MORSE AVENUE NEIGHBORHOOD PARK

Final Initial Study / Mitigated Negative Declaration

Prepared for
City of Sunnyvale

September 2011

ESA

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Prepared for
City of Sunnyvale

September 2011

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CITY OF SUNNYVALE
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
FINAL INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

1. Introduction

This Final Initial Study /Mitigated Negative Declaration (IS/MND) and related technical reports evaluate the potential environmental effects of the creation of an approximately 5.3-acre neighborhood park on a portion of the former Fair Oaks Industrial Park at 1010 Morse Avenue near the intersection of East Weddell Drive. The conceptual design for the park was approved by the City Council on June 7, 2011. A more detailed description of the proposed project is provided in the Project Description below.

The environmental approval process, which is regulated by California Environmental Quality Act (CEQA) Statutes and Guidelines, included circulation of this IS/MND for public and agency review for a 30-day period (began on July 29, 2011 and closed at 5:00 p.m. on August 29, 2011). The Notice to Adopt a Mitigated Negative Declaration in presented in **Appendix J**. Written comments received during this review period were reviewed and formal responses are presented in **Appendix K**. These responses and revisions made to this IS/MND are incorporated into this Final IS/MND. The City Council, at a regularly scheduled meeting on October 18, 2011, will review all of the related material and make a determination as to adequacy of this analysis. A Notice of Determination, if made, will then be filed with the County Recorder. The proposed project, which includes demolition of existing buildings, soil remediation and park construction, would proceed after filing the Notice of Determination.

The organization and format of this document is stipulated by the CEQA Guidelines. Section 4 of this IS/MND, the "Environmental Checklist," includes 18 specific elements (e.g. Air Quality, Cultural Resources, Transportation and Traffic, etc.) which must be addressed. Each element begins with a statement from the regulations of the particular issues to be studied and an analysis of the project impact in that regard. The four levels of impact are: "Potentially Significant Impact," "Less Than Significant with Mitigation Incorporation," "Less than Significant Impact," and "No Impact." A discussion relating the anticipated impacts to each of the CEQA issues then follows. If a significant impact is identified, mitigation is presented to offset any potentially significant impacts. Each checklist item includes a reference section, which lists technical studies, agencies, and other resources consulted in this evaluation.

Project Specifics

A. Project Address and Title:

Address: 1010, 1012, 1014, 1016, 1020, 1024 Morse Avenue, Sunnyvale, CA, 94089
APN 110-14-202

Title: Morse Park

B. Lead Agency Name and Address:

City of Sunnyvale
Department of Public Works / Project Administration Division
P.O. Box 3707
Sunnyvale, California 94088-3707

C. Contact Person and Phone Number:

Nasser Fakih, Assistant City Engineer
City of Sunnyvale
Dept of Public Works
456 W Olive Ave, PO Box 3707
Sunnyvale, CA 94088-3707
408-730-7617

D. Project Sponsor's Names and Addresses:

City of Sunnyvale
Department of Public Works / Engineering
P.O. Box 3707
Sunnyvale, California 94088-3707

E. Existing General Plan Designation and Zoning:

General Plan: Industrial to Residential, Medium to High Density

Zoning: Industrial and Service/Industrial to Residential/Medium Density Residential/ Planned Development (M-S/ITR/R-3/PD)

F. Project Description:

See page 3.

G. Location of Project:

See page 3.

2. Project Description

The City of Sunnyvale, Department of Public Works (the City), is proposing to redevelop approximately 5.3-acres of land, formerly known as the Fair Oaks Industrial Park, as a neighborhood park. The property was purchased in 1990 for use as a park, and is currently owned by the City. Until recently, portions of the property were leased to several tenants for private light-industrial use.

Project and Site Vicinity

The site is located at 1010 Morse Avenue in the City of Sunnyvale, County of Santa Clara, north of the intersection of Morse Avenue and Weddell Drive. Sunnyvale is located along the U.S. Highway 101 corridor in Santa Clara County in the heart of Silicon Valley (see **Figure 1**). The project location is within the Tasman Crossing neighborhood and the site is currently zoned Industrial and Service/Industrial to Residential/Medium Density Residential/ Planned Development (M-S/ITR/R-3/PD). The proposed project would amend the General Plan and rezone the site for park use to Public Facility/Park and Public Facility (PF), respectively.

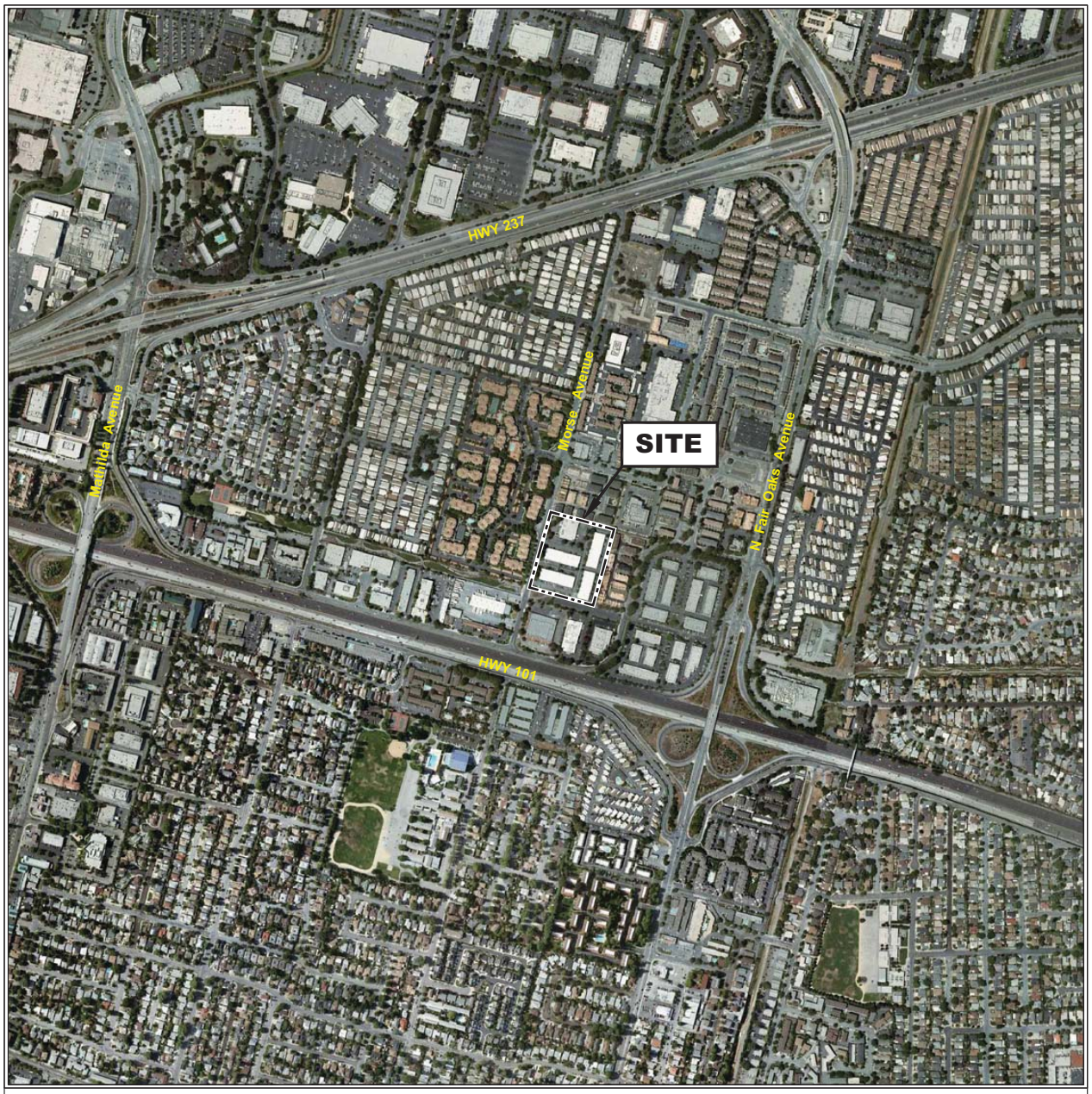
The area surrounding the site is predominantly medium and high-density residential. As shown in **Figure 2**, there are multi-family housing complexes to the north and east of the site, which are bordered by eight-foot masonry walls.[1] Land adjacent to the site to the northeast, east, and south is zoned M-S/ITR/R-3/PD. To the west, across Morse Avenue are multi-family homes. United Parcel Service (UPS) Freight, America's Best Value Inn, and Public Self Storage are to the west and southwest. A San Francisco Public Utilities (SFPUC) Hetch-Hetchy right-of-way runs along the southern boundary, containing high volume potable water transmission lines. Two churches: New Hope International Church and Holy Korean Martyrs Catholic Church, are south of the project site (beyond the SFPUC right-of-way), fronting E. Weddell Drive. The John W. Christian Greenbelt, a paved trail for pedestrians and bicycles, runs along the southern property line over portions of the SFPUC right-of-way. The trail runs east to west for 2.7 miles linking Orchard Gardens Park on the City of Santa Clara border and Fairwood Park in Sunnyvale (see **Figure 3**).

The project site includes four wooden-framed, single story, multi-tenant buildings (1010, 1012, 1014 and 1016 Morse Avenue), and one concrete tilt-up building (1020 and 1024 Morse Avenue).[2] Each building is approximately 17,000 square feet. Current and past uses have included machine shops and metal fabrication. The site was developed initially in the middle to late 1970s, and was part of an orchard prior to its current development. The property was

---

1 The east wall may be subject to modification by the adjacent residential Home Owner's Association (HOA) as condition of approval of development, at HOA expense. This modification would reduce the wall height from eight-feet to five-feet and is dependent on the City's direction. See **Appendix D**.

2 A tilt-up building is a construction method where concrete elements (i.e. walls, columns, structural supports, etc.) are formed on a concrete slab; usually the building floor, but sometimes a temporary concrete casting surface near the building footprint. After the concrete has cured, the elements are tilted from horizontal to vertical with a crane and braced into position until the remaining building structural components (roofs, intermediate floors and walls) are secured.



Reference: Google Earth Pro; Imagery date June 30, 2007.

Notes:

1. All locations are approximate.

N

0 1000 2000

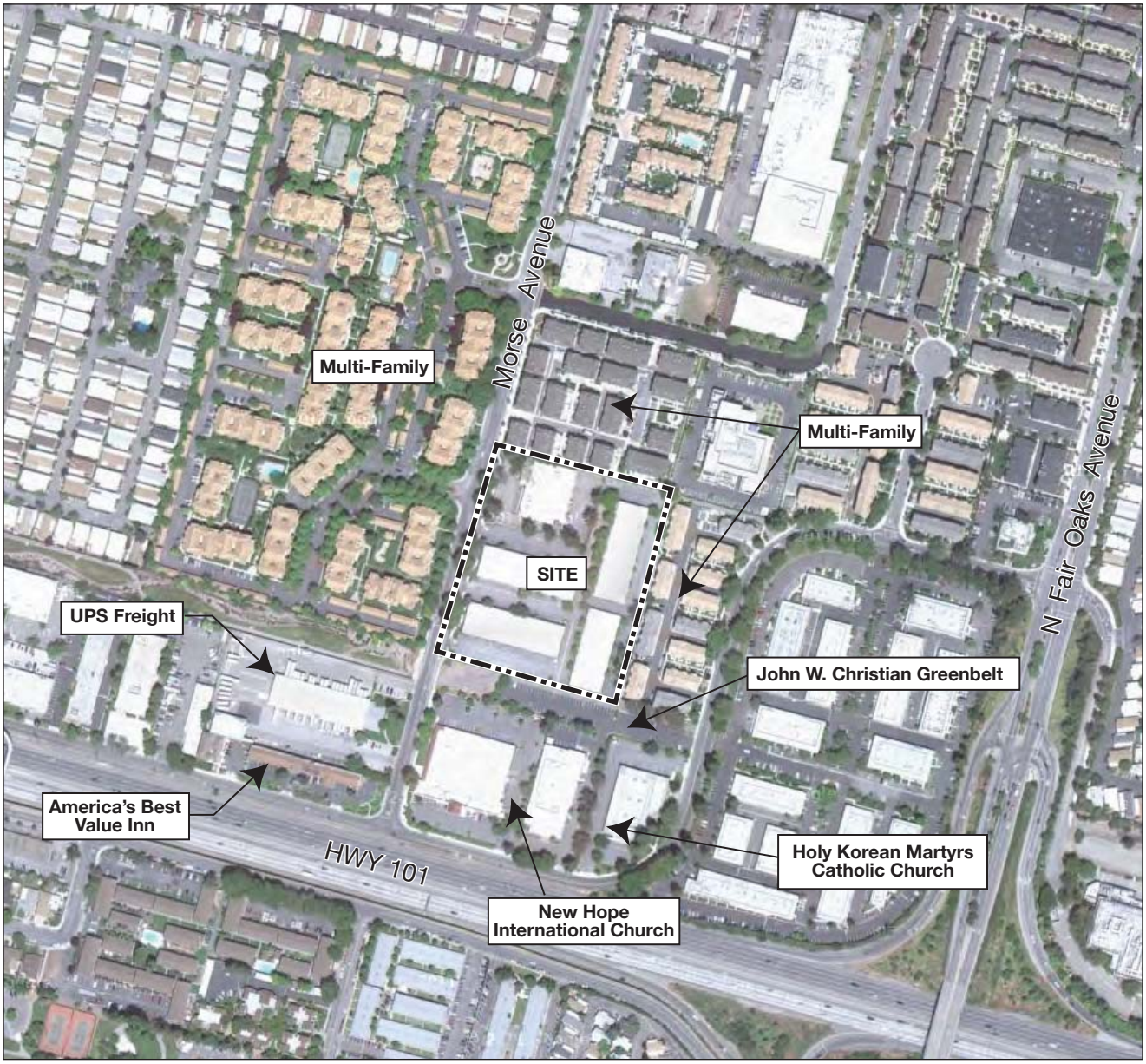
(Approximate Scale in Feet)

SOURCE: Erler & Kalinowski, Inc.

