plumbing Code, be installed in all residential, commercial, industrial and institutional facilities within the Transit Area. Such devices are capable of reducing the amount of water used indoors, resulting in substantial wastewater flow reductions.
- Policy 6.19: Per the Midtown Specific Plan, require new development to include recycled water lines for irrigation.
- Policy 6.20: The City of Milpitas will require that recycled water be used to irrigate all parks, plazas, community facilities, linear parks, landscaped front yards and buffer zones. Recycled water may also be used for landscape irrigation on vegetated setbacks and private common areas. The City shall also require, where reasonable and feasible, that commercial uses, schools and non-residential mixed-use developments be provided with dual plumbing to enable indoor recycled water use for non-potable uses to the extent feasible. Only non-residential buildings are allowed to use recycled water for indoor water use. The use of recycled water will reduce the amount of effluent otherwise requiring disposal.
- Policy 6.21: Require existing irrigation users to convert to recycled water when it becomes available.

- Policy 6.22: Upgrade and expand the water distribution system such that it will be adequate to serve new development in the Transit Area.
- Policy 6.23: All new development shall participate to the maximum extent practical in solid waste source reduction and diversion programs.
- Policy 6.24: Before the expiration of its current waste disposal contract, the City shall negotiate new agreements to handle the long-term disposal of its solid waste past the closure of the Newby Island Sanitary Landfill.

#### 4.20 WILDFIRE

#### 4.20.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation Measures Implemented
W	ould the project:					
1.	Impair an adopted emergency response plan or emergency evacuation plan?	This criterion was not evaluated in the TASP EIR (2008).	N/A	N/A	N/A	N/A
2.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	N/A
3.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	N/A
4.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	This checklist question did not exist at the time the EIR was certified (2008)	N/A	N/A	N/A	N/A

#### City of Milpitas Transit Area Specific Plan EIR – Wildfire Conclusion

The TASP is located in central Milpitas and developed with urban uses. There are no wildland areas within or adjacent to the TASP. For these reasons, the TASP EIR did not address wildfire impacts.

Impact WF-1:	The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. (No Impact)
Impact WF-2:	The project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (No Impact)
Impact WF-3:	The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (No Impact)
Impact WF-4:	The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (No Impact)

The proposed project is located within the urbanized area of central Milpitas. The project is not located in or near state responsibility areas, lands classified as very high fire hazard severity zones, or other areas subject to wildland fires. Therefore, the project would not expose people or structures to significant wildfire risk and would not result in wildland fire impacts.

#### **General Plan Policies that Reduce Impacts**

None.

#### **TASP Policies and Development Standards that Reduce Impacts**

None.

#### 4.21 MANDATORY FINDINGS OF SIGNIFICANCE

#### 4.21.1 <u>Impact Discussion</u>

		Conclusion in EIR	Does the Proposed Project Involve New Impacts?	New Circumstances Involving New Impacts?	New Information Requiring New Analysis or Verification?	Final EIR Mitigation or Minimization Measures Implemented
a)	Does the project have the potential to substantially degrade the quality of the environment, 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, or eliminate important examples of the major periods of California history or prehistory?	Less Than Significant with Mitigation Incorporated	No	No	No	TASP Policies: 5.25, 5.26, 5.27, 5.29, 5.31
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Significant and Unavoidable	No	No	No	TASP Policies 3.21, 3.23, 3.26, 3.28, 3.30, 3.31, 4.20
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Significant and Unavoidable	No	No	No	TASP Policies 3.21, 3.23, 3.26, 3.28, 3.30, 3.31, 4.20

Impact MFS-1: The project does not have the potential to substantially degrade the quality of the environment, 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, or eliminate important examples of the major periods of California history or prehistory. [Same Impact as Approved Project (Less Than Significant Impact)]

As discussed in the individual sections, the proposed project would not degrade the quality of the environment with the implementation of identified best management practices and conditions of approval and compliance with applicable General Plan polices and TASP policies and development standards.

The project would implement measures to avoid western pond turtles and burrowing owl in the project vicinity during project construction activities, consistent with the findings of the TASP EIR.

The project would implement standard measures, consistent with the TASP EIR, to reduce potential impacts to buried archaeological resources to a less than significant level.

For the remaining resource sections, the project would not result in new or more significant impacts than identified in the TASP EIR.

# Impact MFS-2: The project does not have impacts that are individually limited, but cumulatively considerable. [Same Impact as Approved Project (Less Than Significant Impact)]

Under Section 15065(a)(3) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects "that are individually limited, but cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In addition, under Section 15152(f) of the CEQA Guidelines, where a lead agency has determined that a cumulative effect has been adequately addressed in a prior EIR, the effect is not treated as significant for purposes of later environmental review and need not be discussed in detail.

The proposed development would result in temporary air quality, water quality, biology, and noise impacts during construction. With the implementation of the identified best management practices and conditions of approval and consistency with TASP policies, construction impacts would be reduced to a less than significant level. As the identified impacts are temporary and would be less than significant, project contribution to cumulative air quality, water quality, biology, and noise in the project area would not be cumulatively considerable.

With the implementation of the identified best management practices and conditions of approval and consistency with TASP policies, the project would have a less than significant aesthetics, geology and soils, hydrology and water quality, population and housing, public services, recreation, and utilities impacts, and project contribution to cumulative impacts on these resources would not be cumulatively considerable. The project would not impact agricultural and forest resources or mineral resources. Therefore, the project would not contribute to a significant cumulative impact on these resources. For these reasons and those stated above, the proposed project would not result in new or greater cumulative impacts than identified in the TASP EIR.

# Impact MFS-3:The project does not have environmental effects which will cause<br/>substantial adverse effects on human beings, either directly or indirectly.<br/>[Same Impact as Approved Project (Less Than Significant Impact)]

The environmental effects of the proposed project, both direct and indirect, are evaluated in the individual sections of this Addendum. With the implementation of identified best management practices and conditions of approval and compliance with applicable General Plan polices and TASP policies and development standards, the proposed project would not result in new or greater environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

#### SECTION 5.0 REFERENCES

The analysis in this Addendum is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

- Bay Area Air Quality Management District. Final 2017 Clean Air Plan. April 2017.
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- Holman & Associates. Results of CEQA Archaeological Survey and Initial Consultation for McCandless Park Project No. 5102, McCandless Well Site Project No. 7076 and Penitencia Creek Pedestrian Bridge Project No. 2005, Milpitas, Santa Clara County, California. January 14, 2019.
- Illingworth & Rodkin, Inc. *McCandless Park, Well Upgrade, and Penitencia Creek Pedestrian Bridge Construction Health Risk Assessment.* March 19, 2019.
- Illingworth & Rodkin, Inc. *Milpitas Park, Pedestrian Bridge, and Water Supply Well Noise and Vibration Assessment.* July 11, 2019.
- Milpitas Unified School District. McCandless Drive Elementary School Project Draft Environmental Impact Report. November 2015.

Schaaf & Wheeler. Centre Point Pedestrian Bridge Hydraulic Impacts. December 15, 2017.

Schaaf & Wheeler. City Park 100-year Floodplain Analysis. April 24, 2019.

#### SECTION 6.0 LEAD AGENCY AND CONSULTANTS

#### 6.1 LEAD AGENCY

#### **City of Milpitas**

Planning Department, Planning & Neighborhood Services Michael Fossati, Senior Planner

Engineering Department Maren G. Schram, Associate Civil Engineer

#### 6.2 CONSULTANTS

#### David J. Powers & Associates, Inc.

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#### H.T. Harvey & Associates

Ecological Consultants

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#### Holman & Associates, Inc.

Archaeological Consultants Sunshine Psota, Senior Associate

#### Illingworth & Rodkin, Inc.

Acoustical and Noise Consultants James Reyff, Principal Dana Lodico, Senior Consultant Mimi McNamara, Consultant

#### Schaaf & Wheeler

Consulting Civil Engineers Caitlin J. Gilmore, PE Cassandra L. Fagan, PE

#### West Yost Associates

Groundwater Consultants Ken Loy, Principal Hydrogeologist

### **APPENDIX A**

AIR QUALITY ANALYSIS

# McCANDLESS PARK, WELL UPGRADE, AND PENITENCIA CREEK PEDESTRIAN BRIDGE CONSTRUCTION HEALTH RISK ASSESSMENT

## Milpitas, California

March 19, 2019

**Prepared for:** 

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**Prepared by:** 

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I&R Project#: 18-226

#### Introduction

The purpose of this report is to address the potential construction health risk impacts associated with the construction of the McCandless Park, McCandless Well Upgrade, and the Penitencia Creek Pedestrian Bridge in Milpitas, California. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).<sup>1</sup> The BAAQMD recommends using a 1,000-foot screening radius around a project site for purposes of identifying community health risk from siting a new source of toxic air contaminants (TACs).

#### **Project Description**

The proposed project consists of three separate projects: the McCandless Park Project, the McCandless Well Site Upgrade, and the Penitencia Creek Pedestrian Bridge Project. The park, production well, and pedestrian bridge are all separate City projects. The four-acre park will include joint-use lighted sports field and all-inclusive play areas for the City and Mabel Mattos Elementary School. The pedestrian bridge project will span East Penitencia Creek midway between the Montague Expressway and McCandless Drive. The well project will construct a production water well and associated building at the southeast corner of the parcel. The construction of the projects will be done in phases to allow the underground work to be completed before the above ground and site amenities are constructed.

#### Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter ( $PM_{10}$ ), and fine particulate matter ( $PM_{2.5}$ ).

#### Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about threequarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

<sup>&</sup>lt;sup>1</sup> Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

#### **Regulatory Agencies**

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavyduty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.<sup>2</sup> The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.<sup>3</sup> The detailed community risk modeling methodology used in this assessment is contained in *Attachment 1*.

#### Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. The closest sensitive receptors to the project site are residences of single-family townhomes to the west of the project site. There are additional residences at farther distances from the project site. Mable Mattos Elementary School is also located directly south of the project site and the children attending the school are considered sensitive receptors.

#### Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

<sup>&</sup>lt;sup>2</sup> Available online: <u>http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm</u>. Accessed: November 21, 2014.

<sup>&</sup>lt;sup>3</sup> Bay Area Air Quality Management District. 2017. BAAQMD CEQA Air Quality Guidelines. May.

Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)			
Excess Cancer Risk	>10.0 per one million	>100 per one million			
Hazard Index	>1.0	>10.0			
Incremental annual PM <sub>2.5</sub>	$>0.3 \ \mu g/m^3$	$>0.8 \ \mu g/m^3$			
Note: $PM_{10}$ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.					

 Table 1.
 Community Risk Significance Thresholds

#### **Construction Health Risk Impacts and Mitigation Measures**

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The project would not introduce new residents that are sensitive receptors. Temporary project construction activity would also generate dust and equipment exhaust on a temporary basis that could affect nearby sensitive receptors. A construction health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors. Community risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual PM<sub>2.5</sub> concentrations, and computing the Hazard Index (HI) for non-cancer health risks. The methodology for computing community risks impacts is contained in *Attachment 1*.

#### Construction Community Health Risk Impacts

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM<sub>2.5</sub>. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and PM<sub>2.5</sub>.<sup>4</sup> This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

#### CalEEMod Modeling

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction of the site assuming full build-out of the project. The project land

<sup>&</sup>lt;sup>4</sup> DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

CalEEMod provided annual emissions for construction and estimates emissions for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A construction build-out scenario, including equipment list and schedule, was based information provided by the project applicant. The proposed project land uses are as follows:

- McCandless Well Upgrade McCandless Site
  - 792 square feet (sf) entered as "General Light Industry" to account for the proposed chemical feed and electrical control building,
  - o 500 cubic yards (cy) of soil exported during grading,
  - Five cement truck round-trips during building construction, and
  - Specific start and end dates for each construction phase were provided and entered into the CalEEMod model.
- Penitenica Pedestrian Bridge
  - 0.5 acres entered as "Other Non-Asphalt Surfaces" to account for the pedestrian bridge construction,
  - o 600-cy of soil imported during the site preparation,
  - o 600-cy of soil imported during the grading,
  - 15 cement truck round trips during the bridge construction, and
  - The constructions start date was provided as June 2020 and the number of workdays per phases were also provided. Calendar start and end states for each phase were not given. Instead the CalEEMod construction schedule was based on the number of total work days given for each phase.
- McCandless Park
  - 4-acres entered as "City Park",
  - o 9,250-cy soil imported during the site preparation,
  - o 9,250-cy of soil imported during the grading,
  - 200-cy of asphalt hauled during paving, and
  - The constructions start date was provided as June 2020 and the number of workdays per phases were also provided. Calendar start and end states for each phase were not given. Instead the CalEEMod construction schedule was based on the number of total work days given for each phase.

Construction of the whole project was predicted to begin December 2019 and last 20 months. The construction of the McCandless Well Upgrade would start December 2019 and end in August 2021. The McCandless Park and Penitencia Pedestrian Bridge construction would both begin around June 2020. However, the Penitenica Pedestrian Bridge is predicted to finish during the year 2020, while the McCandless Park construction would end early 2021. There would be overlap between the three projects from the years 2020 to 2021. There were an estimated 251 workdays.

The CalEEMod model also provided total annual  $PM_{10}$  exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.1070 tons (214 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive  $PM_{2.5}$  dust emissions were calculated by CalEEMod as 0.0958 tons (192 pounds) for the overall construction period.

#### Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and  $PM_{2.5}$  at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.<sup>5</sup> For each of the construction sites modeled, the modeling utilized six area sources to represent the on-site construction emissions, three for exhaust emissions and three for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (19.7 feet) was used for the area sources. The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases. For modeling fugitive PM<sub>2.5</sub> emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area sources. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources. Construction emissions were modeled as occurring daily between 7 a.m. to 7 p.m., which are the construction hours the project applicant provided.

The modeling used a 5-year meteorological data set (2006-2010) from the San José Airport prepared for use with the AERMOD model by the BAAQMD. Annual DPM and  $PM_{2.5}$  concentrations from construction activities at the project site during the 2019-2021 period were calculated using the model. DPM and  $PM_{2.5}$  concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) was used to represent the breathing height of residences in nearby single-family townhomes.

The maximum-modeled annual DPM and  $PM_{2.5}$  concentrations, which includes both the DPM and fugitive  $PM_{2.5}$  concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEIs). The maximum increased cancer risks were calculated using BAAQMD recommended methods and exposure parameters described in *Attachment 1*. Non-cancer health hazards and maximum  $PM_{2.5}$  concentrations were also calculated and identified. *Attachment 3* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

<sup>&</sup>lt;sup>5</sup> Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.





Results of this assessment indicated that the residential construction MEI was located at a townhome southeast of the project as seen in Figure 1. Table 2 summarizes the maximum cancer risks, PM<sub>2.5</sub> concentrations, and health hazard indexes for project related construction activities affecting the residential MEI. As seen in Table 2, the construction risk impacts do exceed the BAAQMD single-source thresholds for cancer risk and PM<sub>2.5</sub> concentrations but does not exceed the single-source threshold for HI. *Mitigation Measures AQ-1 and AQ-2 would reduce these impacts to a level of less-than-significant.* 

Note that the townhome where the residential construction MEI was identified is part of the Ellison Park residential development, and as of this analysis the townhomes are still under construction. However, it was assumed that construction of these residences would be complete and operational before the start of the McCandless project. The maximum residential cancer risks, PM<sub>2.5</sub> concentration, and Hazard Index from construction at the other existing residences (i.e. the fully-developed and operational residences) would be less than the risk identified at the construction MEI and would not exceed their respective BAAQMD single-source thresholds.

	Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
Project Construction				
	Unmitigated	50.8 (infant)	0.84	0.05
	Mitigated	6.6 (infant)	0.17	0.01
	BAAQMD Single-Source Threshold	>10.0	>0.3	>0.1
	Significant?			
	Unmitigated	Yes	Yes	No
	Mitigated	No	No	No

#### Table 2.Construction Risk Impacts at the Offsite MEI

#### Mabel Mattos Elementary School – Sensitive Receptors

Additionally, modeling was conducted to predict the cancer risks, non-cancerous health hazards, and maximum  $PM_{2.5}$  associated that could impact sensitive receptors (i.e. school-aged children) attending Mable Mattos Elementary School. The school is directly south of the project site with the closest school building located approximately 200-feet south. Currently, the school serves students in kindergarten through second grade. Receptor heights of 1 meter was used to represent the breathing height of the school children.

Results of this assessment at the elementary school indicated that the maximum cancer risks (without any mitigation or construction emission controls) would be 4.2 per million for child exposure. The maximum-modeled annual  $PM_{2.5}$  concentration, which is based on combined exhausted and fugitive dust emissions, would be 0.26  $\mu$ g/m<sup>3</sup> and the maximum computed HI, based on the DPM concentration, would be 0.02. These risk values do not exceed the BAAQMD single-source significance threshold for annual cancer risk,  $PM_{2.5}$  concentration, or HI.

#### Cumulative Impact on Construction MEI

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites. These sources include highways, busy surface streets, and stationary sources identified by BAAQMD. A review of BAAQMD's stationary source Google Earth map tool identified one source with the potential to affect the project site. Traffic on nearby streets all have average daily traffic that is less than 10,000 vehicles per day and are not considered sources of TACs. Figure 2 shows the sources affecting the project site. Details of the modeling and community risk calculations are included in *Attachment 4*.



Figure 2. Project Site and Nearby TAC PM2.5 Sources

#### Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identified the location of one possible stationary source and its estimated risk and hazard impacts. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. They provided updated risk levels, emissions and adjustments to account for new OEHHA guidance<sup>6</sup>. The stationary source was identified as an auto repair shop (Plant #7611) with the stationary source being a spray booth. There were no

<sup>&</sup>lt;sup>6</sup> Correspondence with Areana Flores, BAAQMD, 18 March 2019.

cancer risk or  $PM_{2.5}$  concentration risk impacts associated with this stationary source. The HI value is less than <0.01 and would have a minimal impact on the cumulative total. No distance adjustment was included within the analysis.

#### Cumulative Health Risk Impact at Construction MEI

Table 3 reports both the project and cumulative community risk impacts at the sensitive receptor most affected by construction (i.e. the construction MEI). Without mitigation, the project would have a *significant* impact with respect to community risk caused by project construction activities, since the maximum cancer risk and PM<sub>2.5</sub> concentration do exceed their single-source thresholds. However, as seen in Table 3, *Mitigation Measures AQ-1 and AQ-2 would reduce these impacts to less-than-significant*. The combined annual cancer risk, PM<sub>2.5</sub> concentration, and Hazard risk values, which includes unmitigated and mitigated, would not exceed the cumulative threshold. Therefore, the project would also have a *less-than-significant* impact regarding the cumulative risk within the area.

Source	Cancer Risk (per million)	Annual PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Hazard Index
Project Construction			
Unmitigated	50.8 (infant)	0.84	0.05
Mitigated	6.6 (infant)	0.17	0.01
Courtesy Auto Service (no distance adjustment)	-	-	< 0.01
Combined Sources			
Unmitigated	50.8 (infant)	0.84	0.06
Mitigated	6.6 (infant)	0.17	0.02
BAAQMD Cumulative Source Threshold	>100	>0.8	>10.0
Significant	? No	No	No

#### Table 3. Impacts from Combined Sources at Construction MEI

## *Mitigation Measure AQ-1:* Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

- 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. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

- 5. 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.
- 6. 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 [CCR]). Clear signage shall be provided for construction workers at all access points.
- 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

#### Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

# *Mitigation Measure AQ-2:* Selection of equipment during construction to minimize emissions. Such equipment selection would include the following:

The project shall develop a plan demonstrating that the off-road equipment used onsite to construct the project would achieve a fleet-wide average 80-percent reduction in DPM exhaust emissions or greater. One feasible plan to achieve this reduction would include the following:

1. All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 3 engines that include CARB-certified Level 3 Diesel Particulate Filters<sup>7</sup> or equivalent. Additionally, Equipment that meets U.S. EPA Tier 4 standards for particulate matter or use of equipment that is electrically powered or uses non-diesel fuels would meet this requirement.

#### Effectiveness of Mitigation Measure AQ-2

With mitigation, the computed maximum increased lifetime residential cancer risk from construction, assuming infant exposure, would be 6.6 in one million or less, the maximum annual PM<sub>2.5</sub> concentration would be 0.17  $\mu$ g/m<sup>3</sup>, and the Hazard Index would be <0.01. As a result, impacts would be reduced to *less-than-significant* with respect to community risk caused by construction activities.

<sup>&</sup>lt;sup>7</sup>See <u>http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm</u>

#### **Supporting Documentation**

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational output for existing uses is also included in this attachment. Also included are any modeling assumptions.

Attachment 3 is the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format

Attachment 4 includes the screening community risk calculations from sources affecting the project and construction MEI.

#### **Attachment 1: Health Risk Calculation Methodology**

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.<sup>8</sup> These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.<sup>9</sup> This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.<sup>10</sup> Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

#### Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD for residential exposures, 95<sup>th</sup> percentile breathing rates are used for the third trimester and infant exposures, and 80<sup>th</sup> percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95<sup>th</sup> percentile breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

<sup>&</sup>lt;sup>8</sup> OEHHA, 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Office of Environmental Health Hazard Assessment. February.

<sup>&</sup>lt;sup>9</sup> CARB, 2015. Risk Management Guidance for Stationary Sources of Air Toxics. July 23.

<sup>&</sup>lt;sup>10</sup> BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 10<sup>6</sup> Where: CPF = Cancer potency factor (mg/kg-day)<sup>-1</sup> ASF = Age sensitivity factor for specified age group ED = Exposure duration (years) AT = Averaging time for lifetime cancer risk (years) FAH = Fraction of time spent at home (unitless) Inhalation Dose =  $C_{air} x DBR x A x (EF/365) x 10^{-6}$ Where: Cair = concentration in air (µg/m<sup>3</sup>) DBR = daily breathing rate (L/kg body weight-day) A = Inhalation absorption factor EF = Exposure frequency (days/year) 10<sup>-6</sup> = Conversion factor

The health risk parameters used in this evaluation are summarized as follows:

Exposure Type $\rightarrow$		Infant		Child		Adult
Parameter	Age Range →	3 <sup>rd</sup>	0<2	2 < 9	2 < 16	16 - 30
		Trimester				
DPM Cancer Potency Factor (mg/kg-day) <sup>-1</sup>		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg	273	758	631	572	261	
Daily Breathing Rate (L/kg	361	1,090	861	745	335	
Inhalation Absorption Fact	1	1	1	1	1	
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14
Exposure Frequency (days/year)		350	350	350	350	350
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73

#### Non-Cancer Hazards

Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ( $\mu g/m^3$ ).