Morse Park Initial Study. 210070

Figure 1

Project Location

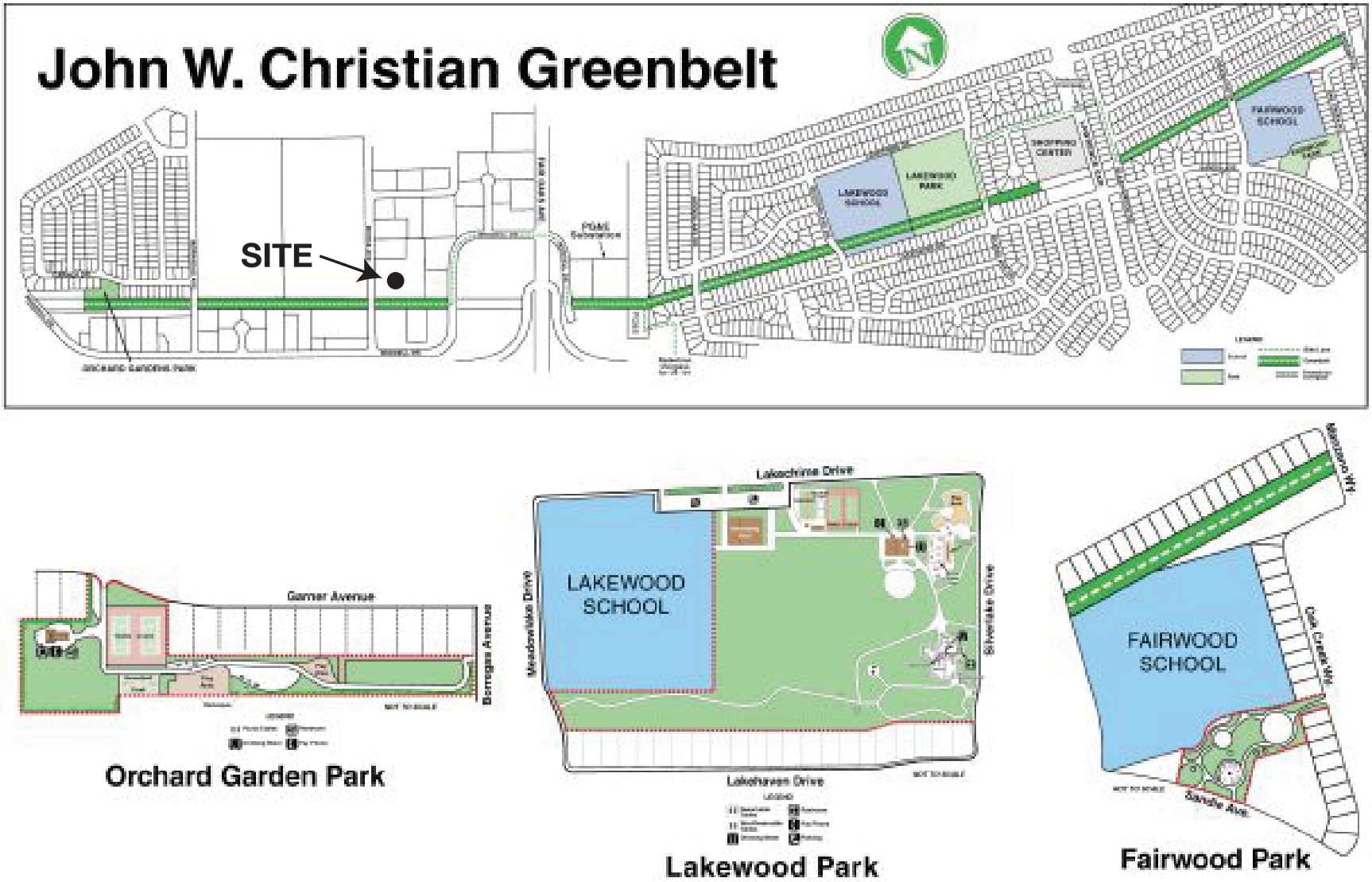


0 400
Feet

SOURCE: Erler & Kalinowski, Inc. and ESA, 2001

Morse Park Initial Study. 210070

Figure 2
Project Site Vicinity



SOURCE: City of Sunnyvale

Morse Park Initial Study. 210070

Figure 3

John W. Christian Greenbelt

purchased in 1990 for park use, with the intent that the existing structures would be demolished to develop the land as a park.[3] City intends to demolish the existing structures to redevelop the site.

Project Characteristics

The proposed park would be developed as a neighborhood park per the City's Mini Park and Neighborhood Park Design Guidelines (see **Appendix A**). A neighborhood park is intended for community members that live within a half a mile radius of the site; however, use would not be restricted to the neighborhood area. The proposed project would seek a general plan land use amendment and rezoning to be consistent with other parks in the City.

The proposed park would be designed to represent natural and designed elements. The conceptual park plan and images are illustrated in **Figures 4 and 5**. The design includes active and passive play areas. The park would incorporate sustainable design and water management policies and would follow the City's design guidelines.

Park Development Project

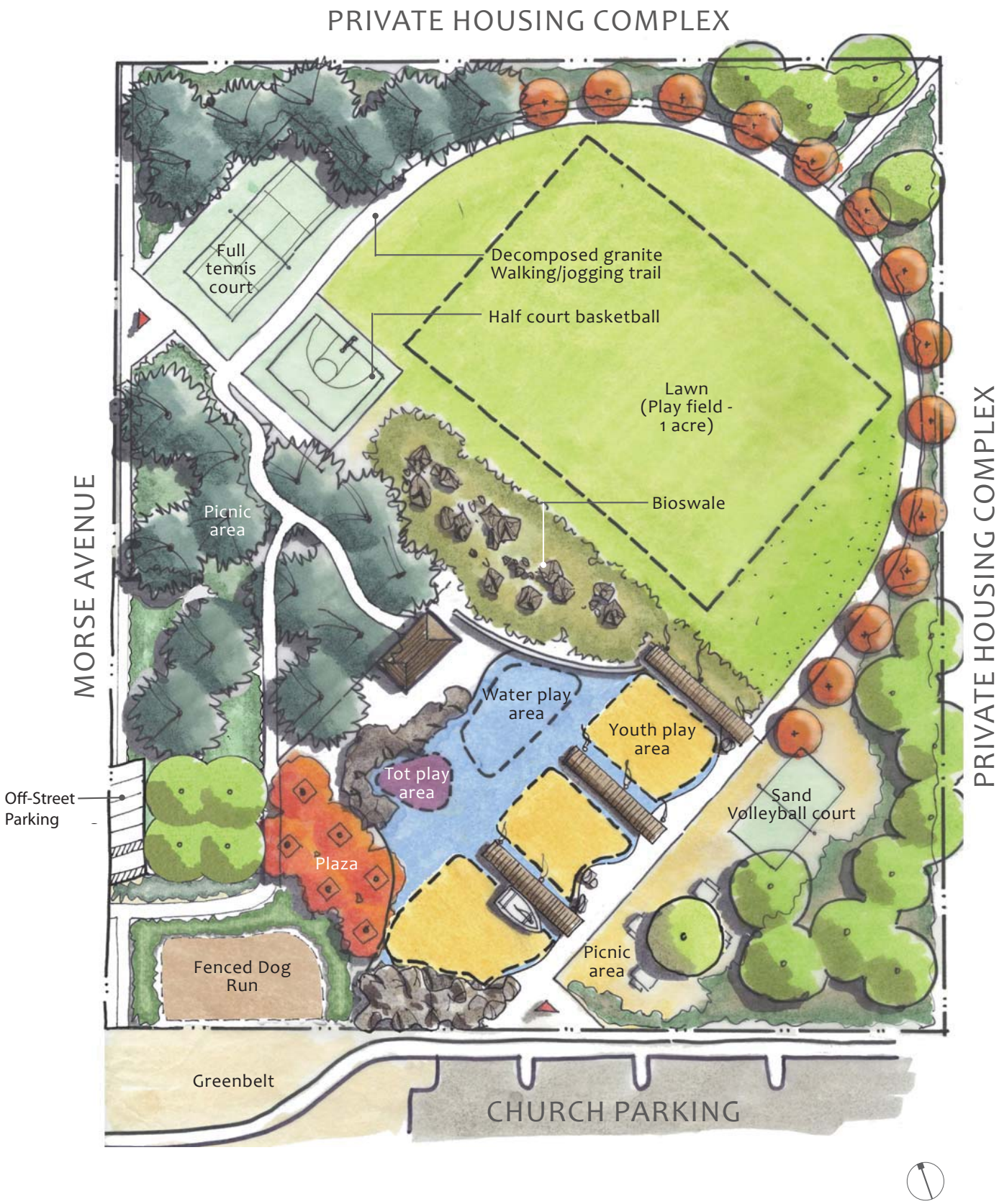
The project includes work in four phases:

- **Demolition** of the existing structures and improvements on the site would be completed in approximately 3 months. Demolition would include erecting a temporary perimeter fence and signage, removal of hazardous construction materials (asbestos containing construction materials, mercury vapor lamps, peeling lead paint) prior to mass demolition, demolition and removal of all structures and selective utilities, as necessary, removal of all building foundations and trees, and temporary grading and site preservation as necessary until the next phase of work. Demolition would occur prior to the remediation phase and the site would have exposed soils or aggregate base material where building pads were removed; these spaces would be sloped to the center. The existing trees along Morse Avenue may be preserved as they are part of the Morse Avenue Right-of-Way. All other trees will be preserved or removed if necessary to achieve the project's goals.

- **Soil remediation** work, including removal of all remaining paving, surface improvements and landscaping. Although part of the overall project, this work is independent from demolition and park construction and will be covered under a separate CEQA document, with the Department of Toxic Substance Control (DTSC) as lead agency. This phase would be completed in approximately 4 to 5 months, depending on approvals by DTSC.

- Temporary grading and drainage as necessary to maintain the site after remediation; and, the site would be disked as necessary between phases to prevent colonization of the site by

[3] The City council approved the purchase on November 13, 1990 under RTC no. of 90-567. "Tenant lease provision 20.18. Relocation" relieved the City from compensation payments to tenant upon City's termination of leases with lessees.



SOURCE: SSA Landscape Architects

Morse Park Initial Study. 210070

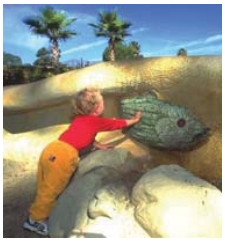
Figure 4
Conceptual Plan

BIOSWALE

A bioswale (a large depression in the ground) in the center of the site will collect rainwater and will have a natural appearance with boulders and plants.

The COVE themed- tot play area

A faux rock outcropping with pot holes, a mermaid tail imprint and brass star fish for holding onto while climbing are all part of this low profile, independent play scene that is sculpted to represent a cove.



Toddler play on rubber surfacing with fencing and shade.

PLAYFUL WORDS

Theme words stamped in concrete walks are used to evoke a sense of playfulness, encourage imagination, and provide learning and discovery opportunities children.

S W I M . F I S H . S P L A S H . T I D A L . S A I L . L A U G H .

The ROCK

All ages play - Lounge on large faux rock outcrops, climb, explore.

WALKING /JOGGING TRAIL

An 8' decomposed granite path provides a soft walking/running surface for users and will replicate sand on a beach.

The PORT themed- youth play area

A faux shipping port with wood piers, cargo nets, a docked boat, climbing boxes and play structures set the scene for children to imagination. Rubber surfacing resembles the ocean.

The OCEAN themed - water play area

A water area with sea life like animals spitting and squirting water may include a pod of spraying dolphins sculptures, whale outlines with mist and sea horses squirting from above.

SOURCE: SSA Landscape Architects

Morse Park Initial Study. 210070

Figure 5

Conceptual Images

ground squirrels and burrowing owls. This phase would occur over a period of approximately 3 to 6 months; however the duration will depend on the timing of the other phases of work.

- **Park construction** would be completed in approximately 10-12 months, followed by a warranty period and a plant establishment period. The general park features are described below.

Park Features

The park may include features, such as: playgrounds, play fields, picnic areas, walkways, trees, and lighting and associated amenities. Zones within the park may include: fenced tot lot, youth play area, water play element, tennis court, half-court basketball, sand volleyball court, picnicking area with barbeque grills, and restrooms and associated amenities. An approximately eight-foot wide surfaced path would meander through the park and provide connectivity between several areas and features. An approximately one-acre playfield would be located along the northern third of the park.

Park design includes an onsite bioswale (a large depression in the ground) to collect rainwater. The bioswale would be designed to slow and treat stormwater prior to leaving the site, per the Low Impact Development requirements.[4]

As the park is intended for neighborhood use, it would include approximately 8 motor-vehicle parking spaces, including two handicap spaces, and bicycle racks. Pedestrians would access the park from several points, including: along Morse Avenue, from the residential development on the northeast corner, from the adjacent church parking lot, and from the John W. Christian Greenbelt on the south side of the site. The project may replace or remove some of the sidewalk and driveways along Morse Avenue as necessary to complete work associated with the park development.

The park would be open from approximately 6:00 a.m. to 9:00 p.m. daily, or from dawn to dusk.

Approvals Required

The project would require the following approvals and discretionary actions from the City of Sunnyvale:

- Adoption of the Initial Study/Mitigated Negative Declaration
- Adoption of the Mitigation Monitoring and Reporting Program
- Permits (demolition permits and building permits for restroom structure)
- Construction documents

[4] These requirements are outlined in the Sunnyvale Municipal Code. SMC 12.60.120-122 and 12.60.150 identifies criteria for numeric sizing. SMC 12.60.190 identifies criteria for infiltration treatment measures.

- Award of construction contracts

Other approvals may be required from the following agencies:

- State Water Resources Control Board – National Pollutant Discharge Elimination System (NPDES) NPDES General Construction Permit and Storm Water Pollution Prevention Plan

- Compliance with Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) development guidelines (see Section 9, Hydrology and Water Quality), including Provision C.3, which limits increases in stormwater discharges from new developments and requires stormwater site design and control measures.