#### Annual PM<sub>2.5</sub> Concentrations

While not a TAC, fine particulate matter ( $PM_{2.5}$ ) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for  $PM_{2.5}$  (project level and cumulative) are in terms of an increase in the annual average concentration. When considering  $PM_{2.5}$  impacts, the contribution from all sources of  $PM_{2.5}$  emissions should be included. For projects with potential impacts from nearby local roadways, the  $PM_{2.5}$  impacts should include those from vehicle exhaust emissions,  $PM_{2.5}$  generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

**Attachment 2: CalEEMod Modeling Output** 

#### 18-226 Milpitas Pedestrian Bridge (Park) AQ

Santa Clara County, Annual

#### **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	4.00	Acre	4.00	174,240.00	0

#### **1.2 Other Project Characteristics**

Urbanization	rbanization Urban		2.2	Precipitation Freq (Days)	58
Climate Zone 4				Operational Year	2022
Utility Company Pacific Gas & Electric		pany			
CO2 Intensity (Ib/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity ( (Ib/MWhr)	0.006

#### **1.3 User Entered Comments & Non-Default Data**

CalEEMod Version: CalEEMod.2016.3.2

#### 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 rate

Land Use - McCandless park land use

Construction Phase - Used total work days provided for each phase

Off-road Equipment - Applicant Construction Schedule

Trips and VMT - 200 cy of asphalt hauled, TAC Trip length of 1 mile

Demolition - No demolition

Grading - 9,250-cy of soil imported

Construction Off-road Equipment Mitigation - BMPs, tier 3

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	230.00	90.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	8.00	60.00

tblConstructionPhase	NumDays	18.00	30.00
tblConstructionPhase	NumDays	5.00	15.00
tblGrading	MaterialImported	0.00	9,250.00
tblGrading	MaterialImported	0.00	9,250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.70
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	2.70
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.70

tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	5.30
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	48.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

#### 2.0 Emissions Summary

#### 2.1 Overall Construction

#### **Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Year	tons/yr											MT/yr							
2020	0.0925	1.0851	0.6625	1.3700e- 003	0.1506	0.0434	0.1941	0.0700	0.0401	0.1102	0.0000	122.2004	122.2004	0.0329	0.0000	123.0240			
2021	0.0152	0.1641	0.1537	2.8000e- 004	1.2400e- 003	7.0800e- 003	8.3300e- 003	3.4000e- 004	6.5800e- 003	6.9200e- 003	0.0000	24.5389	24.5389	6.2400e- 003	0.0000	24.6949			
Maximum	0.0925	1.0851	0.6625	1.3700e- 003	0.1506	0.0434	0.1941	0.0700	0.0401	0.1102	0.0000	122.2004	122.2004	0.0329	0.0000	123.0240			

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Year	tons/yr											MT/yr							
2020	0.0348	0.7151	0.7654	1.3700e- 003	0.0699	4.2200e- 003	0.0742	0.0166	4.2100e- 003	0.0208	0.0000	122.2003	122.2003	0.0329	0.0000	123.0239			
2021	7.4400e- 003	0.1406	0.1799	2.8000e- 004	1.2400e- 003	9.7000e- 004	2.2100e- 003	3.4000e- 004	9.6000e- 004	1.3000e- 003	0.0000	24.5389	24.5389	6.2400e- 003	0.0000	24.6949			
Maximum	0.0348	0.7151	0.7654	1.3700e- 003	0.0699	4.2200e- 003	0.0742	0.0166	4.2100e- 003	0.0208	0.0000	122.2003	122.2003	0.0329	0.0000	123.0239			

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	60.75	31.51	-15.82	0.00	53.14	89.72	62.27	75.94	88.93	81.13	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.6959	0.4243
2	9-1-2020	11-30-2020	0.4102	0.2739
3	12-1-2020	2-28-2021	0.1938	0.1547
4	3-1-2021	5-31-2021	0.0493	0.0415
		Highest	0.6959	0.4243

#### 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	MT/yr										
Area	1.6400e- 003	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.3200e- 003	0.0264	0.0712	2.4000e- 004	0.0222	2.1000e- 004	0.0224	5.9400e- 003	1.9000e- 004	6.1400e- 003	0.0000	22.1714	22.1714	7.6000e- 004	0.0000	22.1904
Waste						0.0000	0.0000		0.0000	0.0000	0.0690	0.0000	0.0690	4.0800e- 003	0.0000	0.1710
Water						0.0000	0.0000		0.0000	0.0000	0.0000	2.1942	2.1942	2.2000e- 004	5.0000e- 005	2.2132
Total	7.9600e- 003	0.0264	0.0712	2.4000e- 004	0.0222	2.1000e- 004	0.0224	5.9400e- 003	1.9000e- 004	6.1400e- 003	0.0690	24.3657	24.4347	5.0600e- 003	5.0000e- 005	24.5747

#### 2.2 Overall Operational

#### Mitigated Operational

	ROG	NO	×	CO	SO2	Fugi PM	itive 110	Exhaust PM10	PM10 Total	Fug PN	jitive //2.5	Exhau PM2.	ist F .5	PM2.5 Total	Bio-	CO2 NBi	o- CO2	Total CO	2 C	H4	N2O	CC	)2e
Category		tons/yr													MT/yr								
Area	1.6400e- 003	0.000	00 4.0	0000e- 005	0.0000			0.0000	0.0000	)		0.000	00	0.0000	0.00	000 7.0	0000e- 005	7.0000e- 005	0.0	0000	0.0000	8.00 00	00e- )5
Energy	0.0000	0.000	0 00	0.0000	0.0000			0.0000	0.0000	)		0.000	00	0.0000	0.00	000 0.	0000	0.0000	0.0	0000	0.0000	0.0	000
Mobile	6.3200e- 003	0.026	64 0	).0712	2.4000e- 004	0.02	222	2.1000e- 004	0.0224	5.94 0	400e- 03	1.9000 004	De-	6.1400e- 003	0.00	000 22	.1714	22.1714	7.60 0	000e- 04	0.0000	22.1	904
Waste	,							0.0000	0.0000	)		0.000	00	0.0000	0.06	690 O.	0000	0.0690	4.08 0	300e- 03	0.0000	0.1	710
Water	,							0.0000	0.0000	)		0.000	00	0.0000	0.00	000 2.	1942	2.1942	2.20 0	000e- 04	5.0000e 005	2.2	132
Total	7.9600e- 003	0.026	64 0	0.0712	2.4000e- 004	0.02	222	2.1000e- 004	0.0224	5.94 0	400e- 03	1.9000 004	De-	6.1400e- 003	0.06	690 24	.3657	24.4347	5.06 0	600e- 03	5.0000e 005	24.5	747
	ROG		NOx	C	so s	602	Fugit PM	tive Ex 10 P	haust M10	PM10 Total	Fugit PM	tive 2.5	Exhau PM2	ust PM2 .5 Tot	2.5 al	Bio- CO2	NBio-0	CO2 Tota	al CO2	CH4	l I	120	CO2e
Percent Reduction	0.00		0.00	0.	.00 0	.00	0.0	00 0	).00	0.00	0.0	00	0.00	0.0	0	0.00	0.00	) 0	.00	0.00	) (	.00	0.00

#### 3.0 Construction Detail

**Construction Phase** 

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/19/2020	5	15	
2	Site Preparation	Site Preparation	6/20/2020	7/10/2020	5	15	
3	Grading	Grading	7/11/2020	10/2/2020	5	60	
4	Trenching	Trenching	7/11/2020	10/2/2020	5	60	
5	Building Construction	Building Construction	10/3/2020	2/5/2021	5	90	
6	Paving	Paving	2/6/2021	3/19/2021	5	30	

Acres of Grading (Site Preparation Phase): 4.97

Acres of Grading (Grading Phase): 45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment
### 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	1	5.30	158	0.38
Demolition	Rubber Tired Dozers	2	2.70	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	2.70	97	0.37
Site Preparation	Graders	1	5.30	187	0.41
Site Preparation	Rubber Tired Dozers	1	5.30	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	5.30	97	0.37
Grading	Excavators	1	4.00	158	0.38
Grading	Graders	1	4.00	187	0.41
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Grading	Scrapers	1	4.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	2.70	231	0.29
Building Construction	Forklifts	1	2.70	89	0.20
Building Construction	Generator Sets	1	2.70	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	2	4.00	130	0.42
Paving	Paving Equipment	2	4.00	132	0.36
Paving	Rollers	2	4.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

18-226 Milpitas	Pedestrian	Bridge	(Park)	AQ - Santa	a Clara	County,	Annual
			\ ··· /				

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	915.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	915.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	73.00	29.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	48.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

### **3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Page 12 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

#### 3.2 Demolition - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	7.2100e- 003	0.0747	0.0429	8.0000e- 005		3.7300e- 003	3.7300e- 003		3.4300e- 003	3.4300e- 003	0.0000	6.7447	6.7447	2.1800e- 003	0.0000	6.7992
Total	7.2100e- 003	0.0747	0.0429	8.0000e- 005		3.7300e- 003	3.7300e- 003		3.4300e- 003	3.4300e- 003	0.0000	6.7447	6.7447	2.1800e- 003	0.0000	6.7992

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e- 005	4.0000e- 005	4.9000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611
Total	8.0000e- 005	4.0000e- 005	4.9000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611

Page 13 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.2 Demolition - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	1.8800e- 003	0.0371	0.0483	8.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004	0.0000	6.7446	6.7446	2.1800e- 003	0.0000	6.7992
Total	1.8800e- 003	0.0371	0.0483	8.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004	0.0000	6.7446	6.7446	2.1800e- 003	0.0000	6.7992

#### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e- 005	4.0000e- 005	4.9000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611
Total	8.0000e- 005	4.0000e- 005	4.9000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0610	0.0610	0.0000	0.0000	0.0611

Page 14 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.3 Site Preparation - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0326	0.0000	0.0326	0.0167	0.0000	0.0167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7700e- 003	0.0982	0.0409	9.0000e- 005		4.4200e- 003	4.4200e- 003		4.0700e- 003	4.0700e- 003	0.0000	7.9822	7.9822	2.5800e- 003	0.0000	8.0467
Total	8.7700e- 003	0.0982	0.0409	9.0000e- 005	0.0326	4.4200e- 003	0.0370	0.0167	4.0700e- 003	0.0208	0.0000	7.9822	7.9822	2.5800e- 003	0.0000	8.0467

#### **Unmitigated Construction Off-Site**

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	9.9000e- 004	0.0472	7.7000e- 003	6.0000e- 005	4.0000e- 004	4.0000e- 005	4.4000e- 004	1.1000e- 004	4.0000e- 005	1.5000e- 004	0.0000	5.9420	5.9420	6.3000e- 004	0.0000	5.9578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e- 005	3.0000e- 005	3.9000e- 004	0.0000	4.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0488	0.0488	0.0000	0.0000	0.0488
Total	1.0600e- 003	0.0472	8.0900e- 003	6.0000e- 005	4.4000e- 004	4.0000e- 005	4.9000e- 004	1.2000e- 004	4.0000e- 005	1.6000e- 004	0.0000	5.9908	5.9908	6.3000e- 004	0.0000	6.0067

Page 15 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.3 Site Preparation - 2020

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0147	0.0000	0.0147	3.7600e- 003	0.0000	3.7600e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2200e- 003	0.0443	0.0516	9.0000e- 005		2.9000e- 004	2.9000e- 004		2.9000e- 004	2.9000e- 004	0.0000	7.9821	7.9821	2.5800e- 003	0.0000	8.0467
Total	2.2200e- 003	0.0443	0.0516	9.0000e- 005	0.0147	2.9000e- 004	0.0149	3.7600e- 003	2.9000e- 004	4.0500e- 003	0.0000	7.9821	7.9821	2.5800e- 003	0.0000	8.0467

### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	9.9000e- 004	0.0472	7.7000e- 003	6.0000e- 005	4.0000e- 004	4.0000e- 005	4.4000e- 004	1.1000e- 004	4.0000e- 005	1.5000e- 004	0.0000	5.9420	5.9420	6.3000e- 004	0.0000	5.9578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e- 005	3.0000e- 005	3.9000e- 004	0.0000	4.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0488	0.0488	0.0000	0.0000	0.0488
Total	1.0600e- 003	0.0472	8.0900e- 003	6.0000e- 005	4.4000e- 004	4.0000e- 005	4.9000e- 004	1.2000e- 004	4.0000e- 005	1.6000e- 004	0.0000	5.9908	5.9908	6.3000e- 004	0.0000	6.0067

Page 16 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

## 3.4 Grading - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.1142	0.0000	0.1142	0.0522	0.0000	0.0522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0450	0.5089	0.2843	5.8000e- 004		0.0220	0.0220		0.0202	0.0202	0.0000	50.8654	50.8654	0.0165	0.0000	51.2766
Total	0.0450	0.5089	0.2843	5.8000e- 004	0.1142	0.0220	0.1362	0.0522	0.0202	0.0725	0.0000	50.8654	50.8654	0.0165	0.0000	51.2766

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	9.9000e- 004	0.0472	7.7000e- 003	6.0000e- 005	4.0000e- 004	4.0000e- 005	4.4000e- 004	1.1000e- 004	4.0000e- 005	1.5000e- 004	0.0000	5.9420	5.9420	6.3000e- 004	0.0000	5.9578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e- 004	2.0000e- 004	2.5600e- 003	0.0000	2.9000e- 004	0.0000	2.9000e- 004	8.0000e- 005	0.0000	8.0000e- 005	0.0000	0.3172	0.3172	1.0000e- 005	0.0000	0.3175
Total	1.4200e- 003	0.0474	0.0103	6.0000e- 005	6.9000e- 004	4.0000e- 005	7.3000e- 004	1.9000e- 004	4.0000e- 005	2.3000e- 004	0.0000	6.2592	6.2592	6.4000e- 004	0.0000	6.2753

Page 17 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

## 3.4 Grading - 2020

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0514	0.0000	0.0514	0.0118	0.0000	0.0118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0142	0.2787	0.3358	5.8000e- 004		1.7700e- 003	1.7700e- 003		1.7700e- 003	1.7700e- 003	0.0000	50.8653	50.8653	0.0165	0.0000	51.2766
Total	0.0142	0.2787	0.3358	5.8000e- 004	0.0514	1.7700e- 003	0.0532	0.0118	1.7700e- 003	0.0135	0.0000	50.8653	50.8653	0.0165	0.0000	51.2766

### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	9.9000e- 004	0.0472	7.7000e- 003	6.0000e- 005	4.0000e- 004	4.0000e- 005	4.4000e- 004	1.1000e- 004	4.0000e- 005	1.5000e- 004	0.0000	5.9420	5.9420	6.3000e- 004	0.0000	5.9578
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e- 004	2.0000e- 004	2.5600e- 003	0.0000	2.9000e- 004	0.0000	2.9000e- 004	8.0000e- 005	0.0000	8.0000e- 005	0.0000	0.3172	0.3172	1.0000e- 005	0.0000	0.3175
Total	1.4200e- 003	0.0474	0.0103	6.0000e- 005	6.9000e- 004	4.0000e- 005	7.3000e- 004	1.9000e- 004	4.0000e- 005	2.3000e- 004	0.0000	6.2592	6.2592	6.4000e- 004	0.0000	6.2753

Page 18 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.5 Trenching - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0136	0.1355	0.1664	2.5000e- 004		7.5000e- 003	7.5000e- 003	1 1 1	6.9000e- 003	6.9000e- 003	0.0000	21.7966	21.7966	7.0500e- 003	0.0000	21.9728
Total	0.0136	0.1355	0.1664	2.5000e- 004		7.5000e- 003	7.5000e- 003		6.9000e- 003	6.9000e- 003	0.0000	21.7966	21.7966	7.0500e- 003	0.0000	21.9728

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e- 004	8.0000e- 005	9.8000e- 004	0.0000	1.1000e- 004	0.0000	1.1000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.1220	0.1220	1.0000e- 005	0.0000	0.1221
Total	1.7000e- 004	8.0000e- 005	9.8000e- 004	0.0000	1.1000e- 004	0.0000	1.1000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.1220	0.1220	1.0000e- 005	0.0000	0.1221

Page 19 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.5 Trenching - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	6.0900e- 003	0.1257	0.1878	2.5000e- 004		1.0800e- 003	1.0800e- 003		1.0800e- 003	1.0800e- 003	0.0000	21.7966	21.7966	7.0500e- 003	0.0000	21.9728
Total	6.0900e- 003	0.1257	0.1878	2.5000e- 004		1.0800e- 003	1.0800e- 003		1.0800e- 003	1.0800e- 003	0.0000	21.7966	21.7966	7.0500e- 003	0.0000	21.9728

## Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e- 004	8.0000e- 005	9.8000e- 004	0.0000	1.1000e- 004	0.0000	1.1000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.1220	0.1220	1.0000e- 005	0.0000	0.1221
Total	1.7000e- 004	8.0000e- 005	9.8000e- 004	0.0000	1.1000e- 004	0.0000	1.1000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.1220	0.1220	1.0000e- 005	0.0000	0.1221

Page 20 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.6 Building Construction - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0108	0.1098	0.0756	1.5000e- 004		5.5600e- 003	5.5600e- 003		5.2900e- 003	5.2900e- 003	0.0000	13.0294	13.0294	2.5800e- 003	0.0000	13.0940
Total	0.0108	0.1098	0.0756	1.5000e- 004		5.5600e- 003	5.5600e- 003		5.2900e- 003	5.2900e- 003	0.0000	13.0294	13.0294	2.5800e- 003	0.0000	13.0940

## Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e- 003	0.0621	0.0172	8.0000e- 005	8.6000e- 004	1.0000e- 004	9.6000e- 004	2.5000e- 004	1.0000e- 004	3.5000e- 004	0.0000	7.4498	7.4498	7.3000e- 004	0.0000	7.4680
Worker	2.5900e- 003	1.1800e- 003	0.0153	2.0000e- 005	1.7400e- 003	2.0000e- 005	1.7600e- 003	4.6000e- 004	2.0000e- 005	4.9000e- 004	0.0000	1.8996	1.8996	8.0000e- 005	0.0000	1.9017
Total	4.3400e- 003	0.0632	0.0326	1.0000e- 004	2.6000e- 003	1.2000e- 004	2.7200e- 003	7.1000e- 004	1.2000e- 004	8.4000e- 004	0.0000	9.3494	9.3494	8.1000e- 004	0.0000	9.3696

Page 21 of 35

# 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.6 Building Construction - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	3.3600e- 003	0.0713	0.0895	1.5000e- 004		6.1000e- 004	6.1000e- 004		6.1000e- 004	6.1000e- 004	0.0000	13.0294	13.0294	2.5800e- 003	0.0000	13.0940
Total	3.3600e- 003	0.0713	0.0895	1.5000e- 004		6.1000e- 004	6.1000e- 004		6.1000e- 004	6.1000e- 004	0.0000	13.0294	13.0294	2.5800e- 003	0.0000	13.0940

### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e- 003	0.0621	0.0172	8.0000e- 005	8.6000e- 004	1.0000e- 004	9.6000e- 004	2.5000e- 004	1.0000e- 004	3.5000e- 004	0.0000	7.4498	7.4498	7.3000e- 004	0.0000	7.4680
Worker	2.5900e- 003	1.1800e- 003	0.0153	2.0000e- 005	1.7400e- 003	2.0000e- 005	1.7600e- 003	4.6000e- 004	2.0000e- 005	4.9000e- 004	0.0000	1.8996	1.8996	8.0000e- 005	0.0000	1.9017
Total	4.3400e- 003	0.0632	0.0326	1.0000e- 004	2.6000e- 003	1.2000e- 004	2.7200e- 003	7.1000e- 004	1.2000e- 004	8.4000e- 004	0.0000	9.3494	9.3494	8.1000e- 004	0.0000	9.3696

Page 22 of 35

### 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.6 Building Construction - 2021

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	3.9500e- 003	0.0403	0.0300	6.0000e- 005		1.9700e- 003	1.9700e- 003		1.8700e- 003	1.8700e- 003	0.0000	5.2930	5.2930	1.0400e- 003	0.0000	5.3189
Total	3.9500e- 003	0.0403	0.0300	6.0000e- 005		1.9700e- 003	1.9700e- 003		1.8700e- 003	1.8700e- 003	0.0000	5.2930	5.2930	1.0400e- 003	0.0000	5.3189

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e- 004	0.0240	6.4600e- 003	3.0000e- 005	3.5000e- 004	2.0000e- 005	3.7000e- 004	1.0000e- 004	2.0000e- 005	1.2000e- 004	0.0000	2.9976	2.9976	2.8000e- 004	0.0000	3.0046
Worker	9.6000e- 004	4.2000e- 004	5.6100e- 003	1.0000e- 005	7.1000e- 004	1.0000e- 005	7.1000e- 004	1.9000e- 004	1.0000e- 005	2.0000e- 004	0.0000	0.7455	0.7455	3.0000e- 005	0.0000	0.7463
Total	1.6000e- 003	0.0244	0.0121	4.0000e- 005	1.0600e- 003	3.0000e- 005	1.0800e- 003	2.9000e- 004	3.0000e- 005	3.2000e- 004	0.0000	3.7431	3.7431	3.1000e- 004	0.0000	3.7508

Page 23 of 35

# 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.6 Building Construction - 2021

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	1.3600e- 003	0.0290	0.0364	6.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004	0.0000	5.2930	5.2930	1.0400e- 003	0.0000	5.3189
Total	1.3600e- 003	0.0290	0.0364	6.0000e- 005		2.5000e- 004	2.5000e- 004		2.5000e- 004	2.5000e- 004	0.0000	5.2930	5.2930	1.0400e- 003	0.0000	5.3189

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e- 004	0.0240	6.4600e- 003	3.0000e- 005	3.5000e- 004	2.0000e- 005	3.7000e- 004	1.0000e- 004	2.0000e- 005	1.2000e- 004	0.0000	2.9976	2.9976	2.8000e- 004	0.0000	3.0046
Worker	9.6000e- 004	4.2000e- 004	5.6100e- 003	1.0000e- 005	7.1000e- 004	1.0000e- 005	7.1000e- 004	1.9000e- 004	1.0000e- 005	2.0000e- 004	0.0000	0.7455	0.7455	3.0000e- 005	0.0000	0.7463
Total	1.6000e- 003	0.0244	0.0121	4.0000e- 005	1.0600e- 003	3.0000e- 005	1.0800e- 003	2.9000e- 004	3.0000e- 005	3.2000e- 004	0.0000	3.7431	3.7431	3.1000e- 004	0.0000	3.7508

Page 24 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.7 Paving - 2021

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	9.4200e- 003	0.0969	0.1099	1.7000e- 004		5.0800e- 003	5.0800e- 003		4.6800e- 003	4.6800e- 003	0.0000	15.0176	15.0176	4.8600e- 003	0.0000	15.1390
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.4200e- 003	0.0969	0.1099	1.7000e- 004		5.0800e- 003	5.0800e- 003		4.6800e- 003	4.6800e- 003	0.0000	15.0176	15.0176	4.8600e- 003	0.0000	15.1390

#### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	5.0000e- 005	2.3800e- 003	3.9000e- 004	0.0000	2.0000e- 005	0.0000	2.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3084	0.3084	3.0000e- 005	0.0000	0.3092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e- 004	1.0000e- 004	1.3300e- 003	0.0000	1.7000e- 004	0.0000	1.7000e- 004	4.0000e- 005	0.0000	5.0000e- 005	0.0000	0.1768	0.1768	1.0000e- 005	0.0000	0.1769
Total	2.8000e- 004	2.4800e- 003	1.7200e- 003	0.0000	1.9000e- 004	0.0000	1.9000e- 004	5.0000e- 005	0.0000	6.0000e- 005	0.0000	0.4852	0.4852	4.0000e- 005	0.0000	0.4862

Page 25 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 3.7 Paving - 2021

### Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	4.2100e- 003	0.0847	0.1297	1.7000e- 004		6.9000e- 004	6.9000e- 004		6.9000e- 004	6.9000e- 004	0.0000	15.0176	15.0176	4.8600e- 003	0.0000	15.1390
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.2100e- 003	0.0847	0.1297	1.7000e- 004		6.9000e- 004	6.9000e- 004		6.9000e- 004	6.9000e- 004	0.0000	15.0176	15.0176	4.8600e- 003	0.0000	15.1390

### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	5.0000e- 005	2.3800e- 003	3.9000e- 004	0.0000	2.0000e- 005	0.0000	2.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3084	0.3084	3.0000e- 005	0.0000	0.3092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e- 004	1.0000e- 004	1.3300e- 003	0.0000	1.7000e- 004	0.0000	1.7000e- 004	4.0000e- 005	0.0000	5.0000e- 005	0.0000	0.1768	0.1768	1.0000e- 005	0.0000	0.1769
Total	2.8000e- 004	2.4800e- 003	1.7200e- 003	0.0000	1.9000e- 004	0.0000	1.9000e- 004	5.0000e- 005	0.0000	6.0000e- 005	0.0000	0.4852	0.4852	4.0000e- 005	0.0000	0.4862

# 4.0 Operational Detail - Mobile

Page 26 of 35

#### 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Mitigated	6.3200e- 003	0.0264	0.0712	2.4000e- 004	0.0222	2.1000e- 004	0.0224	5.9400e- 003	1.9000e- 004	6.1400e- 003	0.0000	22.1714	22.1714	7.6000e- 004	0.0000	22.1904
Unmitigated	6.3200e- 003	0.0264	0.0712	2.4000e- 004	0.0222	2.1000e- 004	0.0224	5.9400e- 003	1.9000e- 004	6.1400e- 003	0.0000	22.1714	22.1714	7.6000e- 004	0.0000	22.1904

### 4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	7.56	91.00	66.96	59,703	59,703
Total	7.56	91.00	66.96	59,703	59,703

### **4.3 Trip Type Information**

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

Page 27 of 35

# 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated	61		1			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000	 , , ,	0.0000	0.0000	 - - -	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 28 of 35

## 18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 5.2 Energy by Land Use - NaturalGas

### <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	- - - -	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 29 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

## 5.3 Energy by Land Use - Electricity

## <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

# 6.0 Area Detail

6.1 Mitigation Measures Area

Page 30 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	√yr		
Mitigated	1.6400e- 003	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005
Unmitigated	1.6400e- 003	0.0000	4.0000e- 005	0.0000		0.0000	0.0000	 , , ,	0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005

## 6.2 Area by SubCategory

**Unmitigated** 

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6400e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005
Total	1.6400e- 003	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005

Page 31 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 6.2 Area by SubCategory

Mitigated

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	ī/yr		
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6400e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005
Total	1.6400e- 003	0.0000	4.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e- 005	7.0000e- 005	0.0000	0.0000	8.0000e- 005

# 7.0 Water Detail

7.1 Mitigation Measures Water

Page 32 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e
Category		MT	/yr	
Mitigated	2.1942	2.2000e- 004	5.0000e- 005	2.2132
Unmitigated	2.1942	2.2000e- 004	5.0000e- 005	2.2132

## 7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	/yr	
City Park	0 / 4.76593	2.1942	2.2000e- 004	5.0000e- 005	2.2132
Total		2.1942	2.2000e- 004	5.0000e- 005	2.2132

Page 33 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 7.2 Water by Land Use

### Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	/yr	
City Park	0 / 4.76593	2.1942	2.2000e- 004	5.0000e- 005	2.2132
Total		2.1942	2.2000e- 004	5.0000e- 005	2.2132

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

### Category/Year

	Total CO2	CH4	N2O	CO2e
		МТ	/yr	
Mitigated	0.0690	4.0800e- 003	0.0000	0.1710
Unmitigated	0.0690	4.0800e- 003	0.0000	0.1710

Page 34 of 35

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

### 8.2 Waste by Land Use

### <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
City Park	0.34	0.0690	4.0800e- 003	0.0000	0.1710
Total		0.0690	4.0800e- 003	0.0000	0.1710

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
City Park	0.34	0.0690	4.0800e- 003	0.0000	0.1710
Total		0.0690	4.0800e- 003	0.0000	0.1710

# 9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

18-226 Milpitas Pedestrian Bridge (Park) AQ - Santa Clara County, Annual

# **10.0 Stationary Equipment**

### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

#### <u>Boilers</u>

Equipment Type Number Heat input/Day Heat input/feat Doller Rating Fuer Ty	Equipment Type	Number	Heat Input/Day	Heat Input/Veer	Poilor Poting	Fuel Type
	Equipment Type	Number	neat input/Day	Heat input/rear	boller Raung	FuerType

### User Defined Equipment

## 11.0 Vegetation

### Penitencia Pedestrian Bridge

Santa Clara County, Annual

# **1.0 Project Characteristics**

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.50	Acre	0.50	21,780.00	0

### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58				
Climate Zone	4			Operational Year	2022				
Utility Company	Pacific Gas & Electric Company								
CO2 Intensity (Ib/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity ( (Ib/MWhr)	0.006				