- Bay Area Air Quality Management District (BAAQMD) – for demolition of buildings, dust control, and permits for barbeque grills.

- Department of Toxic Substance Control (DTSC) – for soil remediation. DTSC is acting as the CEQA lead agency for the remediation portion of the project and will provide environmental site clearance.

3. Environmental Factors Potentially Affected and City's Mitigation Determination

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Geology, Soils and Seismicity
☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials	☐ Hydrology and Water Quality
☒ Land Use and Land Use Planning	☐ Mineral Resources	☒ Noise
☐ Population and Housing	☐ Public Services	☒ Recreation
☒ Transportation and Traffic	☐ Utilities and Service Systems	☒ Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Signature _____ Date _____

Nasser Fakih
Printed Name _____ For _____

4. Environmental Checklist, Discussion, and Mitigation Measures

Aesthetics

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
1. AESTHETICS — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☒	☐	☐

Discussion

a-c) **Less than Significant.** The proposed project site is located on a block bounded by Toyama Drive to the north, E. Weddell Drive to the west and south, and Morse Avenue to the west. None of these roadways have been designated or are considered eligible to be state scenic highways, nor is the project site visible from a state scenic highway. (Caltrans, 2011)

The boundary of the project site along Morse Avenue is lined by mature trees. The trees along Morse Avenue would be retained as appropriate, or removed if necessary to achieve the project goals. Additional trees are planted internally along circulation aisles and building perimeters. The existing industrial buildings are setback from the public right-of-way and are one-story in height. Surface parking and circulation aisles surround the buildings. Short-range publicly available views through the project site are of neighboring uses, including the residential uses to the north and east and the Greenbelt and churches with their associated parking to the south.

Demolition of the existing buildings and the addition of recreational facilities would change the visual character of the site. The proposed neighborhood park would include playgrounds, open lawn for informal sports play, picnic areas, walkways, trees, a restroom/maintenance building, parking and security lighting. Additional possible features may include a water play element, a tennis court, a basketball half-court, a sand volleyball court, and additional picnicking area with barbeque grills.

Short-range public views would be intermittent, as new trees and play structures would obstruct views through the interior of the park. The proposed project complements existing land uses and development in the vicinity in terms of scale, use, and location. The project would not adversely affect long-range views, nor would the project result in a substantial adverse effect on a scenic vista. Therefore, the project would result in a less than significant impact on scenic resources and scenic vistas.

d) **Less than Significant with Mitigation.** The park facilities would include low-level, lighting contained onsite. The proposed project includes plans for night lighting of the ball field, pathways, and parking. Playfield lights would vary seasonally, however the ball field area would close daily at 9:00 p.m. Lighting within the park would stay on approximately one half hour after park closure.

Project plans, including lighting plans, shall be reviewed to reduce light and glare impacts to surrounding properties in accordance with City code. Additionally, the residents on the northern and eastern property boundary would be further protected from potential light and glare by a landscaping buffer and perimeter wall/fence. However, Mitigation Measure AES-1 would be designed to reduce potential impacts to less than significant levels.

> **Mitigation Measure AES-1:** The project will be designed to reduce light and glare impacts to surrounding residential properties to a less than significant level, including use of cut-off light fixtures, and landscape elements to substantially reduce light and glare, and avoid light spillage onto adjacent residential properties.

References

California Department of Transportation (Caltrans), California Scenic Highway Mapping System website, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, accessed March 8, 2011.

Agricultural and Forest Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
2. AGRICULTURAL AND FOREST RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**				
a) 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) 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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒

Discussion

a-b) **No Impact.** The project site is not designated by either the General Plan or the Zoning Ordinance as agricultural. It is not designated as important farmland by the state (DOC, 2008). Thus, no significant agricultural resources or operations would be affected as a result of the proposed project.

c-d) **No Impact.** The project site is not zoned or designated for forestry or timberland uses. It currently contains five light industrial buildings that would be demolished and replaced by a neighborhood park. Therefore, there would be no impacts.

References

City of Sunnyvale, 2009. Land Use and Transportation Element (Revised April 28, 2009)

City of Sunnyvale, 2008. Zoning Ordinance, March 2008

Department of Conservation, California, 2006. Important Farmland of Santa Clara County 2008 (Map). Division of Land Resource Protection. Accessed March 9, 2011.

Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
3. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

a) **Less than Significant.** The project site is within the San Francisco Bay Area Air Basin (Bay Area), which is currently designated as a nonattainment area for state and national ozone standards, state particulate matter (PM10 and PM2.5) standards, and federal PM2.5 (24-hour) standard. The Bay Area Air Quality Management District's (BAAQMD's) 2010 Clean Air Plan (BAAQMD, 2010a) is the applicable Clean Air Plan that has been prepared to address ozone nonattainment issues.

If a City's General Plan is consistent with the most recently adopted Clean Air Plan, a project that is consistent with the General Plan's land use designation is considered consistent with applicable air quality plans and policies.

As stated in Section 10, Land Use and Planning, the proposed project would be consistent with the General Plan land use designations and zoning for the project site.[5] In addition, the City's General Plan is consistent with the Clean Air Plan because data and projections from the General Plan are incorporated into the Clean Air Plan. Development of the project would not interfere with population and vehicle-miles-traveled (VMT) projections used to develop the 2010 Clean Air Plan planning projections as it would not increase the

[5] As parks are permitted uses in a residential neighborhood, the project is consistent with the existing land use designation; however, as part of the project, the project site would amend the General Plan land use to Public Facility/Park, to be consistent with other parks in the city. Therefore, the proposed project, as a permitted use under the existing General Plan land use designation, is also consistent with the Clean Air Plan.

population of the area and VMT traveled would be negligible. Therefore, the proposed project would result in a less-than-significant impact because it would not substantially conflict with the region's air quality management plan.

b) **Less than Significant with Mitigation.** The Bay Area Air Basin experiences occasional violations of ozone and particulate matter (PM10 and PM2.5) standards. Thus, during the construction phase of any given project basin wide violations can occur. The proposed demolition of the existing structures and the subsequent redevelopment of the area into a neighborhood park would result in emissions primarily from construction related vehicles. Demolition and construction would involve use of equipment and materials that would emit ozone precursor emissions (i.e., reactive organic gases or ROG, and nitrogen oxides, or NOx). Demolition, remediation, and construction activities would also result in the emission of other criteria pollutants from equipment exhaust, construction-related vehicular activity, and construction worker automobile trips. Emission levels for these activities would vary depending on the number and type of equipment, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NOx from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project development. Emissions were estimated using the URBEMIS2007 model and are depicted below in **Table 1**. Additional assumptions and information are included in **Appendix B**.

TABLE 1
PEAK DAY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (Pounds/Day)[a]

Year	ROG	NOx	CO	SO_2	Exhaust PM10[b]	Exhaust PM2.5[b]
2011 (Unmitigated Emissions)	3	34	15	<1	2	1
2012 (Unmitigated Emissions)	5	39	23	<1	2	2
BAAQMD Construction Threshold	54	54	None	None	82	54
Significant Impact?	No	No	No	No	No	No

a Emissions were modeled using URBEMIS2007 and assume demolition of the existing five buildings and asphalt. It was also assumed that approximately one foot of topsoil would be exported from the entire site and equivalent clean soil imported during the grading phase. Default URBEMIS2007 equipment assumptions were assumed for construction. Construction activities were assumed to occur for a duration of one year. Additional information is included in Appendix B.

b BAAQMD's proposed construction-related significance thresholds for PM10 and PM2.5 apply to exhaust emissions only and not to fugitive dust.

Notably, air quality concerns related to soil remediation and export are addressed in the DTSC CEQA document, which includes control measures where appropriate. In addition, compliance with all applicable BAAQMD Rules and Regulations, such as Regulation 11 (Hazardous Pollutants) Rule 2 (Asbestos Demolition, Renovation, and Manufacturing), would be required by law.

Although the project would not generate emissions during construction that would exceed the BAAQMD thresholds, due to the non-attainment status of the air basin with respect to ozone, PM10, and PM2.5, the BAAQMD recommends that projects implement a set of

Basic Construction Mitigation Measures as best management practices regardless of the significance determination. Implementation **Mitigation Measures AIR-1a** and **AIR-1b** would reduce impacts to a less-than-significant level.

In regards to operations, the proposed project would increase the use at the project site by adding recreational facilities, as the existing light industrial buildings are currently vacant. The proposed neighborhood park would generate approximately 26 one-way vehicle trips on a weekday (13 inbound and 13 outbound). Operational emissions were estimated using the URBEMIS2007 model and are depicted below in **Table 2**.[6] Additional assumptions and information are included in **Appendix B**.

As shown in Table 2, long-term operational emissions of the project would be less than significant.

TABLE 2
PEAK DAY OPERATION-RELATED POLLUTANT EMISSIONS (Pounds/Day)[a]

Year	ROG	NOx	CO	SO_2	PM10	PM2.5
Area Sources	0.1	0	1.5	0	0	0
On-road Vehicles	0.2	0.2	1.9	0	0.3	0.1
Total Operational Emissions	0.3	0.2	3.4	0	0.3	0.1
BAAQMD Operational Threshold	54	54	None	None	82	54
Significant Impact?	No	No	No	No	No	No

[a] Emissions were modeled using URBEMIS2007 and assume twenty-six daily trips and default assumptions regarding landscape equipment (area sources). Additional information is included in Appendix B.

Mitigation Measure AIR-1a: During active construction, the City shall require construction contractors to implement all the BAAQMD's Basic Construction Mitigation Measures, listed below:

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 mph.

[6] URBEMIS2007 is a computer program that can be used to estimate emissions associated with land development projects in California, area sources such as gas appliances, wood stoves, fireplaces, and landscape maintenance equipment; and construction projects. URBEMIS stands for "Urban Emissions Model."

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.

Mitigation Measure AIR-1b: During temporary gaps of inactivity between construction phases, such as between demolition and soil remediation and between soil remediation and park construction, the City shall require construction contractors to implement the following fugitive dust control measures[7]:

1. Restrict vehicular access to the area; and

2. Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface (i.e., resistant to wind blown fugitive dust emissions), such as:

    i. A visible crust; or

    ii. A threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 centimeters per second or greater; or

    iii. A flat vegetative cover of at least 50 percent that is attached or rooted vegetation; or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind; or

    iv. A standing vegetative cover of at least 30 percent that is attached or rooted vegetation with a predominant vertical orientation; or

    v. A standing vegetative cover that is attached or rooted vegetation with a predominant vertical orientation that is at least 10 percent and where the TFV

[7] These measures are specified for the "Temporary Stabilization During Periods of Inactivity" in the San Joaquin Valley Air Pollution Control District Regulation VIII, Fugitive PM10 Prohibition. The BAAQMD has not established similar controls, and as such, it is recommended to incorporate best practice measures from another air district if available (BAAQMD, 2011).

is at least 43 centimeters per second when corrected for non-erodible elements; or

vi. A surface that is greater than or equal to 10 percent of non-erodible elements such as rocks, stones, or hard-packed clumps of soil.

c) **Less than Significant with Mitigation.** According to the BAAQMD, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the BAAQMD CEQA Air Quality Guidelines, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD, 2010b). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less-than-significant air quality impacts. As discussed for criteria "b" above, the project would result in less than significant construction emissions with mitigation incorporation, and less than significant operational emissions.

Mitigation Measure: Implement Mitigation Measures AIR-1a and AIR-1b.

d) **Less than Significant with Mitigation.** The project would be constructed adjacent to existing residential uses. Construction of the project would result in short-term diesel exhaust emissions (DPM), which are toxic air contaminants (TACs), from on-site heavy-duty equipment. Project construction would generate DPM emissions from the use of off-road diesel equipment required for demolition, remediation, and construction activities. Exposure of sensitive receptors is the primary factor used to determine health risk. Exposure is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. A longer exposure period would result in a higher exposure level. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities (approximately one year) would only constitute a small percentage of the total 70-year exposure period. DPM from construction activities are not anticipated to result in the exposure of sensitive receptors to levels that exceed applicable standards. However, implementation of BAAQMD's Basic Construction Mitigation Measures would reduce potential DPM emissions.

The long-term operation of the project would not result in any sources of toxic air emissions. However, since the park would be located approximately 475 feet from the edge of U.S. 101, park visitors would potentially be exposed to TACs from the highway. This exposure would be for the short-term duration of park visitation and is not

anticipated to be substantially different than the exposure of existing residents in the vicinity, which the park would cater to. As a result, exposure of existing residential sensitive receptors to substantial TAC emissions from the project, and exposure of visitors at the project site to substantial TAC emissions from the highway, would be less than significant.

Mitigation Measure: Implement Mitigation Measures AIR-1a and AIR-1b.

e) **Less than Significant.** As a general matter, the types of land use development that pose potential odor problems include wastewater treatment plants, refineries, landfills, composting facilities and transfer stations. No such uses would occupy the project site. Therefore the project would not create objectionable odors that would affect a substantial number of people.

References

Bay Area Air Quality Management District (BAAQMD), 2010a. Bay Area 2010 Clean Air Plan, adopted September 15, 2010. Available at http://www.baaqmd.gov.

Bay Area Air Quality Management District (BAAQMD), 2010b. CEQA Air Quality Guidelines, adopted June 2, 2010. Available at http://www.baaqmd.gov.

Bay Area Air Quality Management District (BAAQMD), 2011. Personal communication with Alison Kirk, Senior Environmental Planner with the BAAQMD. May 19, 2011.

Biological Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES — Would the project:				
a) 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 Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) 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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

a) **Less than Significant.** California Department of Fish and Game's California Natural Diversity Data Base (CNDDB) documents 20 occurrences of special-status[8] species within the USGS quadrangle containing the site (Mountain View) (CDFG, 2011). Natural habitat for all of these species no longer exists at the project site and a recent search shows no sitings within the project area.

b) **Less than Significant.** The project site is currently comprised of five industrial buildings and associated paved drive aisles, a parking lot and trees. There is no riparian habitat or other sensitive natural community onsite.

[8] The term "special-status" species includes those that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as Threatened or Endangered, but designated as "Rare" or "Sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations, or policies adopted by local agencies such as counties, cities, and special districts to meet local conservation objectives.

c) **No Impact.** The project site is on developed land that is generally either paved for parking or covered with buildings, with minimal planter areas. As such, the project site is largely impervious and contains no wetlands as defined by the Clean Water Act.

d) **Less than Significant with Mitigation.** The project site and surrounding area could be suitable habitat for nesting birds due to the presence of trees. Breeding birds are protected under Section 3503 of the California Fish and Game Code (the Code), and raptors are protected under Section 3503.5. In addition, both Section 3513 of the Code and the Federal Migratory Bird Treaty Act (16 USC, Sec. 703 Supp. I, 1989) prohibit the killing, possession, or trading of migratory birds. Finally, Section 3800 of the Code prohibits the taking of non-game birds, which are defined as birds occurring naturally in California that are neither game birds nor fully protected species. Nesting birds on or near the project site could be negatively impacted by increased light, noise, or pets. These potential impacts would be reduced to less-than-significant levels with the implementation of **Mitigation Measure BIO-1** and **BIO-2**. Increased light and glare is addressed in the Aesthetics section and the impact is reduced to less than significant with the implementation of **Mitigation Measure AES-1**.

Mitigation Measure BIO-1: Construction or vegetation removal during the months of March to August shall have pre-construction surveys conducted by a qualified biologist no more than 14 days prior to these activities, to locate any active nests. These surveys shall be performed in the project area and surrounding 500 feet, in coordination with the City. Vegetation removal and construction activities performed between September and February avoid the general nesting period for birds and therefore would not require pre-construction surveys.

If active nests are observed on either the project site or the surrounding area, the project applicant shall establish buffer zones around the nests, with the size to be determined in consultation with California Department of Fish and Game (usually 100 feet for perching birds and 300 feet for raptors). No ground-disturbance activities shall occur within this buffer zone until young have fledged or the nest is otherwise abandoned.

If work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area.

Mitigation Measure BIO-2: The City shall require garbage cans to have secure lids and for litter to be removed regularly to avoid attracting pets or feral cats to the park.

e) **No Impact.** There are approximately 65 trees of varying sizes providing landscaping around the built structures on the site. The Sunnyvale Municipal Code, Chapter 19.94 Tree Preservation outlines the requirements for tree removal permits on private property and any city owned golf course or park. Because the site is on city-owned land that is not a golf course or park, it is exempt from the requirement of a tree removal permit.

f) **No Impact.** The project site is not covered by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, the proposed project would not result in impacts related to this criterion.

References

California Department of Fish and Game (CDFG), California Natural Diversity Database Rarefind -commercial version 3.1.0 for the Mountain View 7.5-minute topographic quadrangle, March 2011.

Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion

a) **No Impact.** A significant impact would occur if the project causes a substantial adverse change to a historical resource, including historic-period architectural resources, including buildings, structures, and objects. A substantial adverse change includes the physical demolition, destruction, relocation, or alteration of the resource.

A records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University was completed on March 28, 2011 (File No. 10-0941). The review included a ½-mile radius around the project area. Previous surveys, studies, and archaeological site records were accessed. Records were also reviewed in the Historic Property Data File for Santa Clara County that contains information on sites of recognized historical significance including those evaluated for listing in the National Register of Historic Places, the California Register of Historical Resources, the California Inventory of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. The purpose of the records search was to (1) determine whether known archaeological resources have been recorded within or adjacent to the project area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The records search at the NWIC indicated that no historic resources have been recorded in the project area. Given this, and because the project would not affect any buildings or structures, the proposed project would have no impact on historical resources.

b) **Less than Significant with Mitigation.** A significant impact would occur if the project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

The project area is within the traditional territory of the Costanoan or Ohlone people (Levy, 1978: 485–495). These people were collectively referred to by ethnographers as Costanoan, but were actually distinct sociopolitical groups that spoke at least eight languages of the same Penutian language group. The Ohlone occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. The project area is in the greater Ramaytush tribal area (Levy, 1978:485). The nearest ethnographic village site in the vicinity of the project area is puyšon, located northwest of the project area on San Francisquito Creek.

A cultural resources investigation was completed by Garcia and Associates (Siskin and Cox, 2010). The study included a records search at the NWIC, a geoarchaeological analysis, contact with Native Americans, and a surface survey. The study is presented in **Appendix C**.

The record search resulted in the identification of no previously recorded cultural resources within the Area of Direct Impacts (ADI). One previously recorded prehistoric resource was identified 0.25-miles north of the ADI (Psota, 2008). The site is comprised of tiny fragments of freshwater shell with no other cultural materials. Additionally the east side of Morse Avenue presents a view of 2.5 feet depth of exposed soil that exhibits no buried soil horizons or other indicators of cultural materials. Archaeological records also indicate that there are numerous previously recorded prehistoric archaeological sites (CA-SCL-12/H, CA-SCL-416/H, CA-SCL-832) located within one to two miles of the ADI.

Native American consultation resulted in no specific information regarding prehistoric or ethnographic use of the project location. However, the Ohlone community expressed concern regarding the sensitivity of the ADI for prehistoric archaeological resources, including human remains.

The pedestrian survey did not result in the identification of cultural resources within the ADI, however the area is paved or otherwise obscured offering limited surface visibility. The geoarchaeological analysis of the ages and depositional nature of landforms underlying the ADI, the nature and proximity of previously recorded buried archaeological sites in Santa Clara Valley, and the environmental setting and borehole logs gathered for the project (see Appendix B of Appendix C of the Initial Study), suggest that the ADI may be sensitive for the presence of buried prehistoric surfaces.

While geoarchaeological research indicates that the ADI may be sensitive for the presence of buried prehistoric living surfaces, the footprint of project-related excavation within the ADI (to the depth of six feet for utility trenches) is limited. It is recommended that after final design of the utility locations and related ground disturbance, that a limited

Extended Phase I geoarchaeological test excavation be conducted. Damage to archaeological resources would be a potentially significant impact. Implementation of the following mitigation measures would reduce potential impacts to a less-than-significant level.

Mitigation Measure CUL-1a: Extended Phase I Archaeological Survey

Following final design plans, a qualified archaeologist with experience in geoarchaeology shall conduct an Extended Phase I excavation. A Native American monitor shall be invited to monitor the test excavations. This test excavation should be conducted within the areas of the ADI that will be disturbed to a depth of six feet or more (i.e. proposed utility trenches) during project implementation. Methods used for this Extended Phase I excavation should be based on the level and precise location of actual proposed project impacts. A plan shall be prepared that will focus on identifying testing locations, expected depth of testing, and expected cultural materials.

If cultural materials are found during the Extended Phase I excavation, a qualified archaeologist shall prepare an Archaeological Evaluation Plan (AEP). The AEP shall create a program to determine the potential of the expected resource to meet the California Register criteria—particularly Criterion 4, the resource's potential to address important research questions identified in the AEP. The archaeologist shall then conduct an evaluation consistent with the AEP. The methods and findings of the evaluation shall be presented in an Archaeological Evaluation and Effects Report (AEER).

Based on the conclusions of the AEER, it shall be determined if the project will adversely affect a CEQA-significant archaeological resource. If the project will have an adverse effect on such a resource, an Archaeological Research Design and Treatment Plan (ARDTP) shall be prepared by the archaeologist. A data-recovery investigation and/or other treatment consistent with the ARDTP shall be conducted by a qualified archaeologist.

Mitigation Measure CUL-1b: Following the implementation of Mitigation Measure 1a, if prehistoric or historic-period cultural materials are unearthed during ground-disturbing activities, it is recommended that all work within 100 feet of the find halt until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, capping, or data recovery.

c) **No Impact.** Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

Rock formations that are considered of paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains. This includes, but is not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent. The project area is underlain by Holocene alluvium, and is not likely to yield significant paleontological remains because they are young surface deposits that are not considered fossil-bearing rock units. In addition, construction of the proposed project would not require substantial excavation to depths at which paleontological resources could be encountered.

d) **Less than Significant with Mitigation.** A significant impact would occur if the project disturbed any human remains, including those interred outside of formal cemeteries. There is no indication that the project area has been used for burial purposes in the recent or distant past. It is unlikely that human remains would be encountered in the project area. However, in the event of the discovery of any human remains during project construction activities, work would be halted. Damage to human remains would be a potentially significant impact. Implementation of the following mitigation measure would reduce potential impacts to a less-than-significant level.

> **Mitigation Measure CUL-2:** If human remains are encountered during ground disturbing activities, State Health and Safety Code Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will make recommendations for the treatment of any human remains.

References

Levy, Richard, *Costanoan in California*, edited by Robert F. Heizer, pp. 485–495. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C., 1978.

Psota, Sunshine, *Archaeological Survey Report for the Proposed Tasman-Fair Oaks Pedestrian and Bicycle Circulation Plan Improvements Project, Sunnyvale, Santa Clara, California.* Prepared for City of Sunnyvale Department of Public Works. On file (S-34946), Northwest

Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California, 2008.

Siskin, Barbra, and Beatrice Cox, *Cultural Resources Investigation for the City of Sunnyvale's Morse Park Project, Santa Clara County, California*. Prepared for Erler & Kalinowski, Inc., 2010.

Geology, Soils, and Seismicity

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
6. GEOLOGY, SOILS, AND SEISMICITY — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion

a.i) **Less than Significant.** The project site is not located in an Alquist-Priolo Earthquake Fault Zone nor is it located on or immediately adjacent to an active or potentially active fault.[9] The Alquist-Priolo Earthquake Fault Zoning Act requires the delineation of zones by the California Department of Conservation, Geological Survey (CGS, formerly known as the California Division of Mines and Geology [CDMG]) along sufficiently active and well-defined faults. The purpose of the Act is to restrict construction of structures intended for human occupancy along traces of known active faults. Alquist-Priolo Zones

[9] An active fault is defined by the State of California is a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A potentially active fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. Sufficiently active is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches (Hart, 1997).

are designated areas most likely to experience surface fault rupture, although fault rupture is not necessarily restricted to those specifically zoned areas. The active faults nearest to the project site are the San Andreas, located 8 miles southwest of the project site, and the Hayward, located 9 miles northeast. Other nearby active Bay Area faults include the San Gregorio-Hosgri fault, located 21 miles west, and the Calaveras fault, located 16 miles west of the project site. As the project site is not located in an Alquist-Priolo Earthquake Fault Zone nor is it located on or immediately adjacent to an active fault, fault rupture hazards associated with the proposed project are considered less than significant.

a.ii, iii) **Less than Significant.** The City of Sunnyvale is located in a seismically active region. Recent studies by the United States Geological Survey (USGS) indicate there is a 63 percent likelihood of a Richter magnitude 6.7 or higher earthquake occurring in the Bay Area in the next 30 years (USGS, 2008a; 2008b). The project site could experience a range of ground shaking effects during an earthquake on one of the aforementioned Bay Area faults. An earthquake on the San Andreas Fault could result in very strong (Modified Mercalli Index VIII) ground shaking intensities.[10] Ground shaking of this intensity could result in moderate damage, such as collapsing chimneys and falling plaster from buildings in Sunnyvale (ABAG, 2003a). Seismic shaking of this intensity can also trigger ground failures caused by liquefaction, potentially resulting in foundation damage, disruption of utility service and roadway damage.[11] The project site is underlain by alluvial materials that can cause moderate to very high shaking amplification (ABAG, 2003b), and is within an area designated by the CGS and Santa Clara County as a liquefaction Seismic Hazard Zone (CGS, 2006, and Santa Clara County, 2002).

The Seismic Hazards Mapping Act (SHMA) was enacted in 1990 to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failures caused by earthquakes. SHMA requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation must be conducted and appropriate mitigation measures incorporated into the project design. The CGS Special Publication 117A, first adopted in 1997 (and updated in 2008) by the CGS in accordance with the SHMS, provides guidelines for evaluating seismic hazards other than surface faulting, and for recommending mitigation measures as required by Public Resources Code Section 2695(a).

Although the proposed project would include few above-ground structures, the park design would be required to comply with all applicable City of Sunnyvale regulations and standards to address potential geologic impacts associated with development of the

[10] Shaking intensity is a measure of ground shaking effects at a particular location, and can vary depending on the overall magnitude of the earthquake, distance to the fault, focus of earthquake energy, and type of underlying geologic material. The Modified Mercalli (MM) intensity scale is commonly used to measure earthquake effects due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total).

[11] Liquefaction is the process by which saturated, loose, fine-grained, granular, soil, like sand, behaves like a dense fluid when subjected to prolonged shaking during an earthquake.

project site, including ground shaking and liquefaction. Geotechnical and seismic design criteria must also conform to engineering recommendations in accordance with the seismic requirements of the 2010 California Building Code (Title 24). As the project site is located within a liquefaction Seismic Hazard Zone according to the CGS, the City would be required to comply with the guidelines set by CGS Special Publication 117, if applicable.

a.iv) **No Impact.** The project site is relatively level, and is not located on or adjacent to a hillside. Improvements resulting from the proposed project would therefore not be affected by potential impacts associated with landslides or mudslides.

b) **Less than Significant.** Redevelopment of the project site could involve grading and trenching. These activities could expose soils to erosion. The proposed project site exceeds one acre in size, and in accordance with the State Water Resources Control Board requirements, the project would be required to comply with federal National Pollutant Discharge Elimination System (NPDES) requirements. As fully described in Hydrology and Water Quality, Section 9, the City would be required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) in order to minimize potential erosion and subsequent sedimentation of stormwater runoff. This SWPPP would include Best Management Practices (BMPs) to control erosion associated with grading, trenching, and other ground surface-disturbing activities. In addition, a grading plan would be required before permits are issued, in conformance with Santa Clara County Urban Runoff Pollution Prevention Program (SCVURPPP) erosion control measures (SCVURPPP, 2003).

c) **Less than Significant.** The City of Sunnyvale has historically experienced subsidence resulting from excessive withdrawal of groundwater. However, the stabilization of groundwater pumping rates and a groundwater re-injection program administered by the Santa Clara Valley Water District has halted subsidence in the surrounding area. The proposed recreational development would not involve the withdrawal of groundwater. Given the limited loading of the proposed project improvements, potential impacts associated with unstable units would be less than significant. Potential impacts related to liquefaction are discussed under a.ii, above.

d) **Less than Significant.** The completion of a site-specific geotechnical investigation and incorporation of geotechnical recommendations, as required by the City's Building Division prior to issuance of a building permit, would ensure that site-specific information on shrink-swell capabilities of onsite soils is obtained. The site-specific geotechnical investigation would include measures to minimize hazards associated with expansive soils, if present.

e) **No Impact.** The proposed restrooms on the project site would be connected to the City of Sunnyvale sewer system; therefore the project would have no impact related to the support of septic systems.