#### 1.3 User Entered Comments & Non-Default Data

CalEEMod Version: CalEEMod.2016.3.2

Page 2 of 33

#### Penitencia Pedestrian Bridge - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290 rate

Land Use - Penitencia Pedestrian Bridge

Construction Phase - Applicant construction Schedule

Off-road Equipment - Applicant Equipment

Off-road Equipment - Applicant Equipment

Off-road Equipment - Applicant Equpiment

Off-road Equipment - Applicant Equipment

Off-road Equipment - Applicant Equipment

Off-road Equipment - Applicant Equipment

Trips and VMT - 15 round trip cement truck trips, TAC Trip length 1 mile

Demolition - no demolition

Grading - 600-cy of soil imported

Construction Off-road Equipment Mitigation - BMPS, tier 3

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	70.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	5.00	2.00

tblConstructionPhase	NumDays	1.00	2.00
tblGrading	MaterialImported	0.00	600.00
tblGrading	MaterialImported	0.00	600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290

tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	30.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

# 2.0 Emissions Summary

Page 6 of 33

### Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 2.1 Overall Construction

### **Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr								МТ	/yr						
2020	0.0493	0.4919	0.3672	7.1000e- 004	0.0343	0.0245	0.0588	0.0171	0.0232	0.0403	0.0000	62.3102	62.3102	0.0140	0.0000	62.6600
Maximum	0.0493	0.4919	0.3672	7.1000e- 004	0.0343	0.0245	0.0588	0.0171	0.0232	0.0403	0.0000	62.3102	62.3102	0.0140	0.0000	62.6600

### Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	tons/yr										MT/yr						
2020	0.0166	0.3508	0.4314	7.1000e- 004	0.0157	2.9000e- 003	0.0186	3.9500e- 003	2.9000e- 003	6.8500e- 003	0.0000	62.3101	62.3101	0.0140	0.0000	62.6599	
Maximum	0.0166	0.3508	0.4314	7.1000e- 004	0.0157	2.9000e- 003	0.0186	3.9500e- 003	2.9000e- 003	6.8500e- 003	0.0000	62.3101	62.3101	0.0140	0.0000	62.6599	

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	66.40	28.68	-17.46	0.00	54.22	88.15	68.34	76.89	87.51	83.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.4355	0.2890
2	9-1-2020	9-30-2020	0.0922	0.0684
		Highest	0.4355	0.2890

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	MT/yr										
Area	1.8600e- 003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.8600e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005

Page 8 of 33

### Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 2.2 Overall Operational

### Mitigated Operational

	ROG	NO	X	CO	SO2	Fugi PN	itive 110	Exhaust PM10	PM10 Total	Fugit PM2	tive Ex 2.5 F	xhaust PM2.5	PM2.5 Total	Bio	o- CO2	NBio- CO2	? Total	CO2	CH4	N	20	CO2e
Category							tons	s/yr										MT/y	r			
Area	1.8600e- 003	0.00	00	0.0000	0.0000			0.0000	0.0000		C	0.0000	0.0000	0	0.0000	1.0000e- 005	1.00 00	00e- 05	0.0000	) 0.0	0000	1.0000e- 005
Energy	0.0000	0.00	00	0.0000	0.0000			0.0000	0.0000		C	0.0000	0.0000	0	0.0000	0.0000	0.0	000	0.0000	) 0.(	000	0.0000
Mobile	0.0000	0.00	00	0.0000	0.0000	0.0	000	0.0000	0.0000	0.00	000 0	0.0000	0.0000	0	0.0000	0.0000	0.0	000	0.0000	) 0.(	000	0.0000
Waste					,			0.0000	0.0000		C	0.0000	0.0000	0	0.0000	0.0000	0.0	000	0.0000	) 0.(	000	0.0000
Water					,			0.0000	0.0000		C	0.0000	0.0000	0	0.0000	0.0000	0.0	000	0.0000	) 0.(	000	0.0000
Total	1.8600e- 003	0.00	00	0.0000	0.0000	0.0	000	0.0000	0.0000	0.00	000 0	0.0000	0.0000	0	0.0000	1.0000e- 005	1.00 00	00e- )5	0.0000	0.0	000	1.0000e- 005
	ROG		NOx	C C	0	SO2	Fugit PM	tive Exh 10 PN	aust P //10 1	M10 otal	Fugitive PM2.5	e Exh PN	aust P 12.5	M2.5 Fotal	Bio- (	CO2 NBio	-CO2	Total C	02	CH4	N2	0 CO2e
Percent Reduction	0.00		0.00	) 0.	00	0.00	0.0	0 0	.00	).00	0.00	0.	.00	0.00	0.0	0 0.	00	0.00		0.00	0.0	0 0.00

# 3.0 Construction Detail

**Construction Phase** 

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/2/2020	5	2	
2	Site Preparation	Site Preparation	6/3/2020	6/4/2020	5	2	
3	Grading	Grading	6/5/2020	6/11/2020	5	5	
4	Trenching	Trenching	6/15/2020	6/16/2020	5	2	
5	Bridge & Ret. Wall Construction	Building Construction	6/17/2020	9/22/2020	5	70	
6	Paving	Paving	9/23/2020	9/24/2020	5	2	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 5

Acres of Paving: 0.5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	4.00	158	0.38
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Grading	Graders	2	8.00	187	0.41
Grading	Plate Compactors	2	8.00	8	0.43
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Trenching	Excavators	2	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Bridge & Ret. Wall Construction	Air Compressors	2	4.00	78	0.48
Bridge & Ret. Wall Construction	Bore/Drill Rigs	1	1.70	221	0.50
Bridge & Ret. Wall Construction	Cranes	1	4.00	231	0.29
Bridge & Ret. Wall Construction	Forklifts	0	0.00	89	0.20
Bridge & Ret. Wall Construction	Generator Sets	1	4.00	84	0.74
Bridge & Ret. Wall Construction	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT
	Penitencia	Pedestrian	Bridge ·	- Santa	Clara	County,	Annual
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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	59.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	59.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Bridge & Ret. Wall	7	9.00	4.00	30.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

### **3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Page 12 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.2 Demolition - 2020

### Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	6.6000e- 004	6.6200e- 003	7.8300e- 003	1.0000e- 005		3.8000e- 004	3.8000e- 004		3.5000e- 004	3.5000e- 004	0.0000	0.9994	0.9994	3.2000e- 004	0.0000	1.0075
Total	6.6000e- 004	6.6200e- 003	7.8300e- 003	1.0000e- 005		3.8000e- 004	3.8000e- 004		3.5000e- 004	3.5000e- 004	0.0000	0.9994	0.9994	3.2000e- 004	0.0000	1.0075

### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

Page 13 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

## 3.2 Demolition - 2020

### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	2.8000e- 004	5.9300e- 003	8.6000e- 003	1.0000e- 005		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005	0.0000	0.9994	0.9994	3.2000e- 004	0.0000	1.0075
Total	2.8000e- 004	5.9300e- 003	8.6000e- 003	1.0000e- 005		5.0000e- 005	5.0000e- 005		5.0000e- 005	5.0000e- 005	0.0000	0.9994	0.9994	3.2000e- 004	0.0000	1.0075

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

Page 14 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.3 Site Preparation - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					1.0600e- 003	0.0000	1.0600e- 003	1.1000e- 004	0.0000	1.1000e- 004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3700e- 003	0.0169	8.1900e- 003	2.0000e- 005		6.7000e- 004	6.7000e- 004		6.2000e- 004	6.2000e- 004	0.0000	1.7118	1.7118	5.5000e- 004	0.0000	1.7257
Total	1.3700e- 003	0.0169	8.1900e- 003	2.0000e- 005	1.0600e- 003	6.7000e- 004	1.7300e- 003	1.1000e- 004	6.2000e- 004	7.3000e- 004	0.0000	1.7118	1.7118	5.5000e- 004	0.0000	1.7257

### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	6.0000e- 005	3.0400e- 003	5.0000e- 004	0.0000	3.0000e- 005	0.0000	3.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3832	0.3832	4.0000e- 005	0.0000	0.3842
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	7.0000e- 005	3.0500e- 003	5.7000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3913	0.3913	4.0000e- 005	0.0000	0.3923

Page 15 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.3 Site Preparation - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					4.8000e- 004	0.0000	4.8000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8000e- 004	9.7400e- 003	0.0117	2.0000e- 005		7.0000e- 005	7.0000e- 005		7.0000e- 005	7.0000e- 005	0.0000	1.7118	1.7118	5.5000e- 004	0.0000	1.7257
Total	4.8000e- 004	9.7400e- 003	0.0117	2.0000e- 005	4.8000e- 004	7.0000e- 005	5.5000e- 004	3.0000e- 005	7.0000e- 005	1.0000e- 004	0.0000	1.7118	1.7118	5.5000e- 004	0.0000	1.7257

### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	6.0000e- 005	3.0400e- 003	5.0000e- 004	0.0000	3.0000e- 005	0.0000	3.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3832	0.3832	4.0000e- 005	0.0000	0.3842
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	7.0000e- 005	3.0500e- 003	5.7000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3913	0.3913	4.0000e- 005	0.0000	0.3923

Page 16 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

## 3.4 Grading - 2020

## Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0328	0.0000	0.0328	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0200e- 003	0.1001	0.0422	9.0000e- 005		4.5000e- 003	4.5000e- 003		4.1400e- 003	4.1400e- 003	0.0000	8.1887	8.1887	2.6100e- 003	0.0000	8.2541
Total	9.0200e- 003	0.1001	0.0422	9.0000e- 005	0.0328	4.5000e- 003	0.0373	0.0168	4.1400e- 003	0.0210	0.0000	8.1887	8.1887	2.6100e- 003	0.0000	8.2541

### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	6.0000e- 005	3.0400e- 003	5.0000e- 004	0.0000	3.0000e- 005	0.0000	3.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3832	0.3832	4.0000e- 005	0.0000	0.3842
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e- 005	3.0000e- 005	3.3000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0407	0.0407	0.0000	0.0000	0.0407
Total	1.2000e- 004	3.0700e- 003	8.3000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.4238	0.4238	4.0000e- 005	0.0000	0.4249

Page 17 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

## 3.4 Grading - 2020

### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0147	0.0000	0.0147	3.7900e- 003	0.0000	3.7900e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2400e- 003	0.0446	0.0519	9.0000e- 005		3.0000e- 004	3.0000e- 004		3.0000e- 004	3.0000e- 004	0.0000	8.1887	8.1887	2.6100e- 003	0.0000	8.2541
Total	2.2400e- 003	0.0446	0.0519	9.0000e- 005	0.0147	3.0000e- 004	0.0150	3.7900e- 003	3.0000e- 004	4.0900e- 003	0.0000	8.1887	8.1887	2.6100e- 003	0.0000	8.2541

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	7/yr		
Hauling	6.0000e- 005	3.0400e- 003	5.0000e- 004	0.0000	3.0000e- 005	0.0000	3.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.3832	0.3832	4.0000e- 005	0.0000	0.3842
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e- 005	3.0000e- 005	3.3000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0407	0.0407	0.0000	0.0000	0.0407
Total	1.2000e- 004	3.0700e- 003	8.3000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.4238	0.4238	4.0000e- 005	0.0000	0.4249

Page 18 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.5 Trenching - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	9.1000e- 004	9.0400e- 003	0.0111	2.0000e- 005		5.0000e- 004	5.0000e- 004	1 1 1	4.6000e- 004	4.6000e- 004	0.0000	1.4531	1.4531	4.7000e- 004	0.0000	1.4649
Total	9.1000e- 004	9.0400e- 003	0.0111	2.0000e- 005		5.0000e- 004	5.0000e- 004		4.6000e- 004	4.6000e- 004	0.0000	1.4531	1.4531	4.7000e- 004	0.0000	1.4649

### Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

Page 19 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.5 Trenching - 2020

### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	4.1000e- 004	8.3800e- 003	0.0125	2.0000e- 005		7.0000e- 005	7.0000e- 005	1 1 1	7.0000e- 005	7.0000e- 005	0.0000	1.4531	1.4531	4.7000e- 004	0.0000	1.4649
Total	4.1000e- 004	8.3800e- 003	0.0125	2.0000e- 005		7.0000e- 005	7.0000e- 005		7.0000e- 005	7.0000e- 005	0.0000	1.4531	1.4531	4.7000e- 004	0.0000	1.4649

### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

Page 20 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.6 Bridge & Ret. Wall Construction - 2020

### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0356	0.3337	0.2826	5.3000e- 004		0.0179	0.0179	1 1 1	0.0172	0.0172	0.0000	46.3660	46.3660	9.4200e- 003	0.0000	46.6016
Total	0.0356	0.3337	0.2826	5.3000e- 004		0.0179	0.0179		0.0172	0.0172	0.0000	46.3660	46.3660	9.4200e- 003	0.0000	46.6016

## Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	3.0000e- 005	1.5500e- 003	2.5000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.1948	0.1948	2.0000e- 005	0.0000	0.1953
Vendor	2.6000e- 004	9.3600e- 003	2.6000e- 003	1.0000e- 005	1.3000e- 004	2.0000e- 005	1.4000e- 004	4.0000e- 005	1.0000e- 005	5.0000e- 005	0.0000	1.1239	1.1239	1.1000e- 004	0.0000	1.1266
Worker	3.5000e- 004	1.6000e- 004	2.0700e- 003	0.0000	2.3000e- 004	0.0000	2.4000e- 004	6.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2562	0.2562	1.0000e- 005	0.0000	0.2564
Total	6.4000e- 004	0.0111	4.9200e- 003	1.0000e- 005	3.7000e- 004	2.0000e- 005	3.9000e- 004	1.0000e- 004	1.0000e- 005	1.2000e- 004	0.0000	1.5749	1.5749	1.4000e- 004	0.0000	1.5784

Page 21 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.6 Bridge & Ret. Wall Construction - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	0.0120	0.2582	0.3299	5.3000e- 004		2.3200e- 003	2.3200e- 003	1 1 1	2.3200e- 003	2.3200e- 003	0.0000	46.3659	46.3659	9.4200e- 003	0.0000	46.6015
Total	0.0120	0.2582	0.3299	5.3000e- 004		2.3200e- 003	2.3200e- 003		2.3200e- 003	2.3200e- 003	0.0000	46.3659	46.3659	9.4200e- 003	0.0000	46.6015

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	3.0000e- 005	1.5500e- 003	2.5000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.1948	0.1948	2.0000e- 005	0.0000	0.1953
Vendor	2.6000e- 004	9.3600e- 003	2.6000e- 003	1.0000e- 005	1.3000e- 004	2.0000e- 005	1.4000e- 004	4.0000e- 005	1.0000e- 005	5.0000e- 005	0.0000	1.1239	1.1239	1.1000e- 004	0.0000	1.1266
Worker	3.5000e- 004	1.6000e- 004	2.0700e- 003	0.0000	2.3000e- 004	0.0000	2.4000e- 004	6.0000e- 005	0.0000	7.0000e- 005	0.0000	0.2562	0.2562	1.0000e- 005	0.0000	0.2564
Total	6.4000e- 004	0.0111	4.9200e- 003	1.0000e- 005	3.7000e- 004	2.0000e- 005	3.9000e- 004	1.0000e- 004	1.0000e- 005	1.2000e- 004	0.0000	1.5749	1.5749	1.4000e- 004	0.0000	1.5784

Page 22 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

## 3.7 Paving - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	8.3000e- 004	8.4400e- 003	8.8600e- 003	1.0000e- 005		4.8000e- 004	4.8000e- 004		4.4000e- 004	4.4000e- 004	0.0000	1.1768	1.1768	3.8000e- 004	0.0000	1.1863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.3000e- 004	8.4400e- 003	8.8600e- 003	1.0000e- 005		4.8000e- 004	4.8000e- 004		4.4000e- 004	4.4000e- 004	0.0000	1.1768	1.1768	3.8000e- 004	0.0000	1.1863

### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	7/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

Page 23 of 33

### Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 3.7 Paving - 2020

### Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	3.3000e- 004	6.8300e- 003	0.0102	1.0000e- 005		6.0000e- 005	6.0000e- 005		6.0000e- 005	6.0000e- 005	0.0000	1.1768	1.1768	3.8000e- 004	0.0000	1.1863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3000e- 004	6.8300e- 003	0.0102	1.0000e- 005		6.0000e- 005	6.0000e- 005		6.0000e- 005	6.0000e- 005	0.0000	1.1768	1.1768	3.8000e- 004	0.0000	1.1863

### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003
Total	1.0000e- 005	1.0000e- 005	7.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	8.1300e- 003	8.1300e- 003	0.0000	0.0000	8.1400e- 003

# 4.0 Operational Detail - Mobile

Page 24 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### 4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

Page 25 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

# 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated	61		1			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000	 , , ,	0.0000	0.0000	 - - -	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 26 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

## 5.2 Energy by Land Use - NaturalGas

## <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Page 27 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

# 5.3 Energy by Land Use - Electricity

# <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

#### **Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

# 6.0 Area Detail

6.1 Mitigation Measures Area

Page 28 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	1.8600e- 003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005
Unmitigated	1.8600e- 003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005

## 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	4.5000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4100e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005
Total	1.8600e- 003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005

Page 29 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	4.5000e- 004			1 1 1		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4100e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005
Total	1.8600e- 003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	1.0000e- 005

# 7.0 Water Detail

7.1 Mitigation Measures Water

Page 30 of 33

Penitencia Pedestrian Bridge - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e		
Category	MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		
Unmitigated	0.0000	0.0000	0.0000	0.0000		

# 7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr				
Other Non- Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000	
Total		0.0000	0.0000	0.0000	0.0000	

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Page 31 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 7.2 Water by Land Use

### Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr				
Other Non- Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000	
Total		0.0000	0.0000	0.0000	0.0000	

# 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

### Category/Year

	Total CO2	CH4	N2O	CO2e			
	MT/yr						
Mitigated	0.0000	0.0000	0.0000	0.0000			
Unmitigated	0.0000	0.0000	0.0000	0.0000			

CalEEMod Version: CalEEMod.2016.3.2

Page 32 of 33

### Penitencia Pedestrian Bridge - Santa Clara County, Annual

### 8.2 Waste by Land Use

## <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e	
Land Use	tons	MT/yr				
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	
Total		0.0000	0.0000	0.0000	0.0000	

#### **Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e	
Land Use	tons	MT/yr				
Other Non- Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000	
Total		0.0000	0.0000	0.0000	0.0000	

# 9.0 Operational Offroad

Equipment Type	
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Page 33 of 33

## Penitencia Pedestrian Bridge - Santa Clara County, Annual

# **10.0 Stationary Equipment**

## Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

#### <u>Boilers</u>

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

### User Defined Equipment

## 11.0 Vegetation

### Well Upgrade McCandless Site

Santa Clara County, Annual

# **1.0 Project Characteristics**

## 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.79	1000sqft	0.02	790.00	0

### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Com	pany			
CO2 Intensity (Ib/MWhr)	290	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity ( (Ib/MWhr)	0.006

### **1.3 User Entered Comments & Non-Default Data**

CalEEMod Version: CalEEMod.2016.3.2

Page 2 of 42

Well Upgrade McCandless Site - Santa Clara County, Annual

Project Characteristics - PG&E 2020 290

Land Use - 792 chemical feed and eletrical/control building for well upgrade at McCandless Site

Construction Phase - Project Applicant Construction Schedule for Well Upgrade

Off-road Equipment - Project Applicant Construction Equipment

Off-road Equipment - Project Applicant Construction Equipment Off-road Equipment - Project Applicant Construction Equipment

Trips and VMT - estimated hauling trips for well drilling (500-cy) Grading -

Construction Off-road Equipment Mitigation - BMPS, tier 3

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstructionPhase	NumDays	5.00	40.00
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	100.00	40.00
tblConstructionPhase	NumDays	100.00	1.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	UsageHours	4.00	8.00
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tblOffRoadEquipment	UsageHours	6.00	0.00

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
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tblOffRoadEquipment	UsageHours	7.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	0.00
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tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
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tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	VendorTripLength	7.30	1.00
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tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

# 2.0 Emissions Summary

Page 7 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 2.1 Overall Construction

## **Unmitigated Construction**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr											MT/yr				
2019	9.4900e- 003	0.0911	0.0781	1.8000e- 004	1.2000e- 004	4.5900e- 003	4.7100e- 003	3.0000e- 005	4.4900e- 003	4.5300e- 003	0.0000	15.4358	15.4358	2.6500e- 003	0.0000	15.5020
2020	0.0250	0.2447	0.2148	4.5000e- 004	0.0154	0.0122	0.0276	8.3600e- 003	0.0118	0.0201	0.0000	39.4454	39.4454	7.5900e- 003	0.0000	39.6351
2021	0.0387	0.3267	0.3100	5.6000e- 004	5.0000e- 005	0.0152	0.0153	1.0000e- 005	0.0146	0.0146	0.0000	47.9003	47.9003	9.6200e- 003	0.0000	48.1408
Maximum	0.0387	0.3267	0.3100	5.6000e- 004	0.0154	0.0152	0.0276	8.3600e- 003	0.0146	0.0201	0.0000	47.9003	47.9003	9.6200e- 003	0.0000	48.1408

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr												МТ	/yr		
2019	3.9900e- 003	0.0834	0.1038	1.8000e- 004	1.2000e- 004	7.1000e- 004	8.3000e- 004	3.0000e- 005	7.1000e- 004	7.4000e- 004	0.0000	15.4358	15.4358	2.6500e- 003	0.0000	15.5020
2020	0.0104	0.2179	0.2733	4.5000e- 004	7.0700e- 003	1.8800e- 003	8.9500e- 003	1.9400e- 003	1.8800e- 003	3.8200e- 003	0.0000	39.4453	39.4453	7.5900e- 003	0.0000	39.6350
2021	0.0176	0.2805	0.3490	5.6000e- 004	5.0000e- 005	2.6000e- 003	2.6400e- 003	1.0000e- 005	2.6000e- 003	2.6100e- 003	0.0000	47.9002	47.9002	9.6200e- 003	0.0000	48.1407
Maximum	0.0176	0.2805	0.3490	5.6000e- 004	7.0700e- 003	2.6000e- 003	8.9500e- 003	1.9400e- 003	2.6000e- 003	3.8200e- 003	0.0000	47.9002	47.9002	9.6200e- 003	0.0000	48.1407

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	56.21	12.19	-20.44	0.00	53.35	83.80	73.88	76.43	83.16	81.72	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-1-2019	2-29-2020	0.2831	0.2578
2	3-1-2020	5-31-2020	0.0182	0.0170
4	9-1-2020	11-30-2020	0.0108	0.0084
5	12-1-2020	2-28-2021	0.0739	0.0445
6	3-1-2021	5-31-2021	0.1738	0.1390
7	6-1-2021	8-31-2021	0.1698	0.1418
		Highest	0.2831	0.2578

## 2.2 Overall Operational

### Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr												МТ	/yr		
Area	3.5000e- 003	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005
Energy	1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.9705	1.9705	1.1000e- 004	4.0000e- 005	1.9845
Mobile	1.0500e- 003	4.6700e- 003	0.0134	5.0000e- 005	4.5100e- 003	4.0000e- 005	4.5600e- 003	1.2100e- 003	4.0000e- 005	1.2500e- 003	0.0000	4.4174	4.4174	1.4000e- 004	0.0000	4.4209
Waste						0.0000	0.0000		0.0000	0.0000	0.1989	0.0000	0.1989	0.0118	0.0000	0.4928
Water	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					0.0000	0.0000		0.0000	0.0000	0.0580	0.1300	0.1880	5.9700e- 003	1.4000e- 004	0.3798
Total	4.6600e- 003	5.6900e- 003	0.0143	6.0000e- 005	4.5100e- 003	1.2000e- 004	4.6400e- 003	1.2100e- 003	1.2000e- 004	1.3300e- 003	0.2569	6.5179	6.7748	0.0180	1.8000e- 004	7.2781

### Page 9 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

### 2.2 Overall Operational

## Mitigated Operational

	ROG	NO	x	СО	SO2	Fu P	gitive M10	Exhaust PM10	PM10 Total	Fug PN	itive 12.5	Exhaus PM2.5	PM2	2.5 Total	Bio-	CO2 NB	io- CO2	Total Co	02 0	CH4	N2O	CC	)2e
Category	tons/yr										MT/yr												
Area	3.5000e- 003	0.00	00 1	1.0000e- 005	0.000	0		0.0000	0.0000	)		0.0000	0.	.0000	0.0	000 1.(	0000e- 005	1.0000 005	)- 0.(	0000	0.0000	2.00 00	00e- )5
Energy	1.1000e- 004	1.020 003	0e- 8 3	8.6000e- 004	1.000 005	)e-		8.0000e- 005	8.0000 005			8.0000e 005	- 8.0	0000e- 005	0.0	000 1	.9705	1.9705	1.1 (	000e- 004	4.0000e- 005	1.9	845
Mobile	1.0500e- 003	4.670 003	0e- 3	0.0134	5.000 005	)e- 4.5 (	100e- 003	4.0000e- 005	4.5600 003	e- 1.21 00	00e- 03	4.0000e 005	- 1.2	2500e- 003	0.0	000 4	.4174	4.4174	1.4 (	000e- 004	0.0000	4.4	209
Waste	F; 0 1 0 1 0 1 0 1							0.0000	0.0000	)		0.0000	0.	.0000	0.1	989 0	.0000	0.1989	0.	0118	0.0000	0.4	928
Water	F; 0 1 0 1 0 1 0 1							0.0000	0.0000	)		0.0000	0.	.0000	0.0	580 0	.1300	0.1880	5.9 (	700e- 003	1.4000e- 004	0.3	798
Total	4.6600e- 003	5.690 003	0e- 3	0.0143	6.000 005	)e- 4.5	100e- 003	1.2000e- 004	4.6400 003	e- 1.21 0(	00e- 03	1.2000e 004	- 1.3	3300e- 003	0.2	569 6	.5179	6.7748	0.0	0180	1.8000e- 004	7.2	781
	ROG		NOx	(	со	SO2	Fug PN	itive Ex 110 F	haust M10	PM10 Total	Fugit PM2	tive E 2.5	xhaust PM2.5	PM2 Tota	.5 al	Bio- CO2	NBio-	CO2 To	tal CO2	СН	4 1	120	CO2e
Percent Reduction	0.00		0.00		0.00	0.00	0.	00	0.00	0.00	0.0	00	0.00	0.0	0	0.00	0.0	0	0.00	0.0	0 0	.00	0.00