References

ABAG, 2003a. Modified Mercalli Intensity Scale. http://www.abag.ca.gov/bayarea/eqmaps/doc/mmi.html. Accessed April 11, 2011.

ABAG, 2003b. Earthquake Hazard Map for Mountain View Based on Underlying Geologic Material. http://www.abag.ca.gov/cgi-bin/pickmapx.pl. April 11, 2011.

California Geological Survey (CGS), 2006. Seismic Hazard Zone Report for the Mountain View 7.5- Minute Quadrangle, Santa Clara, Alameda, and San Mateo Counties, California. Department of Conservation.

Hart, E.W. Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act of 1972 with Index to Earthquake Fault Zones, California Geological Survey (formerly the California Division of Mines and Geology), Special Publication 42, 1990, Revised and Updated 1997.

Santa Clara County, 2002. Geologic Hazard Zones Map. Planning Office.

Santa Clara County, 2003. Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), http://www.scvurppp-w2k.com/default.htm, accessed April 11, 2011.

USGS, 2008a. 2008 Bay Area Earthquake Probabilities. http://earthquake.usgs.gov/regional/nca/ucerf/images/2008probabilities-lrg.jpg. Accessed April 11, 2011.

USGS, 2008b. Uniform California Earthquake Rupture Forecast, Version 2. Working Group on California Earthquake Probabilities (WG07). Findings, http://www.conservation.ca.gov/cgs/information/publications/sr/Documents/SR_203.pdf. Accessed April 11, 2011.

Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

a-b) Less than Significant. Greenhouse gas (GHG) impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008). GHG emissions associated with project construction and operations were modeled with URBEMIS 2007 and the BAAQMD Greenhouse Gas Model (BGM) and are described below.

The project would consist of demolition of the existing buildings, soil remediation, and the subsequent redevelopment of the project site into a neighborhood park. Greenhouse gases (GHGs) associated with demolition, remediation, and construction would be generated by construction equipment, haul trucks, and worker vehicles. As shown in Appendix B, maximum annual GHGs of 222 metric tons of CO_2 would be emitted during the year 2012.

In regards to long-term operations, in accordance with the BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2010), this project would have a significant impact if the project emits GHGs greater than 1,100 metric tons per year CO_2e from sources other than permitted stationary sources. On-road vehicles, landscaping maintenance activities, and water/wastewater conveyance would be the primary sources of GHGs associated with project operations. As shown in **Appendix B**, GHG emissions generated by these sources would equate to 35 metric tons of CO_2 per year. Thus, the project would not exceed the BAAQMD GHG threshold and would be considered less than significant.

The City of Sunnyvale has established a GHG reduction plan (KEMA, Inc. 2007). Notably, the project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. This would be a less than significant impact.

References

Bay Area Air Quality Management District (BAAQMD), 2010. *CEQA Air Quality Guidelines*, adopted June 2, 2010. Available at www.baaqmd.gov

California Air Pollution Control Officers Association (CAPCOA), 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*.

KEMA, Inc., 2007. *City of Sunnyvale Climate Action Plan – City Operations*. June 2007.

Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) 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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion

a,d) **Less than Significant with Mitigation.** The construction of the proposed project would require demolition, soil remediation, and minor grading activities. If not addressed beforehand, construction activities could potentially expose construction workers and the public to hazardous conditions through disturbance of hazardous materials present in subsurface soils or building materials.

Demolition

Demolition of existing structures on the project site may expose construction workers, the public, or the environment to hazardous materials such as lead-based paint, asbestos, and polychlorinated biphenyls (PCBs). The level of potential impact is dependent upon the

age, construction, and building materials in each area of the building. If asbestos containing materials (ACMs) are present and disturbed, it could expose workers and the public to potentially hazardous airborne fibers during demolition. Any ACMs, if present, would need appropriate abatement of identified asbestos prior to demolition.

A pre-demolition survey was conducted on all the buildings on the project site to determine the potential for ACMs as well as other hazardous building materials (see **Appendix H**). The inspection and sampling results indicated that ACMs, lead-based paint (lead based containing materials in glazed ceramic tiles) were present in all the buildings and would require removal in accordance with applicable regulations (Cohen Group, 2010). ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal-OSHA. Cal-OSHA also regulates worker exposure to lead-based paint. Potential exposure to these hazardous building materials can be reduced through appropriate identification, removal and disposal according to applicable regulations.

Structures slated for demolition under the project must be assessed for ACMs, and if present, abatement carried out in accordance with state and federal regulations prior to the start of demolition or renovation activities.

Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified 10 days in advance of any proposed demolition or abatement work.

Notification must include the names and addresses of operations and persons responsible; description and location of the structure to be demolished/altered including size, age, and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The BAAQMD randomly inspects asbestos removal operations and will inspect any removal operation about which a complaint has been received.

Asbestos abatement contractors must follow state regulations contained in 8 CCR 1529 and 8 CCR 341.6 through 341.14 where there is asbestos related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a hazardous waste generator number assigned by and registered with the Department of Toxic Substances Control (DTSC) in Sacramento. The site owner or responsible party and the transporter of

the waste are required to file a hazardous waste manifest that details the transportation of the material from the site and its disposal.

Both the federal OSHA and Cal-OSHA regulate worker exposure during construction activities that disturb lead-based paint. The Interim Final Rule found in 29 CFR 1926.62 covers construction work in which employees may be exposed to lead during such activities as demolition, removal, surface preparation for repainting, renovation, cleanup, and routine maintenance. The OSHA-specified compliance includes respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of this regulation.

Fluorescent lighting ballasts manufactured prior to 1978, and electrical transformers, capacitors, and generators manufactured prior to 1977, may contain PCBs and/or mercury. To prevent unintentional release, these lighting fixtures are required to be removed intact and transported to a regulated facility. In accordance with the Toxic Substances Control Act and other federal and state regulations, the proposed project would be required to properly handle and dispose of electrical equipment and lighting ballasts that contain PCBs and/or mercury, reducing potential impacts to a less-than-significant level.

Compliance with these regulations and procedures would ensure that any potential impacts due to hazardous building materials are less than significant.

Subsurface Contamination

The project site was developed initially in the mid- to late-1970s, and was part of a larger orchard prior to its current development. The project site was most recently leased to a number of tenants for private industrial and commercial uses, and includes four wooden-framed, single-story, multi-tenant buildings (1010, 1012, 1014 and 1016 Morse Avenue), and one concrete tilt-up building (1020 and 1024 Morse Avenue). Current and past uses have included machine shops and metal fabrication. A screening-level soil sampling investigation was conducted on the project site to determine the presence of contaminants that may have been released from prior uses (see **Appendices E through G**). The findings showed the presence of lead and arsenic in shallow soil on the project site at concentrations above environmental regulatory screening criteria for unrestricted land use, and above typical background concentrations for South Bay Area soils (EKI, 2010). Pesticides were not found in concentrations above relevant screening criteria. Although, lead and arsenic were found at levels that are not suitable for the proposed use, they were not determined to be classified as hazardous waste (EKI, 2010). The presence of elevated lead and arsenic in soil on the site appears to be due to the previous orchard use related to possible application of lead-arsenate as a pesticide. With implementation of **Mitigation Measures HAZ-1a and HAZ-1b**, the contaminated site soils would be removed from the project site and thus would not be a potential health threat to proposed recreational uses (see **Appendix I**).

During operation of the proposed project, there would be no routine transport, use, or disposal of hazardous materials. Landscaping maintenance may require the use of limited quantities of industry standard hazardous materials such as herbicides or pesticides but not in such a manner as to represent a significant threat to human health and the environment.

Mitigation Measure HAZ-1a: The City shall obtain a qualified environmental professional to prepare a health and safety plan based on the site conditions. The health and safety plan, in accordance with OSHA's Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), shall identify the potential contaminants that may be encountered, appropriate personal protective equipment, and worker safety procedures.

Mitigation Measure HAZ-1b: The City shall retain a qualified environmental consulting firm to direct the remediation of surface soil contamination at the project site in accordance with any Department of Toxic Substances Control (DTSC) requirements as the overseeing regulatory agency. Upon completion of contaminated soil removal and confirmation soil sampling that demonstrates residual contaminant concentrations are less than the approved cleanup levels, the site shall be ready for unrestricted use. A final remediation completion report will then be submitted to DTSC within one to two months after the completion of excavation. The proposed park shall not be open to the public until final approval of the remediation report and DTSC certification that the site has been cleared for public use.

b) **Less than Significant.** Construction at the site could involve minor quantities of paints, solvents, oil and grease, and petroleum hydrocarbons as discussed in Section 9, Hydrology and Water Quality. Compliance with hazardous materials BMPs, as identified in the required SWPPP, would reduce potential impacts from spills or leaks associated with construction hazardous materials to a less-than-significant level. Following construction, no hazardous materials storage, use, or disposal would be likely. Therefore potential impacts from upset or accidental releases during or after project construction would be considered less than significant.

c) **Less than Significant.** The project site is not located within a quarter mile of any school. The closest school to the project site is the Columbia Middle School located approximately a half mile south of the project site. However, as discussed above, the proposed project would not handle or disturb significant hazardous materials; therefore this is a less-than-significant impact.

e,f) **No Impact.** The project site is located within two miles of the Moffett Federal Airfield, which is operated by the NASA Ames Research Center. Five to ten flights per day take off or land at this field. The project site is not located within any airport land use plan, and it is located outside the airport's noise contour and approach zone. The project site's proximity to the airfield would not result in a safety hazard for people residing or working in the project site.

g) **No Impact.** The proposed project would alter an existing developed site into a recreational area. Construction and operation of the proposed project would not involve the temporary or permanent closure of roads, and would not interfere with emergency response or evacuation plans. There would be no impact.

h) **Less than Significant.** The project site is located in an urban setting. The project site is not located in a designated wildland area that would contain substantial forest fire risks or hazards. The risk of increased fire hazards from implementation of the proposed improvements at the project site is considered less than significant.

References

Cohen Group, 2010. *Report of Findings, Pre-Demolition Hazardous Materials Survey, Fair Oaks Industrial Park, 1010, 1012, 1014, and 1020/1024 Morse Avenue, Sunnyvale California*, April 22, 2010.

Erler Kalinowski Incorporated (EKI), 2010. Report of Results of Additional Soil Characteristics, 1010 to 1024 Morse Avenue, Sunnyvale California, October, 2010.

Hydrology and Water

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

Discussion

a) **Less than Significant.** Stormwater runoff generated from the project site is currently collected onsite and delivered to existing storm sewer facilities which direct flows to the north of the site, ultimately emptying into the San Francisco Bay.

Because the project site exceeds one acre in size, the City would be required to apply for coverage under the State General Construction Permit to comply with federal National

Pollutant Discharge Elimination System (NPDES) regulations. In accordance with General Plan/Municipal Code requirements and the State General Construction Permit, a developer would file a Notice of Intent with the State Water Resources Control Board, then develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that identifies appropriate construction Best Management Practices (BMPs) in order to minimize potential sedimentation or contamination of stormwater runoff generated from the project site. The SWPPP would be prepared, and specified BMPs would be implemented during construction as part of the project. Preparation and approval of the SWPPP, as required by the City, would therefore reduce potential degradation of water quality associated with future project construction to a less-than-significant level through compliance with NPDES permit regulations. The project would also be subject to compliance with the City of Sunnyvale stormwater requirements for projects that replace more than 10,000 square feet of impervious surfaces. As such, the project sponsor would be required to prepare a stormwater management plan that details post construction BMPs that would be incorporated into project plans to reduce potential stormwater impacts.

The City of Sunnyvale is a co-permittee agency listed in the Municipal NPDES Stormwater Permit. Municipal agencies in Santa Clara County, including Sunnyvale, the County of Santa Clara, and the Santa Clara Valley Water District, joined to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) to coordinate compliance with the Permit, including the regulations that require stormwater treatment controls at certain new development and redevelopment projects. The City and SCVURPPP have developed complementary guidelines for the post-construction treatment requirements. The City may be required to design and install adequate stormwater treatment controls for the project, as well as ensure that long-term maintenance of the controls is provided. To the maximum extent that is feasible, Low Impact Development (LID) treatment controls would be selected for this project. LID treatment controls include rainwater collection and re-use systems, infiltration controls, or biotreatment controls, such as bioretention facilities.

Hazardous materials associated with construction activities would likely involve minor quantities of paint, solvents, oil and grease, and petroleum hydrocarbons. Storage and use of hazardous materials at the project site during construction activities would comply with BMPs as specified in the required SWPPP, described above. Adherence to BMPs would effectively reduce potential impacts to groundwater quality associated with spills or leaks of hazardous materials and stormwater quality during construction to a less-than-significant level.

Following the completion of construction activities, application of pesticides and herbicides related to landscape maintenance would be potential sources of polluted stormwater runoff. Otherwise, there would be no sources that would significantly impact stormwater runoff quality, and the proposed project would not adversely affect ground water quality. Regardless, as previously discussed, the proposed project would be

required to comply with City of Sunnyvale and SCVURPPP stormwater quality protection requirements where applicable. Therefore, potential groundwater quality impacts associated with potential development would be considered less than significant.

b,c) **Less than Significant.** Development of the site would not involve groundwater extraction, nor the alteration of a stream or river. The potential development of the project site with recreational facilities would overall decrease the amount of impervious surfaces, and thus no increased offsite runoff would occur. Many of the proposed improvements, such as the walkways and the playfield, consist of pervious surfaces, thus the addition of impervious surfaces would be limited to the parking lot, basketball and multi-use courts. Therefore, the proposed project would not lower the groundwater table as a result of groundwater extraction or reduction in groundwater recharge and would not otherwise cause offsite sedimentation or erosion to occur.

d,e) **Less than Significant.** As discussed above, the proposed project would not alter any stream or river. The decrease in impervious surfaces with the proposed improvements would likely direct runoff towards onsite infiltration and therefore would not increase flows to receiving waters. Therefore, the potential impact of altered drainage causing offsite or onsite flooding would be less than significant.

f) **Less than Significant.** Operation of the proposed project would not result in any substantial changes to onsite water quality associated with stormwater runoff. As discussed under Comment a), above, implementation of BMPs under the SWPPP and compliance with SCVURPPP requirements would reduce potential impacts to water quality to a less-than-significant level.

g,h,i) **Less than Significant.** The project site is not located near levees or dams and would not be exposed to flooding from failure of these structures. According to maps compiled by the San Francisco Bay Conservation and Development Commission (BCDC), a projected sea-level rise of 55 inches by the year 2100 would affect large areas around the bay perimeter. The maps indicate that the proposed project site would be located outside of anticipated inundation (BCDC, 2011). The project site is also located outside the 100-year flood zone designated by the Federal Emergency Management Agency (FEMA) (FEMA, 1997). In addition, the proposed project does not include the construction of any residential units, and proposes limited above ground improvements. Therefore, flooding hazards related to the proposed project would be less than significant.

j) **Less than Significant.** The project site is located approximately ½ mile inland from the San Francisco Bay. Tsunami waves would have to travel from the Pacific Ocean through the Golden Gate to finally reach the shoreline nearest the project site. Due to natural attenuation, the probability of significant tsunami waves impacting the project site are very low. Seiches are large waves on an enclosed or semi-enclosed body of water that can be caused by seismic activity. San Francisco Bay is partially enclosed, with outlets to San Pablo Bay, as well as the Pacific Ocean via the Golden Gate, and is relatively shallow, with a mean depth of approximately 27.6 feet. Geologic-induced seiche events have not

been documented in the San Francisco Bay. The proposed project site is relatively flat and not subject to mudflows. Therefore, the potential impact of seiche, tsunamis and mudflows is less than significant.

References

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), Panel 0603520001D, City of Sunnyvale, December 19, 1997.

San Francisco Bay Conservation and Development Commission (BCDC), 55-Inch Sea Level Rise By End Of Century South Bay, available online at http://www.bcdc.ca.gov/planning/climate_change/maps/55/south_bay.pdf, accessed April 12, 2011.

Land Use and Land Use Planning

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
10. LAND USE AND LAND USE PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☒	☐
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

a) **Less than Significant.** The project site is located within an urban area, with surrounding residential, institutional, and light industrial land uses. The project would demolish five existing light industrial buildings, complete soil remediation, and construct a neighborhood park on the project site.

The project site is currently designated as Industrial and Service/Industrial to Residential/Medium Density Residential/Planned Development in the General Plan. The site is zoned M-S/ITR/R-3/PD which combines several zoning categories: Industrial and Service (M-S), Industrial to Residential (ITR), Medium Density Residential (R-3) and Planning Development (PD). The purpose of the ITR Combining District is to "allow industrial, office, commercial and residential uses to exist within the same zoning district, and to allow industrial, office or commercial uses to gradually convert to residential use." (Ord. 2920-10 § 1). As parks are permitted uses in a residential neighborhood, the project would not require a General Plan amendment or zoning change. However, to be consistent with other parks in the city, the project would include a General Plan amendment to Public Facility/Park and a corresponding zoning district change to Public Facility (PF).

The proposed recreational uses on the site would be consistent with the existing neighboring residential uses, as well as the John W. Christian Greenbelt that forms the southern boundary of the project site, linking the proposed park to additional recreational opportunities. The proposed recreational space would also be consistent with the Mini Parks and Neighborhood Parks Design Guidelines (See Appendix A).

Establishing a neighborhood park on the site would not change the character of the neighborhood in a negative way as it would provide recreational opportunities and a

gathering place for the adjacent community. The project would have a less than significant impact on the surround land uses.

b) **Less than Significant.** As stated in Section 4, Biological Resources, the site is not located in an area governed by any adopted environmental plans or policies by agencies, outside of the City of Sunnyvale, with jurisdiction over the project. Therefore, the proposed project would not conflict with environmental plans or policies adopted by agencies with jurisdiction over the project.

c) **No Impact.** The project site is located in an area that is not governed by any habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan affecting the area.

References

City of Sunnyvale General Plan Land Use Map, March 2008

City of Sunnyvale, Appendix E.1: Mini Parks and Neighborhood Parks Design Guidelines. 2007

City of Sunnyvale Zoning Map, North of U.S. 101, March 2008

ESA, Field Reconnaissance Survey, March 17, 2011.

Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
11. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒

Discussion

a-b) **No Impact.** There are no known mineral resources within the project site, and no operational mineral resource recovery sites at the project site or in the vicinity. Therefore, the project would not result in any impacts to mineral resources since it would not result in the loss of availability of a known mineral resource that would be of value to the region or the state, or result in the loss of a locally-important mineral resource. Therefore, the project would not affect mineral resources.

Noise

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
12. NOISE — Would the project:				
a) Result in Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Result in Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) Result in A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) Result in A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☒	☐
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion

a) **Less than Significant with Mitigation.** Applicable noise regulations, existing setting, and impacts associated with the construction and operation of the proposed project are provided below.

The City of Sunnyvale General Plan contains guidelines for determining the compatibility of various land uses with different noise environments (City of Sunnyvale, 2008). The City has not adopted the State of California Noise Guidelines for Land Use Planning but does consider them to be reasonable guidelines for determining land use compatibility. For neighborhood parks and playgrounds, the General Plan guidelines indicate that an exterior noise environment of between 65 dB Ldn and 80 dB Ldn is considered “conditionally acceptable.” For residential uses, a noise environment below 60 dB Ldn is considered “normally acceptable,” a noise environment between 60 dB Ldn and 75 dB Ldn is considered “conditionally acceptable,” and an exterior noise environment of 75 dB Ldn or above is considered “unacceptable.”

The Municipal Code sets noise standards for construction (Title 16), and operation (Title 19), equipment and maintenance as follows:

16.08.030. Hours of construction—Time and noise limitations.

Construction activity shall be permitted between the hours of 7:00 a.m. and 6:00 p.m. daily Monday through Friday. Saturday hours of operation shall be between 8:00 a.m. and 5:00 p.m. There shall be no construction activity on Sunday or national holidays when city offices are closed.

No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent residential neighborhoods.

Exceptions:

(a) Construction activity is permitted for detached single-family residential properties when the work is being performed by the owner of the property, provided no construction activity is conducted prior to 7:00 a.m. or after 7:00 p.m. Monday through Friday, prior to 8:00 a.m. or after 7:00 p.m. on Saturday and prior to 9:00 a.m. or after 6:00 p.m. on Sunday and national holidays when city offices are closed. It is permissible for up to two persons to assist the owner of the property so long as they are not hired by the owner to perform the work. For purposes of this section, "detached single-family residential property" refers only to housing that stands completely alone with no adjoining roof, foundation or sides.

(b) As determined by the chief building official:

(1) No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent properties.

(2) Where emergency conditions exist, construction activity may be permitted at any hour or day of the week. Such emergencies shall be completed as rapidly as possible to prevent any disruption to other properties.

(3) Where additional construction activity will not be a nuisance to surrounding properties, based on location and type of construction, a waiver may be granted to allow hours of construction other than as stated in this section. (Ord. 2930-10 §2).

19.42.030. Noise or sound level. (Not for construction activities)

(a) Operational noise shall not exceed 75 dBA at any point on the property line of the premises upon which the noise or sound is generated or produced; provided, however, that the noise or sound level shall not exceed 50 dBA during nighttime or 60 dBA during daytime hours at any point on adjacent residentially zoned property. If the noise occurs during nighttime hours and the enforcing officer has determined

that the noise involves a steady, audible tone such as a whine, screech or hum, or is a staccato or intermittent noise (e.g., hammering) or includes music or speech, the allowable noise or sound level shall not exceed 45 dBA.

(b) Powered equipment used on a temporary, occasional or infrequent basis which produces a noise greater than the applicable operational noise limit set forth in subsection (a) shall be used only during daytime hours when used adjacent to a property with a residential zoning district. Powered equipment used on other than a temporary, occasional or infrequent basis shall comply with the operational noise requirements. For the purpose of this section, powered equipment does not include leaf blowers. Construction activity regulated by Title 16 of this code shall not be governed by this section.

(c) It is unlawful for any person to make or allow to be made a nighttime delivery to a commercial or industrial establishment when the loading/unloading area of the establishment is adjacent to a property in a residential zoning district. Businesses legally operating at a specific location as of February 1, 1995, are exempt from this requirement.

(d) A "leaf blower" is a small, combustion engine-powered device used for property or landscape maintenance that can be hand-held or carried on the operator's back and which operates by propelling air under pressure through a cylindrical tube. It is unlawful for any person to operate a leaf blower on private property in or adjacent to a residential area except between the hours of 8:00 a.m. and 8:00 p.m. Effective January 1, 2000, all leaf blowers operated in or adjacent to a residential area shall operate at or below a noise level of 65 dBA at a distance of fifty feet, as determined by a test conducted by the American National Standards Institute or an equivalent. The dBA rating shall be prominently displayed on the leaf blower. (Ord. 2623-99 § 1 (part): prior zoning code § 19.24.020(b)—(d)).

Sensitive Receptors

The project area contains sensitive residential land uses on three sides. Residences are located approximately 75 feet west across Morse Avenue, adjacent (as close as 10 feet from the construction activities) to the north, and adjacent (as close as 10 feet from the construction activities) to the east of the project boundary. These distances will be used for the purpose of citing distance from construction equipment that would occur during the demolition and park construction. The residences to the north and east of the project area are separated by a wall approximately eight-feet tall.

Existing Noise Environment

The noise environment surrounding the project site is influenced primarily by residential areas, industrial and commercial operations, and truck and automobile traffic on local roadways. U.S. Highway 101 is approximately 500 feet south of the project site. The

noise environment along anticipated construction truck haul routes is also influenced by traffic noise from U.S. 101.

In order to characterize the existing operations environment as well as the project site environment, short term noise measurements were conducted April 5, 2011. Measurements were taken at three locations in and around the project site. The locations of the noise measurements are illustrated in **Figure 6**. Noise measurement results for all study locations are summarized in **Table 3**.

TABLE 3
SOUND-LEVEL MEASUREMENTS AT EXISTING AND PROJECTED STUDY LOCATIONS[a]

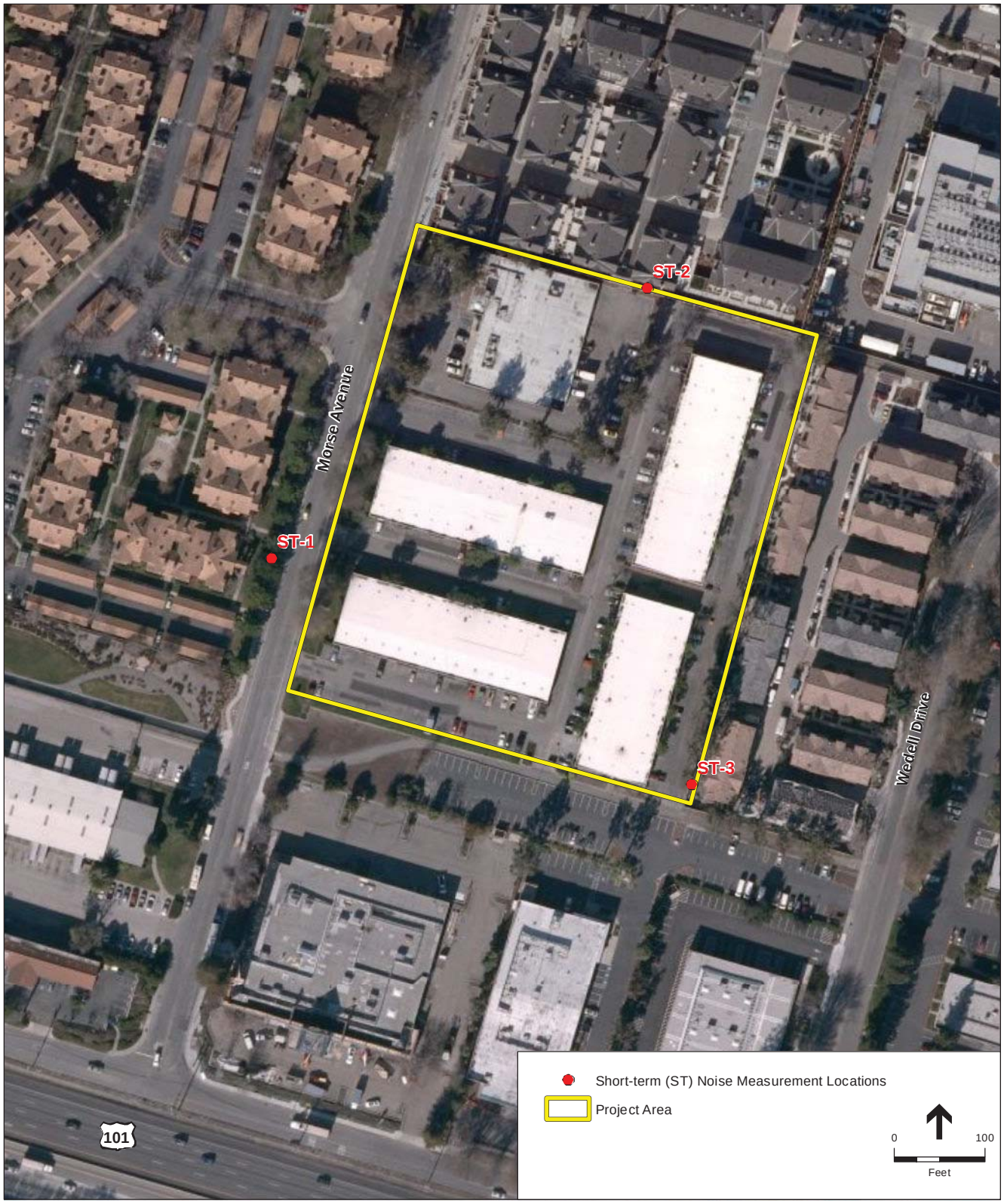
Location	Time Period	Leq(dB)	Noise Sources
ST-1. 50 feet from center of Morse Avenue	Tues. April 5 2:57 – 3:07 p.m.	5-minute results: Leq's = 55, 57	Car 68 dB, Background traffic from Hwy 101.
ST-2. Northern edge of property	Tues. April 5 3:10 – 3:20 p.m.	5-minute results: Leq's = 51, 53	Wind gusts, 58 dB, Airplane, audible but undetected
ST-3. Southeast corner of property	Tues. April 5 3:24 – 3:34 p.m.	5-minute results: Leq's = 60, 58	Wind gust, 67 dB Helicopter audible but undetected

[a] All noise levels measured in decibels (dB). Noise measurement data presented here using a Metrosonics dB-308 sound level meter, calibrated prior to use.