# 3.0 Construction Detail

**Construction Phase** 

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Well Drilling - Below Ground	Trenching	12/1/2019	3/6/2020	5	70	
2	Well Equipping - Above Ground	Site Preparation	11/15/2020	11/27/2020	5	10	
3	Grading / Excavation	Grading	12/1/2020	12/28/2020	5	20	
4	Trenching	Trenching	2/1/2021	2/12/2021	5	10	
5	Building Construction	Building Construction	2/16/2021	4/12/2021	5	40	
6	Backwash Tank	Building Construction	5/1/2021	6/25/2021	5	40	
7	Architectural Coating	Architectural Coating	5/1/2021	6/25/2021	5	40	
8	Filter Installion	Building Construction	6/1/2021	6/1/2021	5	1	
9	Concrete Paving	Paving	7/15/2021	8/11/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,185; Non-Residential Outdoor: 395; Striped Parking Area: 0 (Architectural Coating – sqft)

### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Well Drilling - Below Ground	Bore/Drill Rigs	1	5.00	221	0.50
Well Drilling - Below Ground	Concrete/Industrial Saws	0	0.00	81	0.73
Well Drilling - Below Ground	Generator Sets	1	10.00	84	0.74
Well Drilling - Below Ground	Pumps	1	1.00	84	0.74
Well Drilling - Below Ground	Rubber Tired Dozers	0	0.00	247	0.40
Well Drilling - Below Ground	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Well Equipping - Above Ground	Graders	0	0.00	187	0.41

Well Equipping - Above Ground	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading / Excavation	Concrete/Industrial Saws	0	0.00	81	0.73
Grading / Excavation	Rubber Tired Dozers	1	2.00	247	0.40
Grading / Excavation	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Aerial Lifts	1	3.00	63	0.31
Building Construction	Cement and Mortar Mixers	1	5.00	9	0.56
Building Construction	Cranes	1	1.00	231	0.29
Building Construction	Forklifts	1	1.00	89	0.20
Building Construction	Generator Sets	1	1.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	2.00	97	0.37
Architectural Coating	Aerial Lifts	1	8.00	63	0.31
Architectural Coating	Air Compressors	0	0.00	78	0.48
Architectural Coating	Generator Sets	1	8.00	84	0.74
Architectural Coating	Skid Steer Loaders	1	8.00	65	0.37
Backwash Tank	Cranes	1	8.00	231	0.29
Backwash Tank	Forklifts	0	0.00	89	0.20
Backwash Tank	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Backwash Tank	Welders	1	8.00	46	0.45
Filter Installion	Cranes	1	8.00	231	0.29
Filter Installion	Forklifts	0	0.00	89	0.20
Filter Installion	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Concrete Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Concrete Paving	Generator Sets	1	8.00	84	0.74
Concrete Paving	Pavers	0	0.00	130	0.42
Concrete Paving	Rollers	0	0.00	80	0.38
Concrete Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Well Drilling - Below Ground	4	10.00	0.00	120.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Well Equipping -	1	3.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading / Excavation	3	8.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching	1	3.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	0.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	0.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Backwash Tank	2	0.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Filter Installion	1	0.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Concrete Paving	2	5.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

### **3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Page 13 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

### 3.2 Well Drilling - Below Ground - 2019

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr							
Off-Road	9.3100e- 003	0.0890	0.0769	1.7000e- 004		4.5800e- 003	4.5800e- 003	1 1 1	4.4900e- 003	4.4900e- 003	0.0000	15.0992	15.0992	2.6200e- 003	0.0000	15.1647
Total	9.3100e- 003	0.0890	0.0769	1.7000e- 004		4.5800e- 003	4.5800e- 003		4.4900e- 003	4.4900e- 003	0.0000	15.0992	15.0992	2.6200e- 003	0.0000	15.1647

## Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										MT/yr						
Hauling	5.0000e- 005	2.0200e- 003	3.4000e- 004	0.0000	4.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.2443	0.2443	3.0000e- 005	0.0000	0.2450	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	1.3000e- 004	6.0000e- 005	8.1000e- 004	0.0000	8.0000e- 005	0.0000	8.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0923	0.0923	0.0000	0.0000	0.0924	
Total	1.8000e- 004	2.0800e- 003	1.1500e- 003	0.0000	1.2000e- 004	0.0000	1.3000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.3366	0.3366	3.0000e- 005	0.0000	0.3374	
Page 14 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.2 Well Drilling - Below Ground - 2019

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	3.8100e- 003	0.0813	0.1026	1.7000e- 004		7.0000e- 004	7.0000e- 004	1 1 1	7.0000e- 004	7.0000e- 004	0.0000	15.0992	15.0992	2.6200e- 003	0.0000	15.1646
Total	3.8100e- 003	0.0813	0.1026	1.7000e- 004		7.0000e- 004	7.0000e- 004		7.0000e- 004	7.0000e- 004	0.0000	15.0992	15.0992	2.6200e- 003	0.0000	15.1646

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	5.0000e- 005	2.0200e- 003	3.4000e- 004	0.0000	4.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.2443	0.2443	3.0000e- 005	0.0000	0.2450
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e- 004	6.0000e- 005	8.1000e- 004	0.0000	8.0000e- 005	0.0000	8.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0923	0.0923	0.0000	0.0000	0.0924
Total	1.8000e- 004	2.0800e- 003	1.1500e- 003	0.0000	1.2000e- 004	0.0000	1.3000e- 004	3.0000e- 005	0.0000	3.0000e- 005	0.0000	0.3366	0.3366	3.0000e- 005	0.0000	0.3374

Page 15 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.2 Well Drilling - Below Ground - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0187	0.1804	0.1673	3.8000e- 004		8.8300e- 003	8.8300e- 003		8.6400e- 003	8.6400e- 003	0.0000	32.6694	32.6694	5.5900e- 003	0.0000	32.8092
Total	0.0187	0.1804	0.1673	3.8000e- 004		8.8300e- 003	8.8300e- 003		8.6400e- 003	8.6400e- 003	0.0000	32.6694	32.6694	5.5900e- 003	0.0000	32.8092

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	9.0000e- 005	4.2400e- 003	6.9000e- 004	1.0000e- 005	5.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.5344	0.5344	6.0000e- 005	0.0000	0.5358
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e- 004	1.2000e- 004	1.5700e- 003	0.0000	1.8000e- 004	0.0000	1.8000e- 004	5.0000e- 005	0.0000	5.0000e- 005	0.0000	0.1952	0.1952	1.0000e- 005	0.0000	0.1954
Total	3.6000e- 004	4.3600e- 003	2.2600e- 003	1.0000e- 005	2.3000e- 004	0.0000	2.3000e- 004	6.0000e- 005	0.0000	7.0000e- 005	0.0000	0.7295	0.7295	7.0000e- 005	0.0000	0.7312

Page 16 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.2 Well Drilling - Below Ground - 2020

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	8.3100e- 003	0.1774	0.2239	3.8000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	32.6694	32.6694	5.5900e- 003	0.0000	32.8091
Total	8.3100e- 003	0.1774	0.2239	3.8000e- 004		1.5400e- 003	1.5400e- 003		1.5400e- 003	1.5400e- 003	0.0000	32.6694	32.6694	5.5900e- 003	0.0000	32.8091

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	9.0000e- 005	4.2400e- 003	6.9000e- 004	1.0000e- 005	5.0000e- 005	0.0000	5.0000e- 005	1.0000e- 005	0.0000	2.0000e- 005	0.0000	0.5344	0.5344	6.0000e- 005	0.0000	0.5358
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e- 004	1.2000e- 004	1.5700e- 003	0.0000	1.8000e- 004	0.0000	1.8000e- 004	5.0000e- 005	0.0000	5.0000e- 005	0.0000	0.1952	0.1952	1.0000e- 005	0.0000	0.1954
Total	3.6000e- 004	4.3600e- 003	2.2600e- 003	1.0000e- 005	2.3000e- 004	0.0000	2.3000e- 004	6.0000e- 005	0.0000	7.0000e- 005	0.0000	0.7295	0.7295	7.0000e- 005	0.0000	0.7312

Page 17 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.3 Well Equipping - Above Ground - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0500e- 003	0.0105	0.0114	2.0000e- 005		6.7000e- 004	6.7000e- 004		6.1000e- 004	6.1000e- 004	0.0000	1.3643	1.3643	4.4000e- 004	0.0000	1.3753
Total	1.0500e- 003	0.0105	0.0114	2.0000e- 005	0.0000	6.7000e- 004	6.7000e- 004	0.0000	6.1000e- 004	6.1000e- 004	0.0000	1.3643	1.3643	4.4000e- 004	0.0000	1.3753

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 005	1.0000e- 005	1.0000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122
Total	2.0000e- 005	1.0000e- 005	1.0000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122

Page 18 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.3 Well Equipping - Above Ground - 2020

### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust		1 1 1			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8000e- 004	8.6700e- 003	0.0117	2.0000e- 005		9.0000e- 005	9.0000e- 005		9.0000e- 005	9.0000e- 005	0.0000	1.3643	1.3643	4.4000e- 004	0.0000	1.3753
Total	3.8000e- 004	8.6700e- 003	0.0117	2.0000e- 005	0.0000	9.0000e- 005	9.0000e- 005	0.0000	9.0000e- 005	9.0000e- 005	0.0000	1.3643	1.3643	4.4000e- 004	0.0000	1.3753

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 005	1.0000e- 005	1.0000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122
Total	2.0000e- 005	1.0000e- 005	1.0000e- 004	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0122	0.0122	0.0000	0.0000	0.0122

Page 19 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.4 Grading / Excavation - 2020

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					0.0151	0.0000	0.0151	8.2800e- 003	0.0000	8.2800e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7900e- 003	0.0494	0.0331	5.0000e- 005		2.7200e- 003	2.7200e- 003		2.5000e- 003	2.5000e- 003	0.0000	4.6049	4.6049	1.4900e- 003	0.0000	4.6421
Total	4.7900e- 003	0.0494	0.0331	5.0000e- 005	0.0151	2.7200e- 003	0.0178	8.2800e- 003	2.5000e- 003	0.0108	0.0000	4.6049	4.6049	1.4900e- 003	0.0000	4.6421

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	∵/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e- 005	4.0000e- 005	5.2000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0651	0.0651	0.0000	0.0000	0.0651
Total	9.0000e- 005	4.0000e- 005	5.2000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0651	0.0651	0.0000	0.0000	0.0651

Page 20 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.4 Grading / Excavation - 2020

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Fugitive Dust					6.7700e- 003	0.0000	6.7700e- 003	1.8600e- 003	0.0000	1.8600e- 003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2800e- 003	0.0275	0.0348	5.0000e- 005		2.4000e- 004	2.4000e- 004		2.4000e- 004	2.4000e- 004	0.0000	4.6049	4.6049	1.4900e- 003	0.0000	4.6421
Total	1.2800e- 003	0.0275	0.0348	5.0000e- 005	6.7700e- 003	2.4000e- 004	7.0100e- 003	1.8600e- 003	2.4000e- 004	2.1000e- 003	0.0000	4.6049	4.6049	1.4900e- 003	0.0000	4.6421

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e- 005	4.0000e- 005	5.2000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0651	0.0651	0.0000	0.0000	0.0651
Total	9.0000e- 005	4.0000e- 005	5.2000e- 004	0.0000	6.0000e- 005	0.0000	6.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0651	0.0651	0.0000	0.0000	0.0651

Page 21 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.5 Trenching - 2021

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	⁻/yr		
Off-Road	9.4000e- 004	9.4800e- 003	0.0113	2.0000e- 005		5.6000e- 004	5.6000e- 004		5.1000e- 004	5.1000e- 004	0.0000	1.3649	1.3649	4.4000e- 004	0.0000	1.3759
Total	9.4000e- 004	9.4800e- 003	0.0113	2.0000e- 005		5.6000e- 004	5.6000e- 004		5.1000e- 004	5.1000e- 004	0.0000	1.3649	1.3649	4.4000e- 004	0.0000	1.3759

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 005	1.0000e- 005	9.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0118
Total	2.0000e- 005	1.0000e- 005	9.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0118

Page 22 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.5 Trenching - 2021

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	3.8000e- 004	8.6700e- 003	0.0117	2.0000e- 005		9.0000e- 005	9.0000e- 005		9.0000e- 005	9.0000e- 005	0.0000	1.3649	1.3649	4.4000e- 004	0.0000	1.3759
Total	3.8000e- 004	8.6700e- 003	0.0117	2.0000e- 005		9.0000e- 005	9.0000e- 005		9.0000e- 005	9.0000e- 005	0.0000	1.3649	1.3649	4.4000e- 004	0.0000	1.3759

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 005	1.0000e- 005	9.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0118
Total	2.0000e- 005	1.0000e- 005	9.0000e- 005	0.0000	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0000	0.0000	0.0000	0.0118	0.0118	0.0000	0.0000	0.0118

CalEEMod Version: CalEEMod.2016.3.2

Page 23 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.6 Building Construction - 2021

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	4.2000e- 003	0.0416	0.0405	7.0000e- 005		1.9400e- 003	1.9400e- 003		1.8400e- 003	1.8400e- 003	0.0000	6.0601	6.0601	1.4500e- 003	0.0000	6.0963
Total	4.2000e- 003	0.0416	0.0405	7.0000e- 005		1.9400e- 003	1.9400e- 003		1.8400e- 003	1.8400e- 003	0.0000	6.0601	6.0601	1.4500e- 003	0.0000	6.0963

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

CalEEMod Version: CalEEMod.2016.3.2

Page 24 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.6 Building Construction - 2021

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	1.4700e- 003	0.0323	0.0420	7.0000e- 005		3.1000e- 004	3.1000e- 004		3.1000e- 004	3.1000e- 004	0.0000	6.0601	6.0601	1.4500e- 003	0.0000	6.0963
Total	1.4700e- 003	0.0323	0.0420	7.0000e- 005		3.1000e- 004	3.1000e- 004		3.1000e- 004	3.1000e- 004	0.0000	6.0601	6.0601	1.4500e- 003	0.0000	6.0963

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 25 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.7 Backwash Tank - 2021

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0143	0.1272	0.0740	1.7000e- 004		5.4200e- 003	5.4200e- 003		5.1000e- 003	5.1000e- 003	0.0000	13.9020	13.9020	3.7700e- 003	0.0000	13.9962
Total	0.0143	0.1272	0.0740	1.7000e- 004		5.4200e- 003	5.4200e- 003		5.1000e- 003	5.1000e- 003	0.0000	13.9020	13.9020	3.7700e- 003	0.0000	13.9962

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 26 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.7 Backwash Tank - 2021

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	4.9500e- 003	0.0886	0.0914	1.7000e- 004		6.2000e- 004	6.2000e- 004		6.2000e- 004	6.2000e- 004	0.0000	13.9020	13.9020	3.7700e- 003	0.0000	13.9962
Total	4.9500e- 003	0.0886	0.0914	1.7000e- 004		6.2000e- 004	6.2000e- 004		6.2000e- 004	6.2000e- 004	0.0000	13.9020	13.9020	3.7700e- 003	0.0000	13.9962

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 27 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.8 Architectural Coating - 2021

## Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	4.1200e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4100e- 003	0.0954	0.1234	2.1000e- 004		4.4000e- 003	4.4000e- 003		4.3200e- 003	4.3200e- 003	0.0000	17.8870	17.8870	2.7100e- 003	0.0000	17.9547
Total	0.0135	0.0954	0.1234	2.1000e- 004		4.4000e- 003	4.4000e- 003		4.3200e- 003	4.3200e- 003	0.0000	17.8870	17.8870	2.7100e- 003	0.0000	17.9547

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 28 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.8 Architectural Coating - 2021

## Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	4.1200e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4800e- 003	0.1022	0.1380	2.1000e- 004		1.0700e- 003	1.0700e- 003		1.0700e- 003	1.0700e- 003	0.0000	17.8870	17.8870	2.7100e- 003	0.0000	17.9546
Total	8.6000e- 003	0.1022	0.1380	2.1000e- 004		1.0700e- 003	1.0700e- 003		1.0700e- 003	1.0700e- 003	0.0000	17.8870	17.8870	2.7100e- 003	0.0000	17.9546

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 29 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

### 3.9 Filter Installion - 2021

## Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	2.1000e- 004	2.4200e- 003	9.9000e- 004	0.0000		1.0000e- 004	1.0000e- 004	1 1 1	9.0000e- 005	9.0000e- 005	0.0000	0.2534	0.2534	8.0000e- 005	0.0000	0.2555
Total	2.1000e- 004	2.4200e- 003	9.9000e- 004	0.0000		1.0000e- 004	1.0000e- 004		9.0000e- 005	9.0000e- 005	0.0000	0.2534	0.2534	8.0000e- 005	0.0000	0.2555

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 30 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

### 3.9 Filter Installion - 2021

## Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	7.0000e- 005	1.3700e- 003	1.5400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	0.2534	0.2534	8.0000e- 005	0.0000	0.2555
Total	7.0000e- 005	1.3700e- 003	1.5400e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	0.2534	0.2534	8.0000e- 005	0.0000	0.2555

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	'/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Page 31 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.10 Concrete Paving - 2021

## Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	5.4500e- 003	0.0506	0.0595	1.0000e- 004		2.8000e- 003	2.8000e- 003		2.7100e- 003	2.7100e- 003	0.0000	8.3818	8.3818	1.1700e- 003	0.0000	8.4111
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.4500e- 003	0.0506	0.0595	1.0000e- 004		2.8000e- 003	2.8000e- 003		2.7100e- 003	2.7100e- 003	0.0000	8.3818	8.3818	1.1700e- 003	0.0000	8.4111

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e- 005	2.0000e- 005	3.0000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	5.0000e- 005	2.0000e- 005	3.0000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393

Page 32 of 42

### Well Upgrade McCandless Site - Santa Clara County, Annual

## 3.10 Concrete Paving - 2021

## Mitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Off-Road	2.0800e- 003	0.0474	0.0640	1.0000e- 004		5.0000e- 004	5.0000e- 004		5.0000e- 004	5.0000e- 004	0.0000	8.3818	8.3818	1.1700e- 003	0.0000	8.4111
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0800e- 003	0.0474	0.0640	1.0000e- 004		5.0000e- 004	5.0000e- 004		5.0000e- 004	5.0000e- 004	0.0000	8.3818	8.3818	1.1700e- 003	0.0000	8.4111

## Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e- 005	2.0000e- 005	3.0000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393
Total	5.0000e- 005	2.0000e- 005	3.0000e- 004	0.0000	4.0000e- 005	0.0000	4.0000e- 005	1.0000e- 005	0.0000	1.0000e- 005	0.0000	0.0393	0.0393	0.0000	0.0000	0.0393

## 4.0 Operational Detail - Mobile

Page 33 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Mitigated	1.0500e- 003	4.6700e- 003	0.0134	5.0000e- 005	4.5100e- 003	4.0000e- 005	4.5600e- 003	1.2100e- 003	4.0000e- 005	1.2500e- 003	0.0000	4.4174	4.4174	1.4000e- 004	0.0000	4.4209
Unmitigated	1.0500e- 003	4.6700e- 003	0.0134	5.0000e- 005	4.5100e- 003	4.0000e- 005	4.5600e- 003	1.2100e- 003	4.0000e- 005	1.2500e- 003	0.0000	4.4174	4.4174	1.4000e- 004	0.0000	4.4209

## 4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	5.51	1.04	0.54	12,142	12,142
Total	5.51	1.04	0.54	12,142	12,142

## 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.610498	0.036775	0.183084	0.106123	0.014413	0.005007	0.012610	0.021118	0.002144	0.001548	0.005312	0.000627	0.000740

Page 34 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

# 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	ī/yr		
Electricity Mitigated		1 1 1	, , ,			0.0000	0.0000	, , ,	0.0000	0.0000	0.0000	0.8584	0.8584	9.0000e- 005	2.0000e- 005	0.8658
Electricity Unmitigated	n n n n n	 - - - -				0.0000	0.0000	 - - - -	0.0000	0.0000	0.0000	0.8584	0.8584	9.0000e- 005	2.0000e- 005	0.8658
NaturalGas Mitigated	1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187
NaturalGas Unmitigated	1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187

Page 35 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 5.2 Energy by Land Use - NaturalGas

## <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							MT	/yr		
General Light Industry	20840.2	1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187
Total		1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							МТ	/yr		
General Light Industry	20840.2	1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187
Total		1.1000e- 004	1.0200e- 003	8.6000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005	0.0000	1.1121	1.1121	2.0000e- 005	2.0000e- 005	1.1187

CalEEMod Version: CalEEMod.2016.3.2

Page 36 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 5.3 Energy by Land Use - Electricity

## <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
General Light Industry	6525.4	0.8584	9.0000e- 005	2.0000e- 005	0.8658
Total		0.8584	9.0000e- 005	2.0000e- 005	0.8658

#### **Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
General Light Industry	6525.4	0.8584	9.0000e- 005	2.0000e- 005	0.8658
Total		0.8584	9.0000e- 005	2.0000e- 005	0.8658

## 6.0 Area Detail

6.1 Mitigation Measures Area

Page 37 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Mitigated	3.5000e- 003	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005
Unmitigated	3.5000e- 003	0.0000	1.0000e- 005	0.0000		0.0000	0.0000	<b></b> - - -	0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005

## 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr						MT/yr									
Architectural Coating	4.1000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0900e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005
Total	3.5000e- 003	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005

Page 38 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	4.1000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.0900e- 003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005
Total	3.5000e- 003	0.0000	1.0000e- 005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e- 005	1.0000e- 005	0.0000	0.0000	2.0000e- 005

## 7.0 Water Detail

7.1 Mitigation Measures Water

Page 39 of 42

Well Upgrade McCandless Site - Santa Clara County, Annual

	Total CO2	CH4	N2O	CO2e	
Category	MT/yr				
Mitigated	0.1880	5.9700e- 003	1.4000e- 004	0.3798	
Unmitigated	0.1880	5.9700e- 003	1.4000e- 004	0.3798	

# 7.2 Water by Land Use

#### <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr				
General Light Industry	0.182688 / 0	0.1880	5.9700e- 003	1.4000e- 004	0.3798	
Total		0.1880	5.9700e- 003	1.4000e- 004	0.3798	

CalEEMod Version: CalEEMod.2016.3.2

Page 40 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## 7.2 Water by Land Use

## Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e	
Land Use	Mgal	MT/yr				
General Light Industry	0.182688 / 0	0.1880	5.9700e- 003	1.4000e- 004	0.3798	
Total		0.1880	5.9700e- 003	1.4000e- 004	0.3798	

## 8.0 Waste Detail

## 8.1 Mitigation Measures Waste

## Category/Year

	Total CO2	CH4	N2O	CO2e			
	MT/yr						
Mitigated	0.1989	0.0118	0.0000	0.4928			
Unmitigated	0.1989	0.0118	0.0000	0.4928			

CalEEMod Version: CalEEMod.2016.3.2

Page 41 of 42

Well Upgrade McCandless Site - Santa Clara County, Annual

## 8.2 Waste by Land Use

<u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e	
Land Use	tons	MT/yr				
General Light Industry	0.98	0.1989	0.0118	0.0000	0.4928	
Total		0.1989	0.0118	0.0000	0.4928	

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e	
Land Use	tons	MT/yr				
General Light Industry	0.98	0.1989	0.0118	0.0000	0.4928	
Total		0.1989	0.0118	0.0000	0.4928	

# 9.0 Operational Offroad

Equipment Type	Number	Hours/Day
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Days/Year

Page 42 of 42

## Well Upgrade McCandless Site - Santa Clara County, Annual

## **10.0 Stationary Equipment**

## Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

#### <u>Boilers</u>

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

## User Defined Equipment

## 11.0 Vegetation

## **Attachment 3: Construction Health Risk Calculations**

Milpitas Park, Well, and Pedestrain Bridge Project

Emissions Model		DPM	Area	D	PM Emissi	ons	Modeled Area	DPM Emission Rate
Year	Activity	(ton/year)	Source	(lb/yr)	(lb/hr)	(g/s)	( <b>m</b> <sup>2</sup> )	$(g/s/m^2)$
2019	CON_WELL	0.0046	DPM	9.2	0.00210	2.64E-04	885	2.98E-07
2020	CON_WELL	0.0122	DPM	24.4	0.00557	7.02E-04	885	7.93E-07
2020	CON_PARK	0.0434	DPM	86.8	0.01982	2.50E-03	16,556	1.51E-07
2020	CON_BRIDGE	0.0245	DPM	49.0	0.01119	1.41E-03	218	6.47E-06
2021	CON_WELL	0.0152	DPM	30.4	0.00694	8.75E-04	885	9.88E-07
2021	CON_PARK	0.0071	DPM	14.2	0.00323	4.07E-04	16,556	2.46E-08
Total		0.1070		213.9	0.0488	0.0062		
		Operation .	Hours					
		hr/day =	12	(7am - 7pn	1)			

#### DPM Emissions and Modeling Emission Rates - Unmitigated

hr/day = 12 days/yr = 365

hours/year = 4380

## PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	(ton/year)	PM2.5 I (lb/yr)	Emissions (lb/hr)	(g/s)	Modeled Area (m <sup>2</sup> )	PM2.5 Emission Rate g/s/m <sup>2</sup>
2019	CON_WELL	FUG	0.00003	0.1	0.00001	1.73E-06	885	1.95E-09
2020	CON_WELL	FUG	0.0084	16.7	0.00382	4.81E-04	885	5.43E-07
2020	CON_PARK	FUG	0.0700	140.0	0.03196	4.03E-03	16,556	2.43E-07
2020	CON_BRIDGE	FUG	0.0171	34.2	0.00781	9.84E-04	218	4.52E-06
2021	CON_WELL	FUG	0.00001	0.0	0.00000	5.75E-07	885	6.50E-10
2021	CON_PARK	FUG	0.0003	0.7	0.00016	1.96E-05	16,556	1.18E-09
Total			0.0958	191.7	0.0438	0.0055		

**Operation Hours** 

hr/day = 12 (7am - 7pm)

days/yr = 365

hours/year = 4380

Emissions Model		DPM	Area	D	PM Emissi	ons	Modeled Area	DPM Emission Rate
Year	Activity	(ton/year)	Source	(lb/yr)	(lb/hr)	(g/s)	( <b>m</b> <sup>2</sup> )	$(g/s/m^2)$
2019	CON_WELL	0.0007	DPM	1.4	0.00032	4.08E-05	885	4.61E-08
2020	CON_WELL	0.0019	DPM	3.8	0.00086	1.08E-04	885	1.22E-07
2020	CON_PARK	0.0042	DPM	8.4	0.00193	2.43E-04	16,556	1.47E-08
2020	CON_BRIDGE	0.0029	DPM	5.8	0.00132	1.67E-04	218	7.66E-07
2021	CON_WELL	0.0026	DPM	5.2	0.00119	1.50E-04	885	1.69E-07
2021	CON_PARK	0.0010	DPM	1.9	0.00044	5.58E-05	16,556	3.37E-09
Total		0.0133		26.6	0.0061	0.0008		

#### DPM Construction Emissions and Modeling Emission Rates - With Mitigation

**Operation Hours** hr/day = 12 (7am - 4pm) days/yr = 365 4380 hours/year =

# PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction		Area		PM2.5 F	missions		Modeled Area	PM2.5 Emission Rate
Year	Activity	Source	(ton/year)	(lb/yr)	(lb/hr)	(g/s)	(m <sup>2</sup> )	g/s/m <sup>2</sup>
2019	CON_WELL	FUG	0.00003	0.1	0.00001	1.73E-06	885	1.95E-09
2020	CON_WELL	FUG	0.0019	3.9	0.00089	1.12E-04	885	1.26E-07
2020	CON_PARK	FUG	0.0166	33.2	0.00758	9.55E-04	16,556	5.77E-08
2020	CON_BRIDGE	FUG	0.0040	7.9	0.00180	2.27E-04	218	1.04E-06
2021	CON_WELL	FUG	0.00001	0.0	0.00000	5.75E-07	885	6.50E-10
2021	CON_PARK	FUG	0.0003	0.7	0.00016	1.96E-05	16,556	1.18E-09
Total			0.0229	45.7	0.0104	0.0013		

**Operation Hours** hr/day = 12days/yr = 365 hours/year = 4380

(7am - 4pm)

Milpitas Park, Well, and Pedestrain Bridge Project Construction Health Impacts Summary

	Maximum Con	centrations				Maximum
	Exhaust	Cance	r Risk	Hazard	Annual PM2.5	
Emissions	PM10/DPM	PM2.5	(per m	illion)	Index	Concentration
Year	$(\mu g/m^3)$	$(\mu g/m^3)$	Child	Adult	(-)	$(\mu g/m^3)$
2019	0.0337	0.0007	5.98	0.10	0.007	0.03
2017	0.0537	0.5070	<i>J</i> . <i>J</i> 0 <i>A</i> 1 17	0.10	0.007	0.05
2020	0.2307	0.3970	41.17	0.72	0.030	0.04
2021	0.1292	0.0019	3.69	0.37	0.026	0.13
Total	-	-	50.8	1.2	-	-
Maximum	0.2507	0.5970	-	-	0.050	0.84

## Maximum Impacts at Construction MEI Location - Unmitigated

# Maximum Impacts at Construction MEI Location - With Mitigation

	Maximum Con	centrations				Maximum
	Exhaust Fugitive		Cance	r Risk	Hazard	Annual PM2.5
Emissions	PM10/DPM	PM2.5	(per m	(per million)		Concentration
Year	$(\mu g/m^3)$	$(\mu g/m^3)$	Child	Adult	(-)	$(\mu g/m^3)$
2019	0.0052	0.0007	0.93	0.01	0.001	0.01
2020	0.0306	0.1402	5.02	0.09	0.006	0.17
2021	0.0215	0.0019	0.61	0.06	0.004	0.02
Total	-	-	6.6	0.2	-	-
Maximum	0.0306	0.1402	-	-	0.006	0.17

## Maximum Impacts at Daycare

		Unmitigated Emissions											
	Maximum Con	centrations			Maximum								
	Exhaust	Fugitive	Child	Hazard	Annual PM2.5								
Construction	PM2.5/DPM	PM2.5	Cancer Risk	Index	Concentration								
Year	$(\mu g/m^3)$	$(\mu g/m^3)$	(per million)	(-)	$(\mu g/m^3)$								
2019	0.0020	0.0000	0.1	0.00	0.00								
2020	0.0867	0.1723	3.4	0.02	0.26								
2021	0.0190	0.0008	0.7	0.00	0.02								
Total	-	-	4.2	-	-								
Maximum	0.0867	0.1723	-	0.017	0.26								

#### Milpitas Park, Well, and Pedestrai - Unmitigated Emissions Maximum DPM Cancer Risk Calculations From Construction Impacts at Off-Site Receptors-1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where:  $CPF = Cancer potency factor (mg/kg-day)^{-1}$ 

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose =  $C_{air} x DBR x A x (EF/365) x 10^{-6}$ 

Where:  $C_{air} = concentration in air (\mu g/m^3)$ 

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

 $10^{-6}$  = Conversion factor

Values

			Adult		
Age>	<b>3rd Trimester</b>	16 - 30			
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

\* 95th percentile breathing rates for infants and 80th percentile for children and adults

#### Construction Cancer Risk by Year - Maximum Impact Receptor Location

			nfant/Child	- Exposure	Informatio	Infant/Child	Adult - F	xnosure Info	ormation	Adult	1	
	Exposure			Laposure		Cancer	Mod	eled		Cancer		
Exposure	Duration		DPM Con	e (ug/m3)	Sensitivity	Rick	DPM Con	c (ug/m3)	Sensitivity	Risk	Fugitive	Total
Vear	(vears)	Age	Vear	Annual	Factor	(per million)	Vear	Annual	Factor	(ner million)	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2019	0.0337	10	0.46	2019	0.0337	-	- -	1.000	1 1/121
1	1	0-1	2019	0.0337	10	5 53	2019	0.0337	1	0.10	0.0007	0.0344
2	1	1-2	2020	0.2507	10	41.17	2020	0.2507	1	0.72	0.5970	0.8405
3	1	2-3	2021	0.1292	3	3.69	2021	0.1292	1	0.37	0.0019	0.1311
4	1	3-4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5-6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increas	ed Cancer R	lisk				50.8				1.19		

\* Third trimester of pregnancy

#### Milpitas Park, Well, and Pedestrai - Mitigated Emissions Maximum DPM Cancer Risk Calculations From Construction Impacts at Off-Site Receptors-1.5 meter

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where:  $CPF = Cancer potency factor (mg/kg-day)^{-1}$ 

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose =  $C_{air} x DBR x A x (EF/365) x 10^{-6}$ 

Where:  $C_{air} = concentration in air (\mu g/m^3)$ 

DBR = daily breathing rate (L/kg body weight-day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

 $10^{-6}$  = Conversion factor

Values

			Adult		
Age>	<b>3rd Trimester</b>	0 - 2	2 - 9	2 - 16	16 - 30
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

\* 95th percentile breathing rates for infants and 80th percentile for children and adults

#### Construction Cancer Risk by Year - Maximum Impact Receptor Location

		ľ i	Infant/Child	- Exposure	Informatio	Infant/Child	Adult - E	xposure Info	ormation	Adult		
	Exposure				Age	Cancer	Mod	eled	Age	Cancer		
Exposure	Duration		DPM Con	c (ug/m3)	Sensitivity	Risk	DPM Con	c (ug/m3)	Sensitivity	Risk	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	PM2.5	PM2.
0	0.25	-0.25 - 0*	2019	0.0052	10	0.07	2019	0.0052	-	-		
1	1	0 - 1	2019	0.0052	10	0.86	2019	0.0052	1	0.01	0.0007	0.0059
2	1	1 - 2	2020	0.0306	10	5.02	2020	0.0306	1	0.09	0.1402	0.1695
3	1	2 - 3		0.0215	3	0.61	2021	0.0215	1	0.06	0.0019	0.0234
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00		
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00		
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00		
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00		
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00		
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00		
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00		
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00		
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00		
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00		
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00		
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00		
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00		
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00		
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00		
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00		
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00		
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00		
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00		
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00		
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00		
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00		
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00		
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00		
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00		
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00		
Total Increas	ed Cancer R	lisk				6.6				0.16		

\* Third trimester of pregnancy

#### Mabel Mattos Elementary School, Milpitas, CA - Construction Impacts - Without Mitigation Maximum DPM Cancer Risk Calculations From Construction Daycare - 1.0 meters - Child Exposure

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where:  $CPF = Cancer potency factor (mg/kg-day)^{-1}$ 

ASF = Age sensitivity factor for specified age group

ED = Exposure duration (years)

AT = Averaging time for lifetime cancer risk (years)

FAH = Fraction of time spent at home (unitless)

Inhalation Dose =  $C_{air} \times DBR \times A \times (EF/365) \times 10^{-6}$ 

Where:  $C_{air} = \text{concentration in air } (\mu g/m^3)$ DBR = daily breathing rate (L/kg body weight-day) A = Inhalation absorption factor EF = Exposure frequency (days/year)  $10^{-6} = \text{Conversion factor}$ 

Values

		Infant/Child											
Age>	<b>3rd Trimester</b>	0 - 2	2 - 9	2 - 16	16 - 30								
Parameter													
ASF =	10	10	3	3	1								
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00								
DBR* =	361	1090	861	572	261								
A =	1	1	1	1	1								
EF =	350	350	350	350	350								
AT =	70	70	70	70	70								
FAH =	1.00	1.00	1.00	1.00	0.73								

\* 95th percentile breathing rates for infants and for school children

#### Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Child - Exposure Information			Child		
	Exposure			Age*	Cancer	Maximum	
Exposure	Duration	DPM Conc (ug/m3)		Sensitivity	Risk	Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	PM2.5	PM2.5
1	1	2019	0.0020	3	0.08	0.00001	0.0020
2	1	2020	0.0867	3	3.38	0.1723	0.2590
3	1	2021	0.0190	3	0.74	0.0008	0.0198

\* Students assumed to be from 2 to 9 years of age

# **Attachment 4: Screening Community Risk Calculations**


BAY AREA AIR QUALITY MANAGEMENT D DETAIL POLLUTANTS - ABATED MOST RECENT P/O APPROVED (2014)	DISTRICT Pri	nted:	MAR 18, 2019	
Courtesy Auto Service (P# 7611)				
S# SOURCE NAME MATERIAL SOURCE CODE THROUGHPUT DATE	POLLUTANT	CODE	LBS/DAY	
1 Spray Booth				
SG52A048	Putul acatata	10	1 225 01	
	Mothyl othyl kotopo (MEK)	160	7 355 02	
	Opganic liquid ovan othe	201	1 825 01	
SG62C522	organic iiquid evap - oche	201	1.022-01	
	Organic liquid evap - othe	201	5.69E-02	
	Butyl cellosolve	522	3.06E-03	
SG700318	Propylene glycol monomethy	579	1.22E-03	
	Hydrocarbon - mixtures, ot	318	1.64E-01	

# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Roge	ester Contact Information			
Table A: Requ	lester contact information	For Air District assistance, the following steps must be completed:		
Date of Request	3/11/2019			
Contact Name	Mimi McNamara	1. Complete all the contact and project information requested in <b>Table A</b> ncomplete forms will not be processed. Please include a		
Affiliation	Illingworth & Rodkin, Inc.	project site map.		
Phone	707-794-040 X111	2. Download and install the free program Google Earth, http://www.google.com/earth/download/ge/, and then download the county		
Email	mmcnamara@illingworthrodkin.co m	specific Google Earth stationary source application files from the District's website, http://www.baaqmd.gov/Divisions/Planning-and- Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx. The small points on the map represent stationary sources permitted by the		
Project Name	Milpitas Bridge Project	District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hoard lindex, and MA2. Sourcentration		
Address	1768 McCandless Drive	nazaru index, and Fivz.3 concentration.		
City	CA 95035	3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.		
County	Santa Clara	4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the		
Type (residential,		source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.		
commercial, mixed		5. List the stationary source information in Table B section only		
use, muustriai,	Bark			
Project Size (# of	Faix	6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level		
units or building		data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have		
square feet)	4 acres	aiready been modeled and cannot be adjusted further.		
Comments: Is this s	tationary source still active?	<ol> <li>Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.</li> </ol>		
		Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.		

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

			Table B: 0	Google Ear	th data					
Distance from Receptor (feet) or						2	3	4	5	
MEI	Facility Name	Address	Plant No.	Cancer Risk <sup>-</sup>	Hazard Risk <sup>-</sup>	PM <sub>2.5</sub> *	Source No. <sup>-</sup>	Type of Source	Fuel Code <sup>-</sup>	Status/Comments
твр	Courtesy Auto Service	300 Sango Court	7611		0.0000		1	Spray Booth		Emissions file attache

Footnotes: 1. Maximally exposed individual

2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.

3. Each plant may have multiple permits and sources.

4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.

5. Fuel codes: 98 = diesel, 189 = Natural Gas.

6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.

7. The date that the HRSA was completed.

8. Engineer who completed the HRSA. For District purposes only.

9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.

10. The HRSA "Chronic Health" number represents the Hazard Index.

11. Further information about common sources:

a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.

b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard

c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.

d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but

e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.

f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.

g. This spray booth is considered to be insignificant.

Date last updated:

03/13/2018

**APPENDIX B** 

**BIOTIC CONSTRAINTS ANALYSIS** 





Milpitas Transit Area Specific Plan Projects Biotic Constraints Report

HTH #4251-01

Prepared for:

David J. Powers & Associates, Inc.

1871 The Alameda, Suite 200 San Jose, CA 95126 Attn: Julie Wright

Prepared by:

H. T. Harvey & Associates

January 15, 2019

# **Table of Contents**

Section 1. Introduction	
1.1 Project Description	
1.1.1 Park Project (Project No. 5102)	
1.1.2 Water Supply Well Project (Project No. 7076)	
1.1.3 Pedestrian Bridge Project (Project No. 2005)	
1.2 Project Study Area	
Section 2. Methods	6
Section 3. Results	
3.1 General Site Conditions	
3.2 Potential Biological Constraints	
3.2.1 Potential Waters of the U.S./State and Riparian Habitats	
3.2.2 Special-Status Status Plants	
3.2.3 Special-status wildlife	
3.2.4 Nesting birds	
Section 4. Cumulative Impacts	
Section 5. Literature Cited	

# **Figures**

Figure 1.	Vicinity Map	4
Figure 2.	Project Study Area Map	5
Figure 3.	CNDDB Plant Records	7
Figure 4.	CNDDB Animal Records	8
Figure 5.	Biotic Habitats Map1	2
0	1	

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# 1.1 Project Description

The City of Milpitas (Milpitas) proposes three separate projects under the Milpitas Transit Area Specific Plan: a park, a water supply well, and a bridge over Penitencia East Channel. These three separate projects are all located on a single vacant parcel located along the east side of McCandless Drive near the Great Mall shopping center between Montague Expressway and Great Mall Parkway in the southern part of the City of Milpitas, Santa Clara County, California (Figure 1). The purpose of this biotic constraints report is to discuss biological resources that could potentially be impacted significantly under the California Environmental Quality Act (CEQA) and/or for which regulatory agency approvals or mitigation measures may be required as a result of implementing these three projects. Due to their proximity and the fact that they will be constructed concurrently, the three projects will be analyzed together and are henceforth referred to as the "Project".

The McCandless park, production water well and pedestrian bridge are all separate City projects. All three projects are in the approved 2018-2023 Capital Improvement Program. The park is defined in the adopted Transit Area Specific Plan (TASP) Policy 3.49, which provides for a jointly used park between the City and the Milpitas Unified School District. The production water well is a response to meet the increase in water demands due to growth in the TASP area and neighboring Midtown area. The pedestrian bridge provides access from a residential development currently under construction and the multi-use trail north of the creek to the new park and elementary school south of the creek. The three Project components are described in more detail below.

# 1.1.1 Park Project (Project No. 5102)

The park project (Project No. 5102) provides for a new public park directly north of the newly constructed Mabel Mattos elementary school along McCandless Drive. The four-acre park will include joint-use lighted sports field and all-inclusive play areas for the city and the elementary school. All-inclusive play areas will be for all abilities and all ages. Key features of the play areas include inclusive interactive play equipment, fully accessible play structures and slide mounds, all-inclusive swings, musical garden/performing arts areas, barn-themed party area and whimsical shade structures. There will be permanent shade structures with picnic tables and charcoal barbeques within the park picnic area, a walking trail that loops around the park, a fenced community garden with storage shed, an eight-stall restroom building with equipment storage and drinking fountain, a fenced dog play area with separate areas for large and small dogs, parcourse fitness stations, landscaping and site safety lighting. The Mabel Mattos Elementary School project constructed the joint-use parking and basketball courts. Landscaping will include "butterfly food" or habitat plants, native plants, ornamental plants and shade trees and will be irrigated with recycled water. Landscaping within the existing PG&E easement will adhere to PG&E requirements. Eight-foot black chain link fence and four-foot ornamental fence will be installed where needed. The restroom building will be elevated above the flood area.

A paved access road from McCandless Drive through the park will be provided for the production water well and emergency and maintenance vehicles. Access to the elementary and adjacent residential developments will be provided. Underground utilities for water, recycled water, sewer, storm drain, electrical power and communication will be installed to serve the park. The park will be available from dawn to dusk, 365 days. It is expected that site safety lighting will be in place from dusk to dawn. The lighted sports field may be available for use until 10:00 pm.

### 1.1.2 Water Supply Well Project (Project No. 7076)

The well project (Project No. 7076) will construct a production water well located within a fenced and secured 100-foot by 100-foot area (well site) at the southeast corner of the parcel. The production water well will be at least 50 feet from the two property lines so that the City can demonstrate its protection of the State-required 50-foot control zone. Because there will be no building or enclosure around the well head for sound attenuation, a submersible pump and motor will be installed. The well head will be a concrete structure with dimensions of approximately three feet by three feet by two feet tall to allow room for the sounding tubes and vent. The pump will be set approximately 250 feet below ground surface. The motor will be sized to allow the pump to deliver approximately 1,000 gallons per minute. The well is expected to be approximately 600 feet deep.

The well site will include a one-story building for electrical, instrumentation and chemical feed, an above ground filter vessel treatment system, and an above ground backwash tank. The building will have a wall separating the wet chemicals and dry electrical/instrumentation. Materials for the chemical storage and feed systems will be selected based on chemical compatibility and corrosion resistance. Measures to prevent or mitigate for chemical spills will be in place. The final blended well water quality will not be known until the well is completed. However, the oxidation and filtration system will be designed to remove contaminants found from the results of the test well sampling. The proposed filter vessel includes three internal filter cells with two filter media layers in each filter cell. The three filter cells will be backwashed to provide relatively equivalent clean filter media conditions. The above ground backwash tank will capture the backwash from all the three filter cells and will be sized accordingly. The accumulated backwash water will discharge to a nearby sewer at a low flow rate to minimize impact on the existing main sewer system.

The well site will be elevated above the flood area. The entire fenced area will be paved with either concrete or asphalt paving and curbed in order for all runoff to be directed to a storm drain. No landscaping will be provided within the fenced area. Site security and task lighting will be provided. Backup power will be through an offsite generator transported onto the site on an emergency basis. Underground utilities for water, sewer, storm drain, and electrical power will be installed to serve the well site. It is expected that an antenna will be constructed for radio communication between this site and another City pump station to the north. A paved access road will be provided from McCandless Drive through the park, with a one-way entrance and exit through the well site, for periodic maintenance use as well as for regular maintenance use or material deliveries.

### 1.1.3 Pedestrian Bridge Project (Project No. 2005)

The pedestrian bridge project (Project No. 2005) will span the Penitencia East Channel midway between the Montague Expressway and McCandless Drive. The south bridge approach lands at the northeast corner of the parcel. The project includes a pre-fabricated bridge span, elevated bridge abutments, retaining walls along the north side of the creek, fill slope along the south side of the creek and raised trails on both sides of the channel. The retaining walls and raised trails will be required in order for the existing trail to conform to the bridge deck which will be three to five feet above existing grade. The elevated bridge abutments will extend three to five feet above the existing ground surface so that the bottom of the span clears the top of bank on both sides of the channel. It is expected that no structures or fill will be placed within the channel (i.e. below the top of bank). All grading, abutments and support structures will be located outside the top of banks of the channel. Accessible path will be provided to the park and to the adjacent residential development to the east. Site lighting will be installed on the park side, close to the bridge approach and fencing and railing will be installed where necessary.

# 1.2 Project Study Area

The Project footprint and study area are shown on Figure 2. The Project footprint encompasses the maximum area of direct permanent and temporary impacts related to the Project and includes the proposed park area, the footprint of the proposed pedestrian bridge, and the water supply well. The study area is expanded around this area to evaluate resources that are outside work limits but may be indirectly impacted by the Project. The total size of the study area is 5.87 acres (ac) and the total area of the Project footprint is 4.77 ac.



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Figure 1. Vicinity Map Milpitas Transit SP Biological Constraints Report (4251-01) January 2019



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Figure 2. Project Study Area Map Miltpitas Transit SP Biological Constraints Report (4251-01) January 2019 Prior to conducting a site visit, H. T. Harvey and Associates ecologists reviewed background information on the sensitive biological resources potentially present in the Project study area. The information reviewed included records from the California Natural Diversity Database (CNDDB 2018) and the CNPS's Online Rare Plant Inventory (2018), focused on the *Milpitas, California* U.S. Geological Survey (USGS) 7.5-minute quadrangle (where the study area occurs) and the surrounding eight quadrangles: *Newark, Niles, La Costa Valley, Mountain View, Calaveras Reservoir, Cupertino, San Jose West, and San Jose East.* Our searches focused on the distribution and habitats of vascular plants designated as California Rare Plant Rank (CRPR) 1A, 1B, 2A, 2B, or 3 that occur in any of the USGS quadrangles listed above. We also considered the CNPS plant list for Santa Clara County, as the CNPS does not maintain quadrangle-level records for CRPR 4 species.

We also reviewed CNDDB records for special-status animals and natural communities of concern in the vicinity. For the purposes of this report, the project vicinity is defined as the area within a 5-mile (mi) radius of the study area. A map of CNDDB plant and animal records in the study area's vicinity is shown as Figure 3 and 4. This generalized map shows areas where special-status species are known to occur or have occurred historically. Additionally, the Natural Resources Conservation Service (NRCS) Web Soil Survey was used to identify soils that underlay the study area (NRCS 2018), and the USFWS's National Wetland Inventory (NWI) Wetlands Mapper was consulted to review pre-existing mapping of aquatic features, including wetlands, streams, and sloughs, that may be present in the study area (NWI 2018). Historical aerial imagery of the study area obtained from Google Earth Pro (Google, Inc. 2018) and Nationwide Environmental Title Research (NETR 2018) was also evaluated. Other information reviewed included various technical publications available through the USFWS, CDFW, and other sources.

H. T. Harvey & Associates wildlife ecologist Craig Fosdick, M.S., and plant and wetland ecologist Matthew Moser, surveyed the study area on November 19 and 20, 2018. The purpose of this reconnaissance survey was to (1) assess existing biotic habitats and plant and animal communities in the project vicinity, (2) assess the site for its potential to support special-status species and their habitats, and (3) identify potential jurisdictional habitats (such as waters of the U.S./state), although a formal wetland delineation was not conducted. The November 19 survey by Mr. Moser included a protocol-level survey of suitable habitat for Congdon's tarplant tarplant (*Centromadia parryi* ssp. *congdonii*), a CRPR 4 species which can persist in disturbed grasslands and has been documented by the CNDDB in the project vicinity.

H. T. Harvey & Associates mapped biotic habitats within the study area using a combination of field observations (recorded via the Apple iPad GIS Kit Pro application) and aerial imagery signatures. Habitat types were distinguished using natural community descriptions discussed in Holland (1986) and Sawyer et al. (2009). Plant species within each habitat were identified using Baldwin et al. (2012). A Trimble submeter Global Positioning System (GPS) was used to delineate the ordinary high water mark (OHWM) and top of bank of Penitencia East Channel. Habitat acreages were calculated using geographic information systems (GIS) and aerial imagery interpretation.





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most beautiful jewelflower most beautiful jewelflower

Santa Clara

anta Clara red ribbons

chaparralharebell

maple-leaved checkerbloom fragrant fritillary Hall's bush-mallow

Lake

Tully Rd

Legend



Figure 3. CNDDB Plant Records Milpitas Transit Area SP Biological Constraints Report (4251-01) January 2019





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Figure 4. CNDDB Animal Records Milpitas Transit Area SP Biological Constraints Report (4251-01) January 2019

# 3.1 General Site Conditions

The approximately 6-acre (ac) study area encompasses a previously developed vacant lot that as recently as summer of 2013 was occupied by a large building surrounded by paved parking and landscaping (Google, Inc. 2018 and NETR 2018). The study area is bounded to the north by the Penitencia East Channel, McCandless Drive (a four lane boulevard) to the west, and the recently constructed Mabel Mattos Elementary School to the south. The study area is located primarily within parcels APN 086-41-044 and APN 086-41-043. Fencing separates the creek, which is owned by Santa Clara Valley Water District (SCVWD), from the remainder of the parcels to the south.

The study area is relatively flat with elevations ranging from approximately 35 to 40 feet (ft) (WGS84) (Google, Inc. 2018). Soils are dominated by the Urbanland-Hangerone complex, 0 to 2 percent slopes, drained, and the Urbanland-Newpark complex, 0 to 2 percent slopes (NRCS 2018). Neither of these soils are considered hydric by the NRCS (2018), which would indicate a soil being developed under conditions of long-term saturation, resulting in anaerobic conditions like those found in wetlands.