Construction

Construction activity noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction would be completed in four phases and would take approximately 12-18 months. Demolition of the existing structures would be completed in 1 to 2 months, soil remediation would be completed in 3 to 4 months, and construction of the actual park would require 5 to 6 months. Between the end of the demolition and the beginning of the soil remediation there would likely be a phase of 3 to 6 months of limited activity on the site.

Demolition, excavation, grading, and paving would occur. Construction-related trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. B shows typical noise levels during different construction stages. **Table 5** shows typical noise levels produced by various types of construction equipment.



SOURCE: Bing Maps, 2009; ESRI, 2009; and ESA, 2011

Morse Park Initial Study. 210070

Figure 6

Noise Measurement Locations

TABLE 4
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Activity	Noise Level (dB, Leq)[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

TABLE 5
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level (dB, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Backhoe	85

SOURCE: Cunniff, Environmental Noise Pollution, 1977.

The closest sensitive receptors to the proposed project would be the adjacent residences. Residences to the east of the project site are located as close as 10 feet from the proposed project construction activities or approximately 200 feet to the center of the construction area. Residences to the north of the project site are approximately 250 feet from the center of the construction activities. An 8-foot masonry wall is located between the project site and adjacent residences.

Noise impacts from construction generally result when construction activities occur during the noise-sensitive times of the day (early morning, evening, or nighttime hours), in areas immediately adjacent to construction activities, or when construction noise lasts over extended periods of time. Where noise from construction activities exceeds 60 dB Leq and exceeds the ambient noise environment by at least 5 dB Leq near noise-sensitive

uses for a duration of one year or more, the impact would be considered significant. Noise from construction activities generally attenuates at a rate of 6.0 to 7.5 dB per doubling of distance (Caltrans, 1998).

Assuming an attenuation rate of 6 dB per doubling of distance, the residences across Morse Avenue would experience exterior Leq's between 73 dB (measured from center of the project site) and 86 dB (measured at closest possible distance) and maximum interior noise levels of approximately 61 dB. The residences to the north and east would experience exterior Leq's between 75 dB (measured from center of the project site) and 103 dB (measured at closest possible distance) and maximum interior noise levels of approximately 70-78 dB. This takes into account attenuation from the existing eight-foot masonry wall and an approximate 25 dB of exterior-to-interior noise level reduction provided by the building structures. Construction activities associated with the project would be temporary in nature and the maximum noise levels discussed above would be short-term. However, because construction activities could substantially increase ambient noise levels at noise-sensitive locations by 5 dB or more over the duration of 12 months, construction noise could result in potentially significant, albeit temporary, impacts to sensitive receptors.

Mitigation Measure NOI-1: The project sponsor shall require construction contractors to implement the following mitigation measures:

- Consistent with Section 16.08.030of the Municipal Code, all noise generating construction activities shall be limited to the hours of ~~7:00~~ 7:30 a.m. to 6:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturday. There shall be no construction activity on Sunday or national holidays when city offices are closed.

- All construction vehicles and equipment, fixed and mobile, shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

- Construction staging areas shall be located as far as practicable from dwellings and existing recreational uses so as to cause minimal disruption to these activities.

- Route all construction traffic to and from the project site via designated truck routes where possible. Prohibit construction related heavy truck traffic in residential areas where feasible.

- Prohibit unnecessary idling of internal combustion engines.

- Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the City in the event of problems.

Park Operations

An increase in traffic noise of 3 dB or more (a level perceivable to most individuals (Caltrans, 1998)) at a sensitive receptor location would be considered a significant impact. Operation of the project would create approximately 26 one-way vehicle trips on a weekday (13 inbound and 13 outbound). This minimal addition of project traffic noise would not be noticeable; therefore, project traffic noise would be at less than significant levels.[12]

The only other sources of noise would be from maintenance equipment such as lawnmowers, leaf blowers, and any pumps or compressors used. These sources would be required to comply with the City's Noise Ordinance standards at off-site receptors. Maintenance and other operational activities could result in significant noise impacts.

> **Mitigation Measure NOI-2:** Powered equipment as defined in the Sunnyvale Noise Ordinance shall be operated within daytime hours.

Park Noise Exposure

The potential park would be bordered to the north, west, and east by existing multi-family residential developments. It is anticipated that the proposed one-acre playfield, when used to capacity, would produce the greatest noise exposure for neighboring residents.

Noise sources associated with an organized soccer game, which would be appropriate for this project facility, would include shouting and cheering. Reference noise level data collected at various soccer facilities indicates that average noise levels during games would be approximately 60 dB Leq and 75 dB Lmax at a distance of 100 feet from the center of the field. This data was used to approximate the noise impact at the closest existing residences to the west, north, and east of the project site.

Based on the project conceptual plan (see **Figure 4**) and an aerial photo of the project area (see **Figure 6**), it was estimated that the closest existing residences to the west, north, and east would be approximately 375 feet, 180 feet, and 165 feet from the center of the proposed playfield, respectively. Noise exposure from assumed worst-case activities on the field would be approximately 48 dB Leq/63 dB Lmax, 55 dB Leq/70 dB Lmax, and 56 dB Leq/71 dB Lmax at the closest existing residential building setbacks to the west, north, and east, respectively based on the assumed distances and reference noise levels. This noise exposure does not include attenuation provided by the existing eight-foot high property line noise barriers separating the project property from these residential developments to the north and east. The existing property line noise barriers on the north and east sides of the project would be expected to provide approximately 8 dB of attenuation for receivers at the residential building setbacks. Resulting project-related noise exposure (accounting for the 8 dB attenuation associated with the barriers) would be approximately 47 dB Leq/62 dB Lmax and 48 dB Leq/63 dB Lmax at the

[12] The threshold constituting a significant impact requires a doubling of highway traffic (resulting in an addition 3 dB (Caltrans, 1998). The small addition of traffic trips due to this project falls far short of this threshold, resulting in a less than significant impact.

existing residences to the north and east, respectively during worst-case activities at the project playfield. Although the project-related maximum noise exposure may exceed the City's daytime noise exposure criterion of 60 dB (Lmax) at the neighboring residential properties, there are no noise-sensitive outdoor receivers/receiver areas that would be affected by the noise. In this case, interior noise exposure associated with project operations is considered.

As presented above, existing residential developments to the west, north, and east of the project property do not include any noise-sensitive outdoor activity/recreation areas of their own (e.g., pool areas, picnic areas). Project-related noise exposure would not exceed 38 dB Lmax within the existing residences assuming an exterior-to-interior noise level reduction of 25 dB (assuming doors and windows are closed). This noise exposure would not add significantly to the existing ambient noise environment within these residences, and is not considered to be significant.

b) **Less than Significant with Mitigation.** The construction of the project may generate perceptible vibration as heavy equipment is used in the vicinity of the adjacent sensitive receptors. Groundborne vibration levels would be distinctly perceptible when equipment is operated within approximately 25 feet of sensitive land uses. Demolition of the existing buildings and pavement removal as well as grading could at times produce substantial vibration. The existing building in the northwest corner of the project site is approximately 10 feet from the closest residents.

As shown in **Table 6**, use of heavy equipment for project construction generates vibration levels up to 0.089 in/sec PPV or 87 VdB RMS at a distance of 25 feet. Pile driving is not expected to be used as part of this project. Assuming a large bulldozer would be used approximately 10 feet from the closest residential receptors during construction and loaded trucks would pass 50 feet from the nearest receptors along traversed roadways, vibration levels at the nearest sensitive receptors would be about 99 VdB RMS and 0.35 in/sec PPV from a large bulldozer and 77 VdB RMS and 0.03 in/sec PPV from passing trucks. Other sensitive receptors in the project vicinity would be exposed to vibration levels at incrementally lower levels. Construction activities would generate ground-borne vibration and noise levels that would exceed the FTA criteria of 0.2 – 0.5 in/sec PPV for building damage and 80 VdB RMS for human annoyance. This impact would be significant. **Mitigation Measure NOI-1** would be required, in addition to Mitigation **Measures NOI-3 and NOI-4**, below.

TABLE 6
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment/Activity	PPV at 25 ft (in/sec)[a]	PPV (in/sec) at nearest receptor[b]	RMS at 25 ft (VdB)[c]	RMS at nearest receptor (VdB)
Large Bulldozer	0.089	0.35	87	99
Loaded Trucks	0.076	0.03	86	77

[a] Buildings can be exposed to ground-borne vibration levels of 0.2 – 0.5 PPV (in/sec) without experiencing damage.
[b] The nearest receptor for the large bulldozer was assumed to be 10 feet. The loaded trucks were set at 50 feet.
[c] The human annoyance response level is 80 RMS.

SOURCE: ESA, 2010; Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Mitigation Measure NOI-3: The City shall require the contractor to commit to a mitigation plan, developed and implemented during the final design and construction phases of the project. The objective of the plan shall be to minimize construction vibration damage using all reasonable and feasible means available. The plan shall provide a procedure for establishing appropriate threshold and limiting vibration values for potentially affected structures (adjacent walls and buildings) based on an assessment of each structure's ability to withstand construction vibrations. The plan shall minimize use of large equipment near adjacent walls and buildings.

Mitigation Measure NOI-4: The City shall require that the construction contractor conduct crack surveys before construction that could cause architectural damage to adjacent walls and multi-family residential buildings. The survey shall be done by photographs, video tape, or visual inventory, and shall include all outside locations. All existing cracks in the masonry walls, walks, and driveways should be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey should be conducted to document the condition of the surrounding buildings after the construction is complete.

c) **Less than Significant with Mitigation.** Noise impacts from the project would be primarily during the construction phase of the project. As construction would be a temporary activity, with the implementation of Mitigation Measure NOI-1, the project's construction noise is not expected to contribute significantly to the ambient noise environment. The project would not substantially increase vehicle trips made to the site. Therefore, the project's contribution to cumulative roadside noise levels would also be less than significant.

d) **Less than Significant with Mitigation.** As discussed in the "Construction" sub-section of criterion a) above, the resulting impact would be less than significant with implementation of Mitigation Measure NOI-1.

e) **Less than Significant.** The project site is located approximately 6,000 feet east of Moffett Federal Airfield, also known as Moffett Field, a joint civil-military airport. Noise from aircrafts taking off and landing at Moffett Field would be a potential source of noise

affecting people using the facilities of the proposed project. However, the project site is located outside the 60 dB contour for the airfield and hence would be compatible for the proposed uses with respect to noise. This impact would be less then significant.

f) **No Impact.** The project site is not located within two miles of any private airstrip.

References

City of Sunnyvale, 1997. General Plan Noise Element. Prepared by the Department of Community Development, March 25, 1997.

City of Sunnyvale Municipal Code, Section 16.08.030 and Section 19.42.030

Population and Housing

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING — Would the project:				
a) Induce substantial 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) **No Impact.** The proposed project would not result in any new residential land uses on the site. While the project may include infrastructure connections to proposed on-site structures, the project would not extend any new infrastructure to undeveloped areas located off of the project site that could indirectly induce population growth. The proposed park would increase employment at the site, as the existing light industrial buildings are vacant; however, it is estimated there would be no more than 900 hours annually of park maintenance and no full time employment would be necessary. Therefore, the project would not induce substantial population growth, and would result in no impact.

b,c) **No Impact.** The project site does not contain any existing residential uses. Therefore, the project would not result in substantial displacement of existing housing or people, and would not necessitate the construction of replacement housing elsewhere.

Public Services

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES — Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of, or 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 following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion

a.i) **Less than Significant.** The City of Sunnyvale Fire Department currently has 6 fire stations and approximately 72 employees. There are 12 apparatuses (i.e., engines, major equipment) that are each assigned two firefighters at all times, providing 24 active firefighters on duty at all times. Fire station #5 in District 12 is the closest fire station to the project site. It is located at 1120 Innovation Way, 1.2 miles away. This station has one engine and two firefighters on duty at all times. The next closest fire station is the main fire station #2 located at 795 East Arques Avenue, 1.9 miles away. This station has three apparatuses (e.g., engine, truck, and hazmat rescue truck) and six firefighters on duty (Viveiros, 2011).