The Penitencia East Channel is a mapped in the NWI (2018) as a temporary flooded, excavated (man-made), intermittent stream. This stormwater conveyance feature is a trapezoidal channel maintained by the SCVWD for flood protection, water resource management, and stream stewardship. The channel is a part of the Lower Penitencia Watershed, and flows into the lower Penitencia Creek approximately 380 feet east of McCandless Drive.

Land cover types in the study area are shown on Figure 5. Land cover in the study area is dominated by the developed/landscaped habitat type (5.51 ac). This land cover type largely consists of the previously developed gravel lot which covers the majority of the study area. While this area is almost entirely un-vegetated, there are small patches of non-native species such as stinkwort (*Dittrichia graveolens*) and wild oat (*Avena* sp.). Along the northern edge of this land cover type, bordering the Penitencia East Channel, is a row of six to eight foot tall ornamental shrubs consisting of oleander (*Nerium oleander*) and African sumac (*Searsia lancea*). This land cover type also includes the gravel access road along the northern border of the Penitencia East Channel, which is presently developed and utilized as a public access trail inbetween the channel and the newly constructed residential development to the north.

The study area also contains the following additional land cover/habitat types: ruderal grassland levee slope (0.21 ac) and perennial stream/freshwater marsh (0.15 ac). The ruderal grassland levee slope habitat type is dominated by bristly ox-tongue (*Helminthotheca echioides*), wild oat, and wild radish (*Raphnus sativus*), amongst other non-native vegetation. The limit of this habitat type was defined both by the vegetation composition, and

occurs between the OHWMs and the tops of banks of the Penitencia East Channel. The perennial stream/freshwater marsh habitat type was limited to the Penitencia East Channel within its ordinary high mark (OHW) mark. The channel flows from east to west, and was running with approximately six inches of water during the November survey. The freshwater marsh component of this land cover type is dominated by cattail (*Typha* sp.) and tall flatsedge (*Cyperus eragrostis*), and occupies approximately 20% of the channel, with the other 80% composed of open water.

The developed/landscaped habitat on the proposed project footprint is of relatively low value to wildlife due to the general lack of vegetation, and the predominance of non-native species where vegetation is present. American pipits (*Anthus rubescens*), lesser goldfinches (*Spinus psaltria*), and American crows (*Corrus brachyrhynchos*) were all observed using the gravel lot during the reconnaissance survey. The row of non-native ornamental shrubs bordering the Penitencia East Channel on the project site provides nesting and foraging opportunities for some urban-adapted species. White-crowned sparrows (*Zonotrichia leucophrys*), house sparrows (*Passer domesticus*), house finches (*Haemorhous mexicanus*), Anna's hummingbirds (*Calypte anna*), bushtits (*Psaltriparus minimus*), yellow-rumped warblers (*Setophaga audubonii*), and black phoebes (*Sayornis nigricans*) were all observed foraging in the ornamental shrubs during the reconnaissance survey. Anna's hummingbirds, bushtits, and house finches may all nest in these ornamental shrubs. Few species of reptiles and amphibians occur in the developed/landscaped habitat on the project site due to its disturbed nature and low habitat heterogeneity. Nevertheless, reptiles such as the western fence lizard (*Sceloporus occidentalis*) may occur in this habitat. Common urban-adapted mammal species that may occur on the project site include the native raccoon (*Procyon lotor*) as well as the non-native house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and black rat (*Rattus rattus*).

Common, urban-adapted bird species found elsewhere in the study area likely also occur in the ruderal grassland levee slope, although this habitat has limited value for wildlife, due to its linear nature and its isolation from large, contiguous tracts of grassland. At least two feral domestic cats (*Felis catus*) were observed in this habitat, one hiding in the entrance to a California ground squirrel (*Otospermophilus beecheyi*) burrow—their presence further reducing the value of the habitat for wildlife. No ground squirrels were observed. White-crowned sparrows, house sparrows, house finches were all observed foraging in the ruderal grassland. Rock pigeons (*Columba livia*), a non-native species, likely also forage in this habitat.

The perennial stream/freshwater marsh habitat found in the Penitencia East Channel provides foraging habitat for some urban-adapted species associated with aquatic habitats, such as mallards (*Anas platyrbynchos*), great egrets (*Ardea alba*), snowy egrets (*Egretta thula*), black phoebes, as well as some migrants perhaps not typically associated with urban areas, such as Wilson's snipe (*Gallinago delicata*), one of which was flushed from the channel during the reconnaissance survey.

No old nests of raptors were observed on the site, or in the study area, during the reconnaissance survey. Further, an examination of the trees on the site failed to find any large cavities that might provide suitable habitat for a large roosting or maternity colony of bats. In general, the three habitats identified in the study area provide habitat for certain common, urban-adapted wildlife species typically associated with urban development. The study area, which does not contain sensitive habitat, and which is embedded within a developed landscape characterized by extensive commercial and residential development, is isolated from extant regional wildlife populations and does not provide habitat for species that require high-quality, contiguous habitat.





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tats Map.

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Figure 5. Biotic Habitats Map Miltpitas Transit SP Biological Constraints Report (4251-01) January 2019

# 3.2 Potential Biological Constraints

The following section describe the potential biological constraints to development of the proposed projects. For each potential constraint, we describe the sensitive resource's potential to occur in the study area, potential CEQA and regulatory considerations associated with the constraint, and measures typically required to mitigate significant impacts to a less-than-significant level.

# 3.2.1 Potential Waters of the U.S./State and Riparian Habitats

**Potential for Occurrence.** The study area contains a single waterway, the Penitencia East Channel, that meets the physical criteria of waters of the U.S./state (i.e., jurisdictional waters). Figure 5 shows the boundaries of this features, which was mapped in the field with a submeter GPS unit based on field observations. It is our opinion that this channel would be claimed as waters of the U.S. by the USACE and as waters of the State by the RWQCB, and we expect this channel to be subject to the jurisdiction of the CDFW under Section 1600 of the California Fish and Game Code.

The jurisdiction of the RWQCB and CDFW along a channel may be broader than the USACE's jurisdiction and may extend from the low-flow channel upslope/landward to the top of bank or to the outer edge of the riparian canopy, whichever is greater. In the case of the Penitencia East Channel within the study area, all patches of hydrophytic vegetation are situated below the top of bank. Therefore the jurisdiction of the RWQCB and CDFW would be at top of bank of the channel, and USACE jurisdiction would only extend to the OHWMs of the channel.

No riparian habitats (outside of the top of bank of the Penitencia East Channel) or other sensitive natural communities are present on the project site, and thus none will be directly impacted by the project.

**CEQA and Regulatory Considerations.** Impacts on a jurisdictional feature, such as the Penitencia East Channel, and any in-channel wetlands, would likely be considered significant under CEQA unless mitigated. CEQA mitigation measures would typically include measures to avoid and minimize impacts on the jurisdictional habitats, both during project construction and in the long term (e.g., avoidance of substantial changes in the hydrology of a channel), as well as compensatory mitigation if development results in the temporary or permanent loss of jurisdictional habitat. Such measures could include restoration and monitoring of temporary impacts, and creation or restoration of aquatic or riparian habitat to compensate for permanent loss.

In addition, these features are expected to be regulated by the USACE under Section 404 of the CWA, by the RWQCB under Section 401 of the CWA and under the Porter-Cologne Water Quality Control Act, and (for streams) by the CDFW under Section 1600 of the California Fish and Game Code. As a result, any impacts (permanent or temporary) on these features would necessitate permits from those agencies, and those permits would likely have conditions that include compensatory mitigation.

The component of the project with any potential to significantly impact jurisdictional habitats would be the pedestrian bridge crossing the channel to connect the proposed McCandless Park with the existing residential area to the north. As currently designed, footings for the pedestrian bridge would be outside of the top of the bank of the creek and therefore outside of the limits of the USACE, RWQCB and/or CDFW jurisdiction. No work is anticipated within the channel.

Reductions in ambient light levels in wetland habitat can lead to a decrease in the amount of aquatic vegetation present, which results in a reduction in primary production, as well as the amount of cover and herbaceous food available in the wetland habitat. The proposed pedestrian bridge would result in a new source of shading in the form of a 10 foot wide span across the Penitencia East Channel. Thus, the project has the potential to affect vegetation directly under the span or within its shadow due to changes in ambient lighting (i.e., shading). However, the wetland vegetation underneath the proposed pedestrian bridge is dominated by cattails and flatsedge, fast-growing, weedy, wetland plant species, that would not be expected to substantially decrease in density from the increased shading, especially given the raised bridge soffit elevation above top of bank. Therefore, this impact would not be considered significant.

Projects causing land disturbances that are equal to one acre or greater must comply with State requirements to control the discharge of stormwater pollutants under the NPDES/Construction General Permit. Prior to the start of construction/demolition, a Notice of Intent must be filed with the State Water Board describing the project. In complying with State requirements to control the discharge of stormwater pollutants under the NPDES/Construction General Permit, the Project will be required to develop and maintain a Storm Water Pollution Prevention Plan (SWPPP), which would include the use of BMPs to protect water quality until the site is stabilized. Standard permit conditions under the NPDES/Construction General Permit require that the applicant utilize various measures including: on-site sediment control best management practices, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors. Additionally, in many Bay Area counties, including Santa Clara County, projects must also comply with the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (MRP) (Water Board Order No. R2-2009-0074). This MRP requires that all projects implement BMPs and incorporate Low Impact Development practices into the design that prevents stormwater runoff pollution, promotes infiltration, and holds/slows down the volume of water coming from a site. In order to meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors. Compliance with both of these permits will prevent significant negative water quality impacts and improve stormwater runoff compared to existing conditions at the Project site, and further avoid impacts on the Penitencia East Channel.

**Typical Mitigation Requirements.** If construction of the pedestrian bridge is implemented as designed, wherein the bridge footings are located outside the top of bank of the Penitencia East Channel, and all temporary construction-related ground disturbance for the pedestrian bridge is limited to the area outside of the top of bank, then impacts on waters of the U.S./state and riparian habitats would be avoided and mitigation

would not be required. Measures to assure avoidance of impacts to the Penitencia East Channel would include, installation of construction fencing along the top of bank, BMPs described above as part of the Project SWPPP, and post-construction restoration of the temporarily impacted areas around the bridge footings near the channel with native species.

### 3.2.2 Special-Status Status Plants

**Potential for Occurrence**. A list of 52 special-status plant species thought to have some potential for occurrence in the study area vicinity was compiled using CNPS lists (CNPS 2018) and CNDDB records (CNDDB 2018). Analysis of the documented habitat requirements and occurrence records associated with all of the species considered allowed us to reject 51 of the 52 species as not having a reasonable potential to occur in or immediately adjacent to the study area for at least one of the following reasons: (1) lack of suitable habitat types; (2) absence of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range on the study area; and/or (4) the species is presumed extirpated. As the study area is largely composed of as previously developed lot, as well as areas with little habitat value (i.e., ruderal habitat and developed or landscaped land cover), the study area does not have the capacity to support most special-status plants.

Suitable habitat, edaphic requirements, and elevation range were determined to be present in the study area for one plant species, Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), which can persist in disturbed grasslands and has been documented by the CNDDB in the project vicinity (Figure 2). Congdon's tarplant is a CNPS Rank 1B.2 species. While there is suitable habitat for Congdon's tarplant within the study area (the ruderal grassland on the banks of the Penitencia East Channel) no suitable habitat occurs within the project footprint. A survey for Congdon's tarplant was conducted by H. T. Harvey & Associates plant ecologist Matthew Moser on November 19, 2018. This survey was conducted at the end of the bloom period for Congdon's tarplant when the species would have been apparent and identifiable if present. No individuals of this species were observed. Therefore, this species is determined to be absent from the study area.

**Potential CEQA and Regulatory Considerations.** Survey's for Congdon's tarplant were conducted at a time of year when the plants would have been identifiable and apparent if present. Therefore, in our opinion, this species is considered absent from the study area. Impacts on special-status plant species from the project would not be considered significant under CEQA.

Typical Mitigation Requirements. Mitigation for special-status plants would not be considered necessary.

# 3.2.3 Special-status wildlife

**Potential for Occurrence**. A list of special-status animal species thought to have some potential for occurrence in the study area vicinity (a 5-mi radius centered on the project footprint) was compiled from CNDDB records (CNDDB 2018) and eBird data (Cornell Laboratory of Ornithology 2018), among other sources. Figure 3

depicts CNDDB records of special-status animal species in the general project vicinity. This generalized map shows areas where special-status species are known to occur or have occurred historically.

Analysis of the documented habitat requirements and occurrence records associated with all of the species considered allowed us to reject essentially all of the species as having no reasonable potential to occur in or immediately adjacent to either the project footprint or the study area for at least one of the following reasons: (1) lack of suitable habitat types; (2) absence of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the location of the project site within a developed landscape characterized by extensive commercial and residential development, and isolated from extant regional wildlife populations by two major freeways; (4) the lack of connectivity to tidal waters of the South Bay, and/or (5) the species is presumed extirpated.

Special-status fish species present in the South Bay and some of its tributaries include two federally threatened species, the green sturgeon (Acipenser medirostris) and the Central California Coast steelhead (Oncorhynchus mykiss), along with the longfin smelt (Spirinchus thaleichthys), listed as threatened under the California Endangered Species Act (CESA), and the Central Valley fall-run Chinook salmon (Oncorbynchus tshanytscha), a California Species of Special Concern (CSSC). However, none of these special-status fish species are expected to occur in the project study area because the Penitencia East Channel, although connected to the Lower Penitencia Creek (which connects to the San Francisco Bay), is not tidally influenced and is too shallow to support habitat for any of these species. Moreover, there is no spawning habitat for any of these species upstream of the project study area. Likewise, the absence of large, contiguous patches of salt marsh and the isolation of the study area from South Bay marshes precludes the presence of four special-status species known to occur in salt marsh habitatthe federally and state endangered salt marsh harvest mouse (Reithrodontomys raviventris); the federally and state endangered California Ridgway's rail (Rallus obsoletus obsoletus); the state threatened California black rail (Laterallus jamaicensis coturniculus); and the salt marsh wandering shrew (Sorex vagrans halicoetes), a CSSC. Likewise, two special status species, the California red-legged frog (Rana draytonii), which is federally threatened and also a CSSC, and the California tiger salamander (Ambystoma californiense), which is both federally and state threatened, do not occur in the study area or on the valley floor. Populations of the California tiger salamander located on the valley floor have been extirpated due to habitat loss, and the species is now considered absent from the majority of the valley floor, including the study area and the surrounding vicinity (H. T. Harvey & Associates 1999a, 2011b; SCVWD 2011). Populations of the red-legged frog located on the valley floor have been extirpated due to habitat loss and the introduction of non-native predators such as non-native fishes and bullfrogs. Like the tiger salamander, the red-legged frog is now considered absent from the majority of the valley floor, including the project study area and the surrounding vicinity (H. T. Harvey & Associates 1997; SCVWD 2011).

Three special-status species, the burrowing owl (*Athene cunicularia*), western pond turtle (*Actinemys marmorata*), and San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), have some potential to occur in the study area or in the project footprint. These species, their habitat requirements, and associated mitigation requirements, if any, are discussed in further detail below.

**Potential CEQA and Regulatory Considerations** The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or "take", which is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as "take" even if it is unintentional or accidental.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally listed, threatened, and endangered species under FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under FESA, but may become listed in the near future and are often included in their review of a project. No suitable habitat for any federally listed plant or animal species occurs in the study area. Thus, no federally listed plant or animal species are expected to occur in the study area.

The California Endangered Species Act (CESA; California Fish and Game 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 CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in "take" of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. The CDFW, however, has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification." No suitable habitat for any state listed animal species occurs in the study area. Thus, no state listed animal species are expected to occur in the study area.

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests, and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction. Per a December 22, 2017 memorandum issued by the U.S. Department of the Interior, the MBTA's prohibition on taking migratory birds and their active nests applies only to direct, purposeful actions, and does not include take incidental to other activities. All native bird species that occur in the study area are protected under the MBTA. The December 22 memorandum notwithstanding, California Fish and Game Code protects active bird nests, defined as those containing eggs or young.

The California Environmental Quality Act (CEQA) is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. CEQA requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources

such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA are known as the State CEQA Guidelines.

Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The 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 do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Section 15380(b).

Burrowing owl, western pond turtle, and San Francisco common yellowthroat, which have some potential to occur in the study area or in the project footprint are discussed in further detail below.

### 3.2.3.1 Burrowing Owl

The burrowing owl is a California species of special concern and is protected under the California Fish and Game Code.

**Potential to Occur.** The burrowing owl is a small, terrestrial owl that resides in flat or gently sloping open grassland or sparse shrubland ecosystems. Preferred habitats are annual and perennial grasslands, typically with sparse, or nonexistent, tree or shrub canopies. Burrowing owls are found in close association with California ground squirrels, which provide nesting and refuge burrows. Ground squirrels also maintain areas of short vegetation height, which provide foraging habitat and allow for visual detection of avian predators by burrowing owls. The CNDDB reports historical occurrences of burrowing owls from multiple locations in the vicinity of the study area, suggesting that owls may have nested in this region prior to the extensive urban and commercial development in the region (CNDDB 2018; Figure 3). The nearest owls are located approximately 0.65 mi to the northwest of the study area, and 0.81 mi north of the study area (Figure 3). No burrowing owls or sign of burrowing owls were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the ruderal grassland levee portions of the study area. No ground squirrel burrows were detected within the and scape of extensive commercial and residential development do not provide high-quality burrowing owl nesting habitat. It is extremely unlikely that owls would nest in the ruderal grassland along the Penitencia East Channel.

**Potential CEQA and Regulatory Considerations.** As discussed above, owls are not expected to nest in the study area, and unless in the extremely unlikely event that they are found to be actively using the site, any impacts to owl habitat would be considered less than significant, as the site is poor-quality habitat, and therefore not important to regional breeding owl populations. During migration and winter, owls occur more widely, and in a broader array of habitats, so there is a slightly greater likelihood of occurrence of either non-breeding migrants or wintering owls. However, owls that occur as migrants or wintering birds do not seem to be habitat-limited in the South Bay. Owls winter regularly in foothill grasslands on either side of the Santa Clara Valley, yet much of that habitat is unoccupied during winter and fall, so impacts to habitat for migrant or wintering owls would also be less than significant. Finally, because the burrowing owl is not listed under either FESA or CESA, no approvals from the USFWS or CDFW related to this species would be necessary.

However, although we do not expect owls to occur in the study area, we cannot rule out their occurrence. Therefore, to avoid impacts to owls, we recommend that protocol-level preconstruction surveys (CDFW 2012) be conducted to ensure that an owl is not using the site. If an owl is detected, we recommend the implementation of passive relocation during the non-breeding season, and, if an owl is detected during the breeding season, the establishment of an appropriate buffer.

**Typical Mitigation Requirements.** If burrowing owls occurred in the study area during construction of the Project, measures such as preconstruction surveys and avoidance of breeding-season (February 1 through August 31) activities within 250 ft of active burrows would likely be required to avoid and minimize impacts on individuals. In addition, mitigation for loss of habitat, particularly loss of burrowing owl nesting habitat, could be required as a CEQA mitigation measure. Such mitigation would consist of the preservation, enhancement, and management of burrowing owl habitat at on-site and/or off-site conservation areas. The amount of mitigation required would be determined by the CEQA lead agency, but typical mitigation for impacts on breeding habitat may include preservation of 6.5 ac of habitat per pair of owls disturbed. Mitigation is not expected to be required, however, as we do not expect owls to be present, and because we do not consider the habitat to be suitable for breeding or wintering owls. Nevertheless, because owls have occasionally been detected at relatively poor-quality sites in the Bay area, and as described above, we recommend preconstruction surveys prior to initiating any work activities.

None of the proposed project components would impact the ruderal levee grassland. Footings for the pedestrian bridge would be located outside of the top of bank in the developed/landscaped land cover. Impacts would only be quantified and/or mitigation measures implemented if an owl or recent owl sign was detected during preconstruction surveys.

#### 3.2.3.2 Western Pond Turtle

The western pond turtle is a California species of special concern and is protected under the California Fish and Game Code.

**Potential to Occur.** No western pond turtles were observed during our November 20, 2018 site visit, but individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley, and it is possible, although unlikely, that one or two individual western pond turtles could occur in the study area. Suitable habitat for the western pond turtle consists of ponds or instream pools (i.e., slack water environments) with available basking sites, such as logs, and 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). The study area does not contain any ponds or instream pools, and potential basking sites were not detected. Moreover, essentially all of the nearby upland areas have been converted to commercial or residential development, further reducing the likelihood that a turtle would attempt to nest in the study area. Therefore, if an individual pond turtle does occur, it would most likely occur as a dispersing individual.

**Potential CEQA and Regulatory Considerations.** The loss of individual western pond turtles could potentially reduce the viability of the local population to the extent that it would be extirpated, which would be considered significant under CEQA. However, we consider this species to be unlikely to occur in the study area.

**Potential Mitigation Requirements.** Mitigation measures for impacts on western pond turtles would likely include preconstruction surveys for this species to ensure the project does not cause the inadvertent loss of individuals. The proposed project would not result in the permanent or temporary loss of aquatic habitat for turtles, should any turtles be present. Therefore, no compensatory mitigation for impacts to western pond turtles or their habitat would be required for this species. Given that we do not expect turtles to occur in the study area, and that aquatic habitat within the project footprint will not be temporarily or permanently impacted, the proposed project will have a less than significant impact on the western pond turtle.

### 3.2.3.3 San Francisco Common Yellowthroat

The San Francisco common yellowthroat is a California species of special concern and is protected under the California Fish and Game Code.

**Potential to Occur.** No San Francisco common yellowthroats were observed during our November 20, 2018 site visit, and we do not expect this species to nest here. The scattered patches of emergent marsh vegetation are too small and too fragmented, and relatively isolated from other patches of larger, contiguous patches of salt marsh habitat where this species is known to occur in the South Bay. However, dispersing individuals of this species could potentially occur on the sides of the levees along Penitencia East Channel.

**Potential CEQA and Regulatory Considerations.** Impacts on individuals of this species and their habitat would not be considered significant, unless more than a single dispersing yellowthroat was detected, it would not be considered a significant impact. Because the San Francisco common yellowthroat is not listed under FESA or CESA, no approvals from the USFWS or CDFW related to this species would be necessary.

Potential Mitigation Requirements. Mitigation for San Francisco common yellowthroat would not be considered necessary.

# 3.2.4 Nesting birds

Although no special status bird species are expected to nest in the study area or the project footprint, all native bird species that nest within the study area are protected under the Migratory Bird Treaty Act and California Fish and Game Code.

**Potential to Occur.** The ruderal grassland and the ornamental shrubs along the Penitencia East Channel provide suitable nesting habitat for a variety of common bird species such as black phoebe, lesser goldfinch, song sparrow (*Melospiza melodia*), Anna's hummingbird, bushtit, and house finch, all of which were observed in the study area during the site visit. The vacant lot provides suitable nesting habitat for the killdeer (*Charadrius vociferus*).

**Potential CEQA and Regulatory Considerations.** Impacts on active nests of small numbers of common nesting bird species would not be considered significant under CEQA, as such an impact would represent a very small proportion of the regional populations of these species, all of which are regionally common. Only a few nests of a select few common urban-adapted species would be impacted.

**Typical Mitigation Requirements.** Because impacts on small numbers of common nesting bird species would not be considered significant under CEQA, in our opinion, no mitigation measures are warranted under CEQA. Nevertheless, we recommend implementing the following measures to ensure compliance with the MBTA and California Fish and Game Code:

- Construction activities should be avoided during the nesting season (i.e., February 1 through August 31) to the extent feasible.
- Potential nesting substrate (e.g., bushes, trees, snags, grass, and suitable artificial surfaces) that would be impacted by development should be removed during the non-breeding season (i.e., they should be removed between September 1 and January 31), if feasible, to help preclude nesting in the study area.
- If it is not feasible to schedule construction activities during the non-breeding season, then preconstruction surveys for nesting birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during construction activities. This survey should be conducted no more than seven days prior to the initiation of construction activities. During this survey, the ornithologist should inspect all trees, shrubs, and other potential nesting habitats in and immediately adjacent to the study area for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist should determine the extent of a buffer zone to be established around the nest, typically 300 ft for raptors and 100 ft for other birds, to ensure that no nests of species protected by the MBTA or the California Fish and Game Code will be disturbed during construction activities.

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. The cumulative impact on biological resources resulting from the project in combination with other projects in the project area and larger region would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit of impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; compensatory mitigation and proactive conservation measures associated with each project. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

The three proposed projects elements described in this report are part of the Milpitas TASP. The potential impacts of the Milpitas TASP were described and evaluated in the 2007 Draft Environmental Impact Report (EIR), which evaluated the potential impacts of the buildout of the Specific Plan. The project components being evaluated in this report will be implemented in the context of the larger buildout of the TASP. Construction of medium to high density residential development is either complete or in progress on three sides of the Project study area. An elementary school was recently constructed directly to the south of the Project study area.

The Project as described would implement several BMPs and mitigation measures to reduce impacts on both common and special-status species, as described above. Thus, provided that the mitigation measures described in this biotic constraints report are successfully incorporated, the Project will not contribute to substantial cumulative effects on biological resources.

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# **APPENDIX C**

HYDRAULIC ANALYSES

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# DRAFT MEMO

TO:	Steve Sowa, IBI GROUP	DATE:	April 24, 2019
FROM:	Caitlin J. Gilmore, PE Cassandra L. Fagan, PE	JOB #:	IBIG.01.17
SUBJECT:	City Park 100-year Floodplain Analysis		

### Introduction

Schaaf & Wheeler has been working with Hohbach-Lewin and the IBI GROUP in the analysis of the 100-year hydraulic conditions at the City Park (Site) development on McCandless Drive in Milpitas, California. The Site is bounded on the north by East Penitencia Creek, the Houret development on the east, MUSD elementary school to the south, and McCandless Drive to the west. Currently, the Site is an empty lot. The proposed project develops the Site into a park with recreational land use that includes six (6) structures. The Site and surrounding area are shown in Figure 1.



Figure 1: Vicinity Map

### **Model Basis**

This impacts analysis memo is based on combined HEC-RAS and FLO2D models for the Berryessa Creek and Upper Penitencia Creek systems completed by Schaaf & Wheeler in 2013. It represents the best available floodplain information but may not be the same as the effective FEMA FIRM in the area, which while dated February 19, 2014, relies on outdated data from the 1970s. The updated hydrology and hydraulics that form the basis for the 2D model have not been approved or adopted by FEMA; however, they have been submitted to the City of Milpitas and reviewed by the Santa Clara Valley Water District (SCVWD).

### **Detailed Study**

### **Model Description**

The two-dimensional overland flow model for both the existing and proposed project scenarios assumes that the BART-VTA project has been constructed. This includes all mitigation measures which are part of the project, including cross culverts beneath the tracks from East Capitol Avenue to Trade Zone Boulevard. Schaaf & Wheeler used the mitigated post-BART project FLO2D model as the basis for analysis of the City Park project. SVBX mitigation is intended to result in a post-project floodplain that is not substantially different from the pre-project floodplain. The model accounts for the worst case scenario of levee failure according to FEMA standards. This model uses the Berryessa Park Left Levee Failure case on the south side of Berryessa Creek as this levee failure case yields the max water surface elevations in the project vicinity. County LiDAR data was used to represent the existing Site condition.

The basis for the FLO2D model is a combination of County LiDAR data and detailed drawings for BART improvements and mitigation measures, all on the NAVD88 vertical datum. A Manning's roughness value of 0.075 was assigned to areas of overland flow in commercial area due to the presence of buildings and other obstructions such as parked cars and street furniture. Where the detailed Site information was used, a Manning's value of 0.025 was used for the flow paths and the structures were blocked out from the model; thereby not allowing flow to pass through them. A square grid cell size of 50 feet was used for the model. This cell size was chosen because it allowed for enough detail to encompass flow paths such as roadways, but was large enough to allow for reasonable computation times.

#### **Existing Conditions**

During a 100-year storm event, water approaches the Site from the southeast. As a result of spills from Upper Berryessa Creek upstream of Interstate 680 and Upper Penitencia Creek, water flows northwesterly under the VTA alignment through cross culverts toward the Site. Flow continues overland through parcels located between East Capitol Avenue and Trade Zone Boulevard towards the Site. Flow travels westerly through the Site across Montague Expressway and exits the site over McCandless Drive entering Lower Penitencia Creek. The remainder of the flow is captured by East Penitencia Creek until the channel capacity is reached and spills to the north over Great Mall Parkway.

In existing conditions, water moves through the Site and via McCandless Drive to the west and Houret Drive to the east, conveying flows generally west, with a peak flow of approximately 965 cfs across the site. Flow which exits the site travels westerly across McCandless Drive and through the Harmony development towards Penitencia East Creek. Based on the analysis of the existing (pre-project) conditions, the detailed study BFE ranges from 39.1 ft NAVD on the east side of the project site to 36.6 ft NAVD on the west side of the project site as shown in Figure 2. The structure on the proposed project Site shown in Figure 2 has since been demolished.



#### Figure 2: Detailed Study Floodplain

#### **Proposed Project Condition**

Based on the existing conditions modeling, it was determined that during the 100-year design storm a peak flow of approximately 965 cfs approaches the site from the southeast along Houret Court. The water flows across the site westerly from McCandless Drive and Houret Drive, and exits the site travelling along McCandless Drive and through the Harmony development towards Penitencia East Creek. A section of the proposed Site has been designed to remain at existing grade to allow the passage of the 100-year flow peak flow through the site. This flow path will ensure cumulative impacts to the surrounding developments are insignificant (less than one foot of cumulative rise in the BFE).

Due to limitations in the grid cell sizing in the FLO-2D model, this model is not able to accurately depict the overland flow capacity of the flow path. Instead, the required flow path dimensions were calculated using Manning's equation for open channel flow. The flow path was sized assuming a maximum depth of 3-ft, and a flow capacity of 965 cfs which may be seen below in Table 1 along with the manning's roughness coefficient and slope parameters. The flow path calculations are based on the proposed grading plans provided to Schaaf & Wheeler on March 25, 2019 by Hobach-Lewin.



Figure 3: Proposed Flow Path

Flow Path Parameters				
(Minimum) Bottom Width (feet)	56			
Depth (feet)	3.0			
Slope (ft/ft)	0.0043			
Manning's Roughness Coefficient	0.035			
Flow Capacity (cfs)	966			

#### Table 1: Flow Path Parameters

### **Cumulative Impacts**

#### **Downstream Projects**

The Harmony development project is located downstream of the City Park Site, and reduces the base flood elevation by 0.1 feet. Therefore the Harmony development does not adversely impact the site.

#### **Upstream Projects**

The Houret, Milpitas Unified School District (MUSD), and the City Park Pedestrian Bridge projects are located upstream of the Site. These projects can only impact the City Park project by changing the flow routing. The Houret development has impacts of less than 0.1 feet to the WSE at the Site. The cumulative impact from the MUSD project is not known, since the project was exempt from the Milpitas ordinance and a detailed analysis was neither performed nor required. However, the MUSD site generally reduces blockages as it is designed to incorporate large open spaces for play fields.

The City Park Pedestrian Bridge project increases the base flood elevation by a maximum of 0.5 feet adjacent to the bridge approach, and the impacts do not extend to other parcels on the left bank of East Penitencia. Therefore, these projects will not cause a cumulative impact of greater than one foot.

The flow path on the Site has been designed to be able to convey the peak 100-year design flow across the site of 965 cfs, therefore the impact to the upstream Houret and the Milpitas Unified School District (MUSD) developments, and downstream Harmony development are less than 1-foot and may be considered insignificant.

#### **Other Studies**

The FEMA and Santa Clara Valley Water District's Berryessa/Penitencia Cooperating Technical Partnership (CTP) remapping and physical map revision (PMR) project intends to remap the floodplain throughout most of Milpitas, including the City Park Site. This map may result in revised flood risk at the Site. It will be based on similar physical parameters as the BART-VTA FLO2D model but may result in a different floodplain due to differences in modeling and hydrology. This remapping effort was submitted to FEMA in March 2018. Effective map revisions are anticipated to occur after review and acceptance by FEMA and the effected communities.

The FLO2D model previously described was utilized for impacts to all adjacent developments and was therefore used in this study for consistency.

### **FEMA Base Flood Elevations**

According to Flood Insurance Rate Map (FIRM) panel 06085C0067J (Figure 5), the entirety of the Site is located in a FEMA special flood hazard area AO (1FT) indicating an average flood depth of 1 FT throughout the flood hazard zone. For an area that is entirely inundated by the Zone AO Special Flood Hazard Area (SFHA), FEMA methodology dictates that the average existing ground elevation be added to the flood depth to establish the FEMA Base Flood Elevation. The lowest adjacent grade to each structure must be at or above the base flood elevation to be removed from the jurisdictional floodplain.

County LiDAR representing the pre-project condition was used to determine the effective base flood elevations at the Site. The City of Milpitas floodplain ordinance section XI-15-5.1(c)(2) requires that finish floor elevations be 1 foot above the base flood elevation and 1 foot above the highest adjacent grade elevation plus the depth of flooding (HAG+2') within an AO(1) Zone. The City requires projects to design to the most conservative base flood elevation derived from the effective FEMA BFE and the water surface obtained from the new detailed FLO2D model. The structure BFE's are presented below in Table 1 and the structure locations on the Site may be seen in Figure 6.



Figure 5: FEMA Effective Floodplain
Table 2: City Park Base Flood Elevation, NAVD88									
Structure	FEMA BFEHighestPropLAG aboveFFE 1' aboveAO(1)AdjacentLAGBFE?BFE andGrade, HAGLAGBFE?above HA								
Restrooms	38.2	37.2	38.5	Yes	39.2	Yes			
Barn	37.9	37.0	39.0	Yes	39.0	Yes			
Non-Irrigated Planting Area	36.7	36.3	39.0	Yes	39.0	Yes			
Well Structure 1	36.7	37.1	39.1	Yes	39.1	Yes			
Well Structure 2	38	36.5	39.1	Yes	39.1	Yes			
Well Structure 3	36.1	36.5	39	Yes	39	Yes			

# Figure 6: City Park Structures



# Conclusion

The project is located within a special flood hazard area associated with the 100-year floodplain in the FLO-2D BART/VTA model, but there will be no development in the FEMA floodway. Since the City Park development has no adverse effects to the best available information 100-year floodplain and neighboring projects do not adversely impact one another, cumulative impacts will be less than 1 foot and therefore complies with the City of Milpitas floodplain ordinance section XI-15-4.3(a)(4).

The project, being within the special flood hazard area, at the Site must also comply with the following requirements from FEMA and the City of Milpitas to be removed from the floodplain:

- The finish floor elevation is one foot above the highest adjacent grade plus the flood depth thereby complying with the City of Milpitas floodplain ordinance section XI-15-5.1(c)(1) for structures in an AO zone.
- The lowest adjacent grade to the building within the AO(1) flood zone is above the base flood elevation therefore the project is reasonably safe from flooding per the City of Milpitas floodplain ordinance section XI-15-4.3 (a)(3).
- FEMA requires the lowest elevation within an area of land be higher than the base flood elevation to remove the structures from the flood hazard area. A CLOMR-F and LOMR-F will be filed with FEMA during planning and after placement of fill respectively to remove the structures from the floodplain.
- The project will design its utilities to minimize or eliminate the infiltration of floodwaters into the system and discharge from the system to comply with Milpitas Ordinance XI-15-5.2. Onsite waste disposal systems shall be located outside of the FEMA SFHA.

Schaaf & Wheeler

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# **MEMORANDUM**

TO:	Sarah Moyles, PE	DATE:	December 15, 2017		
FROM:	Larry Johnson, PE	JOB#:	BCAX.39.17		
SUBJECT:	Centre Pointe Pedestrian Bridge Hydraulic Impacts DRAFT				

Schaaf & Wheeler is tasked with assessing the potential impacts to water surface elevations (WSE) in East Penitencia Creek from construction of a proposed Pedestrian Bridge for the Centre Pointe development in Milpitas, California.



Figure 1 – Vicinity Map (Berryessa Watershed shown in blue)

The proposed pedestrian bridge is located on East Penitencia Creek approximately 900 feet upstream of the confluence with Lower Penitencia Creek within the Berryessa Creek watershed (see figure 1). It is bounded by the Centre Pointe Development to the north, and a future City park to the south.

#### **Base Model for Assessment**

The proposed bridge is assessed based on the hydraulic analyses performed in 2013 as part of the Silicon Valley BART Extension CLOMR submittal. Both HEC-RAS and FLO-2D PRO were utilized to assess the potential floodplain impacts of the Silicon Valley BART Extension into Milpitas and San Jose. Channel capacities are analyzed with resulting channel overflows being routed overland to determine the 100-year floodplain. Additional levee failure scenarios are also assessed based on the degree of levee integrity and certification throughout the Berryessa and Upper Penitencia floodplains per FEMA's Analysis and Mapping Procedures for Non-Accredited Levees.



Figure 2 – Bridge Location

The Centre Pointe Pedestrian bridge project is located in an area controlled by one of the levee failure cases for determining the worst case water surface elevation. The governing levee failure shown in Figure 3 is the "Berryessa Park Left" failure which occurs on Berryessa Creek upstream of Interstate 680. Berryessa Creek downstream of Piedmont Road, through Berryessa Creek Park, has non-engineered earthen levees on portions of both its north and south banks. The north bank is clearly leveed along Parkhaven Drive. The south bank levee is less clear, and may have more to do with grading of Berryessa Creek Park than with intentional levee construction. Neither of these structures appears to be owned, operated, and maintained for flood protection and are considered to be structurally deficient levees. The levees in this reach were failed separately since assuming that the opposite bank holds produces the greatest volume of flow leaving Berryessa Creek into each overbank.



Figure 3 – Key to Levee Failures (SVBX Analysis)

Channel overflows from Berryessa creek are conveyed overland toward North Capitol Avenue and Trade Zone Boulevard. Flows ultimately enter East Penitencia Creek and are conveyed northwesterly. The Berryessa Park Left Levee Failure model provides a conservative base WSE for setting the low chord of the proposed bridge to limit hydraulic impacts to the surrounding area. Table 1 identifies the WSE for the Berryessa Park Left Levee Failure at the proposed bridge location. Elevation values are converted to the NGVD 29 vertical datum to match the selected design vertical datum. Conversion values for the datum shift are taken from the effective FEMA FIS for Santa Clara County (2.85 feet).

#### Table 1 – Berryessa Park Left Levee Failure WSE at Proposed Bridge

Cross Section Number	WSEL (NGVD 29)
945	34.7 FT

# **Proposed Bridge**

The proposed bridge is to be a manufactured Pratt Style Truss Bridge. Preliminary bridge abutments and approach grading is provided to Schaaf and Wheeler by RJA and Associates. These preliminary dimensions show the low chord of the bridge slightly more than 1 foot above the identified worst case water surface elevation (see Figure 4). Since the low chord of the bridge is above the designated WSE within the channel, it can be noted that the bridge will have no hydraulic impact within the channel banks. The proposed bridge abutments may have potential impacts to WSE's in the overbank areas and are assessed herein.



**Figure 4 – Preliminary Pedestrian Bridge Dimensions** 

The proposed bridge abutments and associated grading area are shown in plan view in Figure 5 along with the 2-dimensional grid used for the overland flow analysis in the Silicon Valley BART Berryessa Extension Floodplain Analysis. The 2-D grid uses 50-foot by 50-foot grid cells and incorporates elevation, Manning's "n" roughness and area width reduction factor assumptions for current conditions. The proposed bridge approaches account for an approximate 40% additional blockage to the overland flow area when compared to current conditions. This proposed grading is incorporated into the Berryessa Park Left Levee Failure FLO-2D model in order to estimate potential impacts to the surrounding overbank WSE's. Grid cell elevations were modified to reflect the grading shown in Figure 5. Grid cells are not modified in the channel outflow nodes as shown in Figure 5, since these represent the flow returning to the channel within the FLO-2D model.

The max flow depths for both current and proposed conditions have been assessed to estimate any localized impacts to floodplain water surface elevations. Figure 6 illustrates identified increases to the overbank WSE based on the FLO-2D impacts analysis.







Figure 6 – FLO-2D Impact Analysis

#### Conclusion

The proposed pedestrian bridge will not significantly impact water surface elevations within East Penitencia Creek or the in the surrounding overbank areas. The low chord elevation of the proposed bridge is shown to be approximately 1 foot above the worst case water surface elevation within the channel. Bridge abutments and proposed grading approaches have been assessed for potential impacts to the overbank floodplain and are estimated to cause a maximum rise of 0.5 feet in water surface elevation locally near the abutments. Increases to WSEs in the surrounding area are on the order of 0.1 to 0.25 feet and are limited to the proposed park site and therefore would not impact existing commercial/residential structures. The grading approach blockages are based on existing structures and grades with the assumed developments of Centre Pointe, 450 Montague, 730-750 East Capitol Avenue, Houret Drive, and Summerhill Homes. Since the Centre Pointe Bridge development has impacts of less than 1 foot, and neighboring projects do not adversely impact one another based on flood studies performed by Schaaf & Wheeler for various developments in the project vicinity, cumulative impacts will be less than 1 foot and therefore comply with the City of Milpitas floodplain ordinance section XI-15-4.3(a)(4). The levee failure case used in this analysis is conservative as it assumes both a 100-year return period storm, coupled with a failure of the Berryessa Creek Left Levee at Berryessa Creek Park. If improvements are made by the Santa Clara Valley Water District along Berryessa Creek to either provide additional conveyance or to certify the Berryessa Park Left Levee, then water surface elevations will be significantly reduced and provide further freeboard to the proposed pedestrian bridge.

**APPENDIX D** 

NOISE AND VIBRATION ANALYSIS

# MILPITAS PARK, PEDESTRIAN BRIDGE, AND WATER SUPPLY WELL NOISE AND VIBRATION ASSESSMENT

Milpitas, California

July 11, 2019

**Prepared for:** 

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**I&R Job No.: 18-226** 

# **INTRODUCTION**

The project site is located along the east side of McCandless Drive between Montague Expressway and Great Mall Parkway in the southern part of the City of Milpitas, California. This report includes the analysis of three separate projects proposed at the project site; a City park, a pedestrian bridge across the creek, and a water supply well. The four-acre park will include a joint-use lighted sports field and all-inclusive play areas for the City and Mabel Mattos elementary school. The pedestrian bridge project will span East Penitencia Creek midway between Montague Expressway and McCandless Drive. The well project will construct a production water well and associated building at the southeast corner of the parcel.

This report evaluates the project's potential to result in significant environmental noise or vibration impacts with respect to applicable California Environmental Quality Act (CEQA) guidelines. The report is divided into three sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise and groundborne vibration, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed to document existing noise conditions; 2) the General Plan Consistency section discusses land use compatibility utilizing noise-related policies in the City's General Plan; and, 3) the Impacts and Mitigation Measures Section describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents measures, where necessary, to mitigate the impacts to a less-than-significant level.

# SETTING

# **Fundamentals of Environmental Noise**

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel* (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A*-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which

the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called  $L_{eq}$ . The most common averaging period is hourly, but  $L_{eq}$  can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level* (*CNEL*) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level* (*DNL* or  $L_{dn}$ ) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

# **Effects of Noise**

#### Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA DNL. Typically, the highest steady traffic noise level during the daytime is about equal to the DNL and nighttime levels are 10 dB lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12 to 17 dB with open windows. With standard construction and closed windows in good condition, the noise attenuation factor is around 20 dB for an older structure and 25 dB for a newer dwelling. Sleep and speech interference is therefore of concern when exterior noise levels are about 57 to 62 dBA DNL with open windows and 65 to 70 dBA DNL if the windows are closed. Levels of 55 to 60 dBA are common along collector streets and secondary arterials, while 65 to 70 dBA is a typical value for a primary/major arterial. Levels of 75 to 80 dBA are normal noise levels at the first row of development outside a freeway right-ofway. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e. g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L <sub>eq</sub>	The average A-weighted noise level during the measurement period.
L <sub>max</sub> , L <sub>min</sub>	The maximum and minimum A-weighted noise level during the measurement period.
$L_{01}, L_{10}, L_{50}, L_{90}$	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, DNL or L <sub>dn</sub>	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

 TABLE 1
 Definition of Acoustical Terms Used in this Report

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

Common Outdoor Activities	Noise Level (dBA)	<b>Common Indoor Activities</b>
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime Quiet suburban nighttime	40 dBA	Theater, large conference room
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	(Suchigi Sund)
	10 dBA	Broadcast/recording studio
	0 dBA	

TABLE 2Typical Noise Levels in the Environment

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

### **Fundamentals of Groundborne Vibration**

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous or frequent intermittent vibration levels produce. The guidelines in Table 3 represent syntheses of vibration criteria for human response and potential damage to buildings resulting from construction vibration.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to cause damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major, that may threaten the structural integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher. The damage criteria presented in Table 3 include several categories for ancient, fragile, and historic structures, the types of structures most at risk to damage. Most buildings are included within the categories ranging from "Historic and some old buildings" to "Modern industrial/commercial buildings". Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Velocity Level		
PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Threshold at which there is a risk of damage to fragile buildings with no risk of damage to most buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential structures
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to new residential and modern commercial/industrial structures

TABLE 3Reaction of People and Damage to Buildings from Continuous or Frequent<br/>Intermittent Vibration Levels

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.

# **Regulatory Background**

The State of California and the City of Milpitas have established regulatory criteria that are applicable in this assessment. The California Environmental Quality Act (CEQA) Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

*State CEQA Guidelines.* The CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

- (a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- (b) Generation of excessive groundborne vibration or groundborne noise levels;
- (c) For a project located within the vicinity of a private airstrip or 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, if the project would expose people residing or working in the project area to excessive noise levels.

Checklist items (a) and (b) are applicable to the proposed project. The project is not located within two miles of a public airport or in the vicinity of a private airstrip and would not expose people

residing or working in the project area to excessive aircraft noise levels; therefore, item (c) is not discussed further in this analysis.

*City of Milpitas General Plan.* The Noise Element in the Milpitas General Plan (Last Amended April 2015) sets forth policies to guide public and private planning to attain and maintain acceptable noise levels and promote a comprehensive and long-range program of achieving acceptable noise levels. The City's noise compatibility standards are derived from guidelines published by the California Office of Planning and Research and are shown in Table 6-1. The following policies are applicable to the proposed project:

- 6-I-1 Use the guidelines in Table 6-1 (Noise and Land Use Compatibility) as review criteria for development projects.
- 6-I-2 Require an acoustical analysis for projects located within a "conditionally acceptable" or "normally unacceptable" exterior noise exposure area. Require mitigation measures to reduce noise to acceptable levels.
- 6-I-3 Prohibit new construction where the exterior noise exposure is considered "clearly unacceptable" for the use proposed.
- 6-I-7 Avoid residential DNL exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.
- 6-I-10 Reduce the noise impact in existing residential areas where feasible. Noise mitigation measures should be implemented with the cost shared by public and private agencies and individuals.
- 6-I-11 Minimize noise impacts on neighbors caused by commercial and industrial projects.
- 6-I-12 New noise-producing facilities introduced near sensitive land uses which may increase noise levels in excess of "acceptable" levels will be evaluated for impact prior to approval; adequate mitigation at the noise source will be required to protect noise-sensitive land uses.
- 6-I-13 Restrict the hours of operation, technique, and equipment used in all public and private construction activities to minimize noise impact. Include noise specifications in requests for bids and equipment information.

Community Noise Exposure       Land Use Category     Land Community Noise Exposure							
	55	60	65	70	75	80	INTERPRETATION:
Residential - Low Density Single Family, Duplex, Mobile Homes							Normally Acceptable Specified and use is satisfactory
Residential - Multi. Family			Т				based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation
Transient Lodging - Motels, Hotels			Т				requirements.
Schools, Libraries, Churches, Hospitals, Nursing Homes				h		-	Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed
Auditoriums, Concert Halls, Amphitheaters			P				noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will pormath suffice.
Sports Arena, Outdoor Spectator Sports							win normally surfice.
Playgrounds, Neighborhood Parks			1				Normally Unacceptable New construction or development should generally be discouraged. If new construction or development does
Golf Courses, Riding Stables, Water Recreation, Cemeteries						-	proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Office Buildings, Business Commercial and Professional							Clearly Unacceptable New construction or development
Industrial, Manufacturing, Utilities, Agriculture							should generally not be undertaken.

*City of Milpitas Municipal Code.* Chapter 213 of the City's Zoning Ordinance contains a Noise Abatement Section that limits noise levels at adjacent properties. The following policies are applicable to the proposed project:

Code Section V-213-3 limits operational noise in residential areas to 65 dBA DNL at the property line or to an increase of less than 3 dBA DNL, whichever is more restrictive. Operational noise that "occurs with such intensity, frequency or in such a manner as to disturb the peace and quiet of reasonable person of normal sensitivity residing in that area" at a distance of 50 feet from the property line of the noise source or 100 feet from any nonstationary noise source shall be limited to the hours of 7:00 am and 10:00 pm. Construction operations are limited to between the hours of 7:00 pm on weekdays and weekends. No construction is permitted on holidays.

#### **Existing Noise Environment**

The project site is located along the east side of McCandless Drive between Montague Expressway and Great Mall Parkway in the southern part of the City of Milpitas, California. It is bordered to the north by East Penitencia Creek, to the east by a residential development currently under construction and to the south by the recently completed Mabel Mattos Elementary School. Existing residences are located to the north and west of the site. The predominant noise sources affecting the project site include traffic on McCandless Drive and local construction.

A noise monitoring survey was performed to quantify and characterize ambient noise levels at the site and in the project vicinity. Noise monitoring was conducted from February 21 to 25, 2019, during spring break at Mabel Mattos Elementary School, and from March 7 to 8, 2019, during a 24-hour period when school was in session. The monitoring survey included two long-term noise measurements (LT-1 and LT-2) and three short-term measurements (ST-1, ST-2, and ST-3), as shown in Figure 1. The daily trends in noise levels at LT-1 and LT-2 are shown in Appendix A. Table 4 summarizes the results of the short-term measurements.

Long-term noise measurement LT-1 was made along the northern property line of the site, adjacent to East Penitencia Creek. Noise levels measured at this site were primarily the result of distant traffic, occasional aircraft overflights, and construction noise from the adjacent residences under construction. Hourly average noise levels ranged from 45 to 57 dBA  $L_{eq}$  during the day and from 39 to 57 dBA  $L_{eq}$  at night. The day-night average noise level at LT-1 ranged from 53 to 56 dBA DNL during the February monitoring survey and was approximately 1 dBA higher (57 dBA DNL) during the 24-hour period when school was in session.

Long-term noise measurement LT-2 was located west of the site, about 30 feet from the center of McCandless Drive. Noise levels measured at this site were primarily the result of traffic on McCandless Drive. Hourly average noise levels ranged from 56 to 69 dBA  $L_{eq}$  during the day and from 43 to 64 dBA  $L_{eq}$  at night. The day-night average noise level at LT-1 ranged from 62 to 64 dBA DNL during the February monitoring survey and was approximately 2 dBA higher (66 dBA DNL) during the 24-hour period when school was in session.

Short-term noise measurements ST-1, ST-2, and ST-3 were conducted on Thursday, March 7, 2019 when school was in session. School activities did not affect the ambient noise levels at any of these locations during monitoring. ST-1 was made adjacent to residences located north of the project site. The 10-minute average noise level measured at ST-1 was 52 dBA  $L_{eq}$ . Short-term noise measurement ST-2 was made at the southern site boundary, adjacent to Mabel Mattos Elementary School, and resulted in a 10-minute average noise level of 56 dBA  $L_{eq}$ . Measurement ST-3 located at the eastern site boundary, adjacent to ongoing construction of residences, and resulted in a 10-minute average noise level of 54 dBA  $L_{eq}$ .

FIGURE 1 Noise Measurement Locations



Source: Google Earth

# TABLE 4 Summary of Short-Term Noise Measurement Data (dBA)

Noise Measurement Location	L(1)	L(10)	L(50)	L(90)	Leq	Primary Noise Sources
ST-1: Residences north of site (3/7/2019, 11:30 a.m. to 11:40 a.m.)	61	56	50	47	52	Distant traffic, construction, occasional aircraft
ST-2: Southern site boundary (3/7/2019, 11:50 a.m. to 12:00 p.m.)	66	58	54	52	56	Distant traffic, construction, occasional aircraft
ST-1: Eastern site boundary (3/7/2019, 12:10 p.m. to 12:20 p.m.)	59	56	54	52	54	Construction, distant traffic, occasional aircraft

# PLAN CONSISTENCY ANALYSIS – NOISE AND LAND USE COMPATIBILITY

The impacts of site constraints such as exposure of the proposed project to excessive levels of noise and vibration are not considered under CEQA. This section addresses Noise and Land Use Compatibility for consistency with the policies set forth in the City's General Plan.

# Noise and Land Use Compatibility

The applicable General Plan policies were presented in detail in the Regulatory Background section and are summarized below for the proposed project:

• The City's acceptable exterior noise level objective for schools, playgrounds, and neighborhood parks is 70 dBA DNL (Table 6-1).

The future exterior noise environment at the project site would result primarily from distant and local traffic and occasional aircraft. Noise sensitive outdoor use areas associated with McCandless Park would include a sports field, play areas, a picnic area, a walking trail, a community garden, a fenced dog play area, and fitness stations. These land uses would be located as close as 130 feet from the center of McCandless Drive. There are no noise sensitive areas associated with the pedestrian bridge and production water well components of the Project and no noise sensitive indoor uses proposed with the park.

Based on the noise monitoring survey and assuming a 1 dBA DNL noise increase under future conditions, the park would be exposed to future noise levels as high as 58 dBA DNL. Noise levels would be consistent with the City's 70 dBA DNL threshold for schools, playgrounds, and neighborhood parks.

# NOISE IMPACTS AND MITIGATION MEASURES

This section describes the significance criteria used to evaluate project impacts under CEQA, provides a discussion of each project impact, and presents mitigation measures, where necessary, to provide a compatible project in relation to adjacent noise sources and land uses.

# Significance Criteria

The following criteria were used to evaluate the significance of environmental noise and vibration resulting from the project:

- 1. **Temporary or Permanent Noise Increases in Excess of Established Standards.** A significant impact would be identified if project construction or operations would result in a substantial temporary or permanent increase in ambient noise levels at sensitive receivers in excess of the local noise standards contained in the Milpitas General Plan or Municipal Code, as follows:
  - <u>Operational Noise in Excess of Standards.</u> The City of Milpitas limits operational sound levels to 65 dBA DNL at residential property lines.
  - <u>Permanent Noise Increase.</u> The City of Milpitas defines an operational noise increase of 3 dBA DNL or greater to be considered significant.
  - $\circ$  <u>Temporary Noise Increase.</u> A significant temporary noise impact would be identified if construction would occur outside of the hours specified in the Municipal Code. Additionally, a significant temporary noise increase would be identified if construction-related noise would result in hourly average noise levels exceeding 60 dBA L<sub>eq</sub> at the property lines shared with residential land uses, and the ambient by at least 5 dBA L<sub>eq</sub>, for a period of more than one year.
- 2. Generation of Excessive Groundborne Vibration. A significant impact would be identified if the construction of the project would generate excessive vibration levels. Groundborne vibration levels exceeding 0.3 in/sec PPV would be considered excessive as such levels would have the potential to result in cosmetic damage to buildings.

**Impact 1:** Temporary or Permanent Noise Increases in Excess of Established Standards. Project operations and traffic would not generate noise levels that exceed the applicable noise thresholds or result in a substantial temporary or permanent noise level increase at existing noise-sensitive land uses in the project vicinity. However, existing noise-sensitive land uses could be exposed to construction noise levels in excess of the applicable noise thresholds. This is a potentially significant impact.

#### Permanent Noise Increases from On-Site Operational Noise

The City of Milpitas limits operational sound levels to 65 dBA DNL at residential property lines.

The four-acre park will include a joint-use lighted sports field and all-inclusive play areas for the city and the adjacent Mabel Mattos Elementary School, a picnic area, a walking trail, a community garden, a fenced dog play area, fitness stations, and a restroom building. Joint-use parking and basketball courts were previously constructed as part of the Mabel Mattos Elementary School project. The park will be available from dawn to dusk, 365 days per year. It is expected that site safety lighting will be in place from dusk to dawn. The lighted sports field may be available for use until 10:00 pm. The primary noise sources associated with the operations of the park include activities at the provided park amenities and facilities, parking, and increased traffic on the surrounding roadways. There are no operational noise sources associated with the pedestrian bridge and production water well components of the Project.

#### Park Activities

The addition of the picnic area, walking trail, community garden, dog play area, and fitness stations would not be anticipated to generate substantial noise at residents. Children playing in play areas has been measured previously by Illingworth & Rodkin, Inc. in several studies. The noise associated with the use of outdoor play areas is typically characterized by children yelling and playing. A preschool play area with 20 to 40 children was measured to generate average (L<sub>eq</sub>) noise levels of 66 to 68 dBA at a distance of 25 feet from the edge of the play area.<sup>1</sup> Noise generated during play at elementary school playgrounds has been found to be similar. Noise levels at a play area with 4 to 6 children and 4 to 6 adults ranged from 60 to 61 dBA L<sub>eq</sub> at 20 feet from the edge of the playground.<sup>2</sup> Residences are located as close as about 170 feet north and 230 feet west of the nearest play area(s). Play area noise could reach 50 dBA L<sub>eq</sub> at residences to the north during periods with heavy usage and would be anticipated to range from 46 to 47 dBA L<sub>eq</sub> during typical usage. Noise levels would be about 3 dBA lower at residences to the west. Noise levels would be significantly lower on a daily average basis (DNL).

The lighted sports field would be available for use until 10:00 pm. It is anticipated that this field would be used by the school and community for field hockey, baseball, softball, soccer, lacrosse, etc. Based on attended measurements conducted during high school sporting events,<sup>3</sup> softball and

<sup>1</sup> Lawrence Station Road Preschool Center, Sunnyvale, California, Noise Assessment, Illingworth & Rodkin, Inc., April 2016.

<sup>2</sup> Morgan Autism Center Project, Environmental Noise and Vibration Assessment, San José, California, Illingworth & Rodkin, Inc., May 2016.

<sup>3</sup> St. Mary's High School Athletic Field Environmental Noise Assessment, Prepared by Illingworth & Rodkin, Inc., February 23, 2007.

baseball games can generate noise levels of up to about 57 dBA  $L_{eq}$  at a distance of 100 feet from the infield (assumes 100 to 200 spectators in attendance). Maximum noise levels of about 65 dBA L<sub>max</sub> at 100 feet typically result from balls being hit and shouting from players and spectators. Noise levels generated by field hockey, track meets, soccer, and lacrosse games are generally limited to whistles and some cheering. Based on noise monitoring of high school soccer games,<sup>4,5</sup> whistles and cheering would be anticipated to generate maximum noise levels of about 58 to 63 dBA L<sub>max</sub> at land uses adjoining the field. Hourly average noise levels during field hockey, soccer, and lacrosse events would be anticipated to be about 60 dBA Leq at a distance of about 100 feet from the center of the field. Noise levels generated during practices and during middle and elementary school aged activities would be lower. The nearest noise sensitive land uses to the sports field include residences under construction about 270 feet east of the center of the field and existing residences located about 370 feet to the west. Baseball and softball games with high attendance would be anticipated to generate noise levels as high as 48 dBA Leq at the residences under construction to the east and 46 dBA Leq at residences to the west. Hourly average noise levels during field hockey, soccer, and lacrosse events would be anticipated to be about 51 dBA Leq at the residences under construction to the east and 49 dBA Leq at residences to the west. Activities would not extend into the nighttime period (10:00 pm to 7:00 am) and would therefore be significantly lower on a daily average basis.

Noise levels generated by park activities would typically be below existing ambient noise levels and well below the 65 dBA DNL threshold. This is a **less-than-significant** impact.

#### Parking

Parking would be provided in the existing parking lot, shared with Mabel Mattos Elementary School on the western portion of the site, about 100 feet and across McCandless Drive from residences to the west. Noise sources associated with the use of the parking lots would include vehicular circulation, louder engines, car alarms, squealing tires, door slams, and human voices. The sound of engines starting, doors slam closing, and people talking in the parking lot would be expected to reach maximum levels of 45 to 55 dBA  $L_{max}$  at a distance of 50 feet. Maximum noise levels generated in the parking lot would be below existing maximum noise levels generated by vehicles traveling along McCandless Drive and well below the 65 dBA DNL threshold. This is a **less-than-significant** impact.

#### Permanent Noise Increases from Project Traffic

The City of Milpitas defines a significant operational noise increase as 3 dBA DNL or greater. A traffic analysis was not provided for this project. Access to the park would be from McCandless Drive. Based on the traffic information available from the City of Milpitas, McCandless Drive has an average daily traffic (ADT) volume of 2,880 vehicles per day.<sup>6</sup> Typically, the peak hour traffic volume in suburban areas is equivalent to about 10% of the ADT, or in this case, 288 vehicles per hour. There are approximately 40 existing parking spaces available for the shared use of Mabel Mattos Elementary School and McCandless Park. To determine the project-generated traffic noise

<sup>4</sup> Silver Creek High School Sports Lighting Project Environmental Noise Assessment, Prepared by Illingworth & Rodkin, Inc., September 9, 2013.

<sup>5</sup> Santa Teresa High School Sports Lighting Project Environmental Noise Assessment, Prepared by Illingworth & Rodkin, Inc., September 12, 2013.

<sup>6</sup> Available at http://app.ci.milpitas.ca.gov/\_pdfs/trans\_traffic\_volume\_map.pdf, March 12, 2019.

increase, peak hour volumes for the Existing scenario are compared to Existing plus Project conditions, assuming a worst-case Project generated peak hour traffic volume of 40 vehicles per hour. Based on this comparison, traffic noise levels are calculated to increase by less than 1 dBA  $L_{eq}$  along the roadway network in the project vicinity during peak hour traffic conditions. DNL noise increases would be anticipated to be similar and would not result in noise increases of 3 dBA DNL or more on the surrounding roadway network. This is a **less-than-significant** impact.

#### Temporary Noise Increases from Project Construction

Construction operations are limited to between the hours of 7:00 am and 7:00 pm on weekday and weekends. No construction is permitted on holidays. Neither the City of Milpitas nor the State of California specify quantitative thresholds for the impact of temporary increases in noise due to construction. The threshold for speech interference indoors is 45 dBA (see Setting Section, Effects of Noise). Assuming a 15 dB exterior-to-interior reduction for standard residential construction with windows open and a 25 dB exterior-to-interior reduction for standard commercial construction, assuming windows closed, this would correlate to an exterior threshold of 60 dBA  $L_{eq}$  at residential land uses and 70 dBA  $L_{eq}$  at commercial land uses. Therefore, the project would be considered to generate a significant temporary construction noise impact if project construction activities exceeded 60 dBA  $L_{eq}$  at nearby residences or exceeded 70 dBA  $L_{eq}$  at nearby commercial land uses and exceeded the ambient noise environment by 5 dBA  $L_{eq}$  or more for a period longer than one year.

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

The construction of the projects will be in phases to allow the underground work to be completed before the above ground and site amenities are constructed. Construction activities within each phase would be carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Tables 5 and 6. Table 5 shows the average noise level ranges, by construction phase and Table 6 shows the maximum noise level range of 80 to 90 dBA at 50 feet from the source. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

	Domest	ic Housing	Offi Hot Sch	ce Building, el, Hospital, ool, Public Works	Indust Garag Am Recrea Serv	trial Parking ge, Religious usement & ations, Store, rice Station	Pu Roads Se	blic Works s & Highways, ewers, and Trenches
	Ι	II	Ι	Π	Ι	II	Ι	II
Ground								
Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84
<ul><li>I - All pertinent equipment present at site.</li><li>II - Minimum required equipment present at site.</li></ul>								

TABLE 5Typical Ranges of Construction Noise Levels at 50 Feet, Leq (dBA)

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

Equipment Category	Lmax Level (dBA)1,2	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor <sup>3</sup>	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5	85	Continuous
HP		

# TABLE 6 Construction Equipment 50-foot Noise Emission Limits

1

Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.

<sup>2</sup> Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

<sup>3</sup> Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

Source: Mitigation of Nighttime Construction Noise, Vibrations and Other Nuisances, National Cooperative Highway Research Program, 1999.

Notes:

# Production Water Well

The production water well would be located within a fenced and secured 100-foot by 100-foot area at the southeast corner of the parcel. The well site will include a one-story building for electrical, instrumentation and chemical feed, an above ground filter vessel treatment system, and an above ground backwash tank. A submersible pump and motor will be installed approximately 250 feet below ground surface, and thus, pump noise would not be audible or detectable. The well is expected to be approximately 600 feet deep. The entire fenced area will be paved. Underground utilities for water, sewer, storm drain, and electrical power will be installed to serve the well site. A paved access road will be provided from McCandless Drive through the park, with a one-way entrance and exit through the well site, for periodic maintenance use as well as for regular maintenance use or material deliveries.

Construction of the well is anticipated to take 251 days over the course of 20 months, between approximately December 2019 and August 2021. Construction would primarily occur during daytime hours; however, 24-hour per day well drilling would be required over an approximate 4 week period. Stages of construction would include well drilling (below ground), well equipping (above ground), grading and excavation, trenching, building construction, construction of the backwash tank, filter installation, and concrete paving. Only finish grading will be required, as initial site grading will have occurred as part of the park project. Site preparation includes installation of a security fence, construction trailer, and temporary utilities.

As shown in Tables 5 and 6, construction activities generate considerable amounts of noise, especially during demolition and earth-moving activities when heavy equipment is used. Table 7 shows the anticipated well project specific construction noise levels calculated using the Federal Highway Administration (FHWA) software - Roadway Construction Noise Model (RCNM). At 50 feet from the noise source, maximum instantaneous noise levels generated by well project construction equipment are calculated to range from 77 to 82 dBA  $L_{max}$  and hourly average noise levels are calculated to range from 73 to 80 dBA  $L_{eq}$ .

Construction Dhose	At Distance of 50 ft.				
Construction Phase	Leq, dBA	L <sub>max</sub> , dBA			
Well Drilling – Below Ground (70 days)	80	81			
Well Equipping & Site Preparation (10 days)	74	77			
Grading/Excavation (20 days)	79	82			
Trenching (10 days)	74	77			
Building-Exterior (40 days)	79	81			
Building-Interior (40 days)	78	81			
Backwash Tank (40 days)	75	81			
Filter Installation (1 day)	73	81			
Concrete Paving (20 days)	75	78			

 TABLE 7
 Calculated Construction Noise Levels for Each Stage of Well Construction

Project construction would be located as close as about 65 feet from residences under construction to the east. At this distance, noise levels would be about 2 dBA lower than those summarized in Table 7, in the range of 71 to 78 dBA Leq. Construction would generally comply with the City of

Milpitas' Municipal Code specified hours of construction with the exception of the 24-hour per day construction that is required to complete the well. Noise levels due to construction activities would exceed 60 dBA  $L_{eq}$  and ambient levels by more than 5 dBA  $L_{eq}$  at adjacent residential uses to the east over a period exceeding one year. Noise levels in shielded areas would be anticipated to be 5 to 20 dB lower. This is a **potentially significant** temporary impact.

# Penitencia Pedestrian Bridge

The pedestrian bridge project will span East Penitencia Creek midway between Montague Expressway and McCandless Drive. The south bridge approach will be situated at the northeast corner of the project site. The pedestrian bridge project includes a pre-fabricated bridge span, elevated bridge abutments, retaining walls along the north side of the creek, fill slope along the south side of the creek and raised trails on both sides of the creek. The retaining walls and raised trails will be required for the existing trail to conform to the bridge deck, which will be three to five feet above existing grade. The elevated bridge abutments will extend three to five feet above the existing ground surface so that the bottom of the span clears the top of bank on both sides of the creek. It is expected that no structures or fill will be placed within the creek channel. All grading, abutments and support structures will be located outside the top of banks to minimize impacts to the creek. Site lighting will be installed on the park and to the adjacent residential development to the east. Site lighting will be installed where necessary.

Construction of the bridge is anticipated to take 83 days over the course of 9 months, beginning in approximately June 2020. Stages of construction would include demolition, site preparation, grading and excavation, trenching, bridge and retaining wall construction, and paving. Table 8 shows the anticipated bridge project specific construction noise levels, calculated using RCNM. At 50 feet from the noise source, maximum instantaneous noise levels generated by project construction equipment are calculated to range from 80 to 87 dBA  $L_{max}$  and hourly average noise levels are calculated to range from 80 to 87 dBA  $L_{eq}$ .

Construction Dhase	At Distance of 50 ft.				
Construction r hase	Leq, dBA	L <sub>max</sub> , dBA			
Demolition (2 days)	82	82			
Site Preparation (2 days)	85	85			
Grading/Excavation (5 days)	87	87			
Trenching (2 days)	82	82			
Bridge and Retaining Wall Construction (70 days)	83	84			
Paving (2 days)	80	80			

 TABLE 8
 Calculated Construction Noise Levels for Each Stage of Bridge Construction

Project construction would be located as close as about 25 feet from residences to the north. At this distance, noise levels would be about 6 dBA higher than those summarized in Table 8, resulting in hourly average construction noise levels in the range of 86 to 93 dBA  $L_{eq}$ . Construction would comply with the City of Milpitas' Municipal Code specified hours of construction. However, noise levels due to construction activities would exceed 60 dBA  $L_{eq}$  and ambient levels by more than 5

dBA  $L_{eq}$  at adjacent residential uses to the north and residences under construction to the east. Although bridge construction would be completed over a period of less than one year, the combined exposure of these residences to bridge and park construction would exceed one year. This is a **potentially significant** temporary impact.

# McCandless Park

Construction of the park is anticipated to take 281 days over the course of 15 months, beginning in approximately June 2020. Construction of the park will include demolition, site preparation, grading and excavation, trenching, building construction, and paving. A paved access road from McCandless Drive through the park will be constructed for the production water well and emergency and maintenance vehicles. Underground utilities for water, recycled water, sewer, storm drain, electrical power and communication will be installed to serve the park.

Table 9 shows the anticipated park project specific construction noise levels calculated using RCNM. At 50 feet from the noise source, maximum instantaneous noise levels generated by well project construction equipment are calculated to range from 78 to 85 dBA  $L_{max}$  and hourly average noise levels are calculated to range from 75 to 85 dBA  $L_{eq}$ .

Construction Dhose	At Distance of 50 ft.		
Construction Phase	Leq, dBA	L <sub>max</sub> , dBA	
Demolition (15 days)	81	82	
Site Preparation (15 days)	83	85	
Grading/Excavation (60 days)	85	85	
Trenching (60 days)	78	81	
Building-Exterior (90 days)	75	81	
Building-Interior (15 days)	75	78	
Paving (30 days)	82	82	

 TABLE 9
 Calculated Construction Noise Levels for Each Stage of Park Construction

Project construction would be located as close as about 25 feet from residences under construction to the east, 110 feet from residences to the north, 180 feet from residences to the west, and about 210 feet from Mabel Mattos Elementary School classroom buildings to the south. Construction would comply with the City of Milpitas' Municipal Code specified hours of construction. However, noise levels due to construction activities would exceed 60 dBA  $L_{eq}$  and ambient levels by more than 5 dBA  $L_{eq}$  at all surrounding residential uses and at the adjacent school buildings for a period exceeding one year. This is a **potentially significant** temporary impact.

**Mitigation Measure 1:** Modification, placement, and operation of construction equipment are possible means for minimizing the impact of construction noise on existing sensitive receptors. Construction equipment should be well-maintained and used judiciously to be as quiet as possible. Additionally, construction activities for the proposed project should include the following best management practices to reduce noise from construction activities near sensitive land uses:

• Unless the Contractor requests in writing, and receives in advance, written approval from the City's Director of Public Works for a modified construction schedule, the City requires

that construction activities be limited to 12-hour shifts between 7:00 a.m. and 7:00 p.m., Monday through Friday and construction shall not take place on weekends or City holidays. Per the City's Noise Ordinance, work shall not be conducted on the following City holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

- 24-hour operations shall be required from, at latest, the initiation of pilot hole drilling through construction of the well, and shall require the Contractor to request in writing, and receive in writing, approval from the City's Director of Public Works for 24-hour operations prior to the initiation of 24-hour operations. 24-hour operations may also be advantageous for other specific portions of well development and testing, and if this is the desire of the Contractor, will also require the Contractor to request in writing and to receive a response in writing from the City's Director of Public Works for 24-hour operations, prior to initiation of 24-hour operations. The Contractor shall arrange with the City for any 24-hour, weekend, or holiday operations intended and/or required for the successful completion of the project. The Contractor shall notify the City at least 72 hours prior to any proposed work outside the normal working times defined above, including any proposed work on weekends or holidays. The City will take Contractor's request under consideration and make a decision within 48 hours.
- The Contractor shall complete the temporary sound barrier design and associated calculations, and apply for a Building Permit from the City's Building Department as first order of work from receiving notice to proceed.
- The work shall be carried out as quietly as possible to prevent possible annoyance to adjacent residents. Unnecessary noise shall be avoided at all times.
- Sound attenuation measures will be required due to the proximity of the work area to dwellings. Sound attenuation measures shall include providing construction equipment and performing construction activities in a manner that minimizes noise generation and conforms to General Conditions Article 28, Hours of Work, and the instructions of the City/Engineer.
- Night-time drilling operations when previously authorized, shall be conducted in a manner to reduce noise peaks and avoid rapid changes in noise levels. All drilling personnel shall be advised to avoid noise generation wherever possible. In particular, the changing of drill pipe and the throttling of the drill rig shall be done in such a manner that appreciably lessens the noise produced by these activities as compared to the daytime. All deliveries of pipe and other materials and supplies, and all removal of debris, drilling cuttings, drilling fluids, equipment, materials, and supplies from the well site shall take place during day-time hours, unless approved in writing by the City.
- Construction of a temporary sound barrier shall include all work necessary to design, furnish, install, maintain and remove a temporary sound barrier, and conduct a full-scale sound test.

- The temporary sound barrier shall be self-supporting and at least 24 feet high. The sound barrier shall be generally configured along the west, north, and east boundaries of the work area, or as approved by the City, to minimize noise at residential land uses. The temporary sound barrier shall be engineered to reduce noise levels to the maximum extent possible.
- A full-scale drilling noise test simulating drilling activities will consist of noise level emissions measurements taken at the work area boundary, at the nearest sensitive receptor, and at 75 feet and 150 feet from the drilling location. Construction noise levels measured by the Contractor at the nearest sensitive receptor shall not exceed 60 dBA from the hours of 7:00 a.m. to 7:00 p.m., and 55 dBA from the hours of 7:00 p.m. to 7:00 a.m. without prior written approval of the City.
- Drilling operations shall not proceed until noise emissions conform to these Specifications. Should noise levels exceed the above levels, appropriate noise attenuation measures shall be implemented prior to resuming work, to reduce the offensive noise levels at the sensitive receptors.
- Construction scheduling shall be undertaken with consideration for school activities and hours. Schedule high noise generating construction activities that are located nearest school facilities during periods when school is not in session, such as summer, school breaks, weekends, and after school dismissal. Coordination of construction activity times with school officials may be necessary.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Notify all adjacent noise sensitive land uses of the construction schedule in writing.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the

disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Implementation of the above best management practices would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance. With the implementation of these measures and recognizing that noise generated by construction activities would occur over a temporary period, the impact would be **less-than-significant**.

# **Impact 2:** Generation of Excessive Groundborne Vibration due to Construction. Construction-related vibration levels are not anticipated to exceed 0.3 in/sec PPV at the nearest structures. This is a less than significant impact.

The City of Milpitas does not specify a construction vibration limit. For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings (see Table 3). The 0.3 in/sec PPV vibration limit would be applicable to properties in the vicinity of the project site. The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Table 10 presents typical vibration levels from construction located near the site boundary. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels are highest close to the source, and then attenuate with increasing distance at the rate  $(D_{ref}/D)^{1.1}$ , where D is the distance from the source in feet and  $D_{ref}$  is the reference distance of 25 feet.

Equipment		PPV at 25 ft. (in/sec)	PPV at 110 ft. (in/sec)	PPV at 180 ft. (in/sec)	PPV at 210 ft. (in/sec)
Clam shovel drop		0.202	0.040	0.023	0.019
Hydromill (slurry wall)	0.008	0.002	0.001	0.001	0.002
	0.017	0.003	0.002	0.002	0.004
Vibratory Roller		0.210	0.041	0.024	0.020
Hoe Ram		0.089	0.017	0.010	0.009
Large bulldozer		0.089	0.017	0.010	0.009
Caisson drilling		0.089	0.017	0.010	0.009
Loaded trucks		0.076	0.015	0.009	0.007
Jackhammer		0.035	0.007	0.004	0.003
Small bulldozer		0.003	0.001	0.000	0.000

# TABLE 10 Vibration Levels for Construction Equipment at Various Distances

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, October 2018 as modified by Illingworth & Rodkin, Inc., March 2019.

Project construction activities, such as drilling, the use of jackhammers, rock drills and other highpower or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity of construction activities. However, as indicated in Table 10, none of these construction activities would be anticipated to exceed 0.3 in/sec PPV at the nearest structures. Vibration levels may be perceptible to occupants but would not be anticipated to cause cosmetic or structural damage to the nearest buildings and would not be considered excessive. As construction moves away from the shared property lines, vibration levels would be even lower.

This is a **less-than-significan**t impact.

Mitigation Measure 2: None required.


