In fiscal year 2009-2010, the fire department responded to 1,633 fire calls and 5,268 EMS (emergency medical service) calls in all of Sunnyvale. Fire station #5 responded to 163 calls (34 fire and 127 EMS) on average each year for the past three years. The estimated response time from any fire station is 4 minutes, 41 seconds (Viveiros, 2011).

The implementation of the proposed project would result in development of a recreation area on the project site, which is currently served by the Sunnyvale Fire Department. The recreational uses on the project site could lead to an increase in calls for emergency medical services and fire suppression. The Fire Department would review all project designs at the time building permits are issued to ensure that adequate fire and life safety measures are incorporated into the project in compliance with all applicable state and city

fire safety requirements and to ensure that Fire Department personnel would have adequate access to the site.

The proposed project would not create a need for new or altered facilities to maintain adequate service ratios, response times and other objective standards, and would not, therefore, result in significant environmental impacts to fire protection and emergency medical response provisions.

a.ii) **Less than Significant.** The Sunnyvale Department of Public Safety operates the Bureau of Police Services. The Bureau is headquartered at 700 All America Way, 3.2 miles from the project site. The Bureau includes patrol services with five patrol squads that cover the city.

The Bureau currently consists of six geographical police beats. The project site is located within Beat 1, which contains blocks bound by Evelyn Avenue to the south, San Francisco Bay to the north, the City limits to the west and Fair Oaks Avenue to the east.

The Bureau's target response time for responding to a crime scene for the highest priority calls is 6 minutes, 18 seconds or an average of 3 minutes, 32 seconds after a call is dispatched to the on scene arrival of police. (Viveiros, 2011)

The proposed project would not create a need for new or altered facilities to maintain adequate service ratios, response times and other objective standards, and would not, therefore, result in significant environmental impacts to police protection and response provisions.

a.iii) **No Impact.** The Sunnyvale Elementary School District, the Cupertino Union School District, the Santa Clara Unified School District, and the Fremont Union High School District operate Sunnyvale's public schools.

As stated in Section 13, Population and Housing, no residential units would be constructed as part of the proposed project. The project would not increase the number of residents or school-aged children in the area. In addition, although the project would expand a recreational resource that could attract residents to the park on a temporary basis, this is not the type of development that could indirectly allow for future residential development. Therefore, the project would not increase the student population in the City of Sunnyvale, and it would have no impact on schools.

a.iv, v) **No Impact.** The discussion of project effects on parks is addressed in the Recreation section.

References

Viveiros, Keith, Acting Communications Coordinator, Sunnyvale Department of Public Safety. Personal communication, March 29, 2011.

Recreation

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
15. RECREATION — Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☒	☐	☐

Discussion

a) **Less than Significant.** The proposed project would construct a new neighborhood park, including a fenced tot lot, youth play area, water play element, tennis court, half-court basketball, sand volleyball court, picnicking area with barbeque grills, and restrooms and associated amenities. The creation of a new recreational facility would not result in an adverse affect to the City's current park performance standard.

b) **Less than Significant with Mitigation.** The proposed project would construct a new neighborhood park. Physical effects that could result from the proposed project are discussed in the other sections of this IS/MND and all impacts have been determined to be less than significant with implementation of measures identified in this IS/MND.

References

Project description and plans.

Transportation and Traffic

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
16. TRANSPORTATION AND TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion

a,b) **Less than Significant with Mitigation.**

Operation

The proposed project would increase the use of the project site by developing a park, as the existing light industrial buildings are vacant.[13] Vehicle trip generation for the proposed project was estimated using rates found in San Diego Trip Generators (SANDAG, 2002), for neighborhood parks. The proposed neighborhood park would generate approximately 26 one-way vehicle trips on a weekday (13 inbound and 13 outbound).

The development of neighborhood park facilities would increase the traffic at the project site, especially on weekends with ideal weather. However, traffic generated by the project would be spread out throughout the day, and the increased traffic volume in any one hour

[13] The five vacant buildings are approximately 17,000 square feet each, or 85,000 square feet total. When occupied, they would have generated approximately 592 daily trips, 78 a.m. peak hour trips, and 82 p.m. peak hour trips. (ITE, 2008)

on any one roadway is not expected to be high. In addition, trips to recreational facilities tend not to occur during peak commute periods when there is more traffic on roadways. Roadways in the project vicinity have sufficient capacity to carry the increase in vehicle trips to the park. Furthermore, as a neighborhood park, it is expected that many users would walk or bicycle to the site, especially as the park would provide only six to eight parking spaces.[14] A neighborhood park, per the City's Mini Park and Neighborhood Park Design Guidelines, is intended for residents within half a mile radius, which is a reasonable walking distance for this type of land use. Therefore, the project would have a less than significant impact on the roadway system in the project vicinity, individually and cumulatively.

Construction

The proposed project would be constructed over a period anticipated to last approximately 12 to 18 months. Construction activities would include daily vehicle trips generated by the arrival and departure of construction workers, as well as haul trucks carrying demolition debris, soil, and building materials. Construction of the proposed project would not require any lane closures.

Trucks would haul materials away from and to the site. The proposed project would be completed in three phases. The demolition phase of the project would require approximately 700 truckloads, or 1,400 one-way truck trips. The remediation phase, which will be analyzed under a separate CEQA document, would require approximately 890 truckloads, or 1,780 one-way truck trips. Finally, the park construction is estimated to require 640 truckloads, or 1,280 one-way truck trips.

Assuming eight weeks of demolition, demolish off haul would amount to approximately 35 truck trips per day, or about 5 trips per hour (one every 12 minutes), assuming an eight-hour work day. Similarly, park construction, assuming a twelve week construction period, would generate approximately 21 truck trips per day, or about 3 trips every hour (one every 20 minutes). The impact of construction truck traffic would be a temporary lessening of the capacities of local streets due to the slower movement and larger turning radii of trucks, which could affect both traffic and transit operations. However, this level of truck activity would not be sufficient to result in significant impacts to intersection operations or to transit service. Throughout the remainder of the construction period, there would be a reduced flow of construction related trucks into and out of the site, generally limited to trucks making occasional deliveries of material.

As discussed, project construction would result in short-term and intermittent construction traffic impacts associated with the delivery of materials and equipment, removal of debris, hauling of fill material to the site, and parking for construction workers. Any construction traffic occurring on weekdays between 7:00 a.m. and

[14] Parking impacts are not considered significant under CEQA topic unless it would cause significant secondary effects. (*San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco* (2002) 102 Cal.App.4th 656.)

9:00 a.m., or between 4:00 p.m. and 6:00 p.m., would coincide with peak hour traffic and could impede traffic flow. Construction activities could impede pedestrian access near the site or block traffic. Thus, **Mitigation Measures TRAN-1a and TRAN-1b** are provided to reduce the significance of this potentially significant impact to a less than significant level.

> **Mitigation Measure TRAN-1a:** As part of pre-construction submittals, the contractor(s) shall submit a truck route plan to the City of Sunnyvale Public Works Department for review and approval to help minimize impacts to adjacent neighborhoods.
>
> **Mitigation Measure TRAN-1b:** To the extent possible, truck movements should be limited to the hours between 9:00 a.m. and 3:30 p.m. (or other times, if approved by the Public Works Department).

c) **No Impact.** The proposed project would not change air traffic patterns, increase air traffic levels or result in a change in location that would result in substantial safety risks. Therefore, the project would result in no impact in this area.

d) **Less than Significant.** The proposed project would involve physical changes to the site that would affect the existing pedestrian or bicycle circulation. However, the development of the recreation site would not impede or obstruct bicycles or pedestrians if the circulation within the site maintained clear visibility. The design of the parking lot would be reviewed and approved by the City's traffic engineer and fire department ensuring the project would have a less than significant impact on bicycle facilities. The development at the park would increase demand for bicycle parking and secure bicycle parking would be provided as part of the project.

e) **Less than Significant.** The proposed project would demolish the existing light industrial buildings and construct a park, thus it would involve physical changes to the site that could affect emergency access. The design of the parking lot would be reviewed and approved by the City's traffic engineer and fire department and therefore, the project would have a less than significant impact on emergency access.

f) **Less than Significant.** Altering the use of the project site from light industrial to recreational use would not conflict with adopted policies, plans, or programs supporting alternative transportation. Therefore, there would be a less than significant impact related to alternative transportation.

References

City of Sunnyvale, Appendix E.1: Mini Parks and Neighborhood Parks Design Guidelines. 2007

ESA, Field Reconnaissance Survey, March 17, 2011.

SANDAG (San Diego Regional Planning Agency), San Diego Traffic Generators, April 2002.

Project description and plans.

Utilities and Service Systems

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
17. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

a,b,e) **Less than Significant.** The City of Sunnyvale is within the Santa Clara Basin Watershed, which drains rainfall and other water runoff through creeks and rivers to the South San Francisco Bay. The Donald M. Somers Water Pollution Control Plant provides wastewater treatment for residents, businesses and industries in the City of Sunnyvale (City of Sunnyvale, 2011). The Plant has a total capacity of 29.5 million gallons of treated wastewater per day (mgd). The projected estimated wastewater flow at build-out is 28.3 mgd, and as of 2001, the estimated wastewater flow was 16.2 (City of Sunnyvale, 2001).

Wastewater draining from indoor sources in Sunnyvale flows through sewer pipes that direct the wastewater to the Water Pollution Control Plant for treatment before being discharged to the San Francisco Bay (City of Sunnyvale, 2011). In 2001, the Water Pollution Control Plant was producing 16 mgd of high quality effluent, which could be used for landscape irrigation and other purposes to help conserve potable water supplies.

Wastewater associated with the project would be generated from a restroom, a drinking fountain, and a potential water play element. Plumbing at the new building would include two toilet stalls and two sinks.

The project's restrooms and drinking fountains would be connected to sanitary sewer infrastructure, but these facilities would not generate a substantial amount of new wastewater particularly since the overall wastewater use on the site would decrease with the demolition of five structures that until recently were contributing to the wastewater system. Given that the City's current demand is considerably less than capacity, and that the project would not substantially increase demand, the Water Pollution Control Plant would continue to meet the wastewater treatment requirements of the National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board, and the impact would be less than significant.

c) **Less than Significant.** The City storm collection drain system provides for storm water runoff from City streets along gutters and through underground pipes to discharge into waterways that drain to San Francisco Bay. The system is designed for the control of flooding only and does not provide any treatment to the storm water runoff. Storm water entering drains flows directly into local creeks and the San Francisco Bay (City of Sunnyvale, 2011). The Santa Clara Valley Water District (SCVWD) owns and operates all channels and creeks in the City: Stevens Creek, Calabazas Creek, the Sunnyvale East and West channels and El Camino channel (Sunnyvale Public Works, 1993).

Repair and maintenance of the storm water collection system including grates, manhole lids, outfalls into local creeks, and flood prevention flap gates is provided by the Field Services Division of Public Works. The collection system includes more than 300 miles of collection lines up to 84 inches in diameter, with two pumping stations that collect runoff from low lying areas and discharge to the Guadalupe Slough.

Erosion can be exacerbated by construction activities that disturb land surfaces and expose soil to storm water runoff. Guidelines for erosion and sediment control should be included in the project plan based on the Manual of Standards for Erosion.

Presently the site is approximately 90 percent impervious with five industrial buildings and associated paved drive aisles and onsite parking with little stormwater runoff detained or treated prior to discharge to the public storm drain system in Morse Avenue. Approximately 65 percent of the proposed project area would have pervious surfaces and thus decrease total stormwater runoff volumes.

The park would incorporate sustainable design and water management policies and would follow the City's design and development guidelines. The project would aim to collect storm water onsite within bioswales, thereby slowing and filtering water flow before it enters the City storm drain system, thus reducing the discharge amount through groundwater recharge.

Also, as part of any future project approval process, a Stormwater Pollution Prevention Plan (SWPPP) would be required in order to minimize potential erosion and sedimentation during construction. As described further in the Hydrology and Water Quality section, the SWPPP would include BMPs to control erosion associated with grading, trenching, and other ground surface-disturbing activities.

The proposed project would also be required to comply with Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) development guidelines (see Section 9, Hydrology and Water Quality), including Provision C.3, which limits increases in stormwater discharges from new developments and requires stormwater site design and control measures. The SCVURPPP development guidelines are identified in the SCVURPPP's Urban Water Management Plan as Model Performance Standards. The proposed project would be expected to comply with the Model Performance Standards developed for the following activities:

- Storm Drain System Operation and Maintenance
- New Development Planning Procedures
- Construction Site Inspection
- Pest Management

Compliance with the SWPPP and the SCVURPPP, as already required by the City Sunnyvale (see Section 9, Hydrology and Water Quality), would result in less-than-significant impacts to the stormwater drainage system.

d) **Less than Significant.** The City of Sunnyvale receives approximately 45 percent of its water from the San Francisco Public Utilities Commission (SFPUC) and 45 percent from the Santa Clara Valley Water District (SCVWD), with the remaining 10 percent derived from City-owned and operated wells for potable uses and recycled water produced by the Sunnyvale Water Pollution Control Plant (WPCP) for non-potable uses (City of Sunnyvale, 2008).

The proposed project would create recreational uses at the project site. Site landscaping would be sustained with potable water. Restrooms, a drinking fountain, and a small water play element, would be located onsite. The demand generated by these facilities would not constitute a substantial increase in the City's current water demand. The overall water demand for the park would be approximately 851,800 gallons per year. Irrigation would require 750,000 gallons per year and the restroom and drinking fountains would require approximately 96,800 gallons per year. If included in the project, the water play element could require a maximum of 700,000 gallons per year (based on a 90-days-a-year run time at 3.2 hrs a day).

The *2005 Urban Water Management Plan* found that under normal water year conditions, the City of Sunnyvale has adequate water supply to meet demand until 2030 (City of Sunnyvale, 2005). The projection for water demand at build-out is estimated to

be 29,000 acre feet per year for the year 2030 (City of Sunnyvale, 2005; 2008). The water delivery forecast for the City of Sunnyvale in 2011 is 27,841 acre-feet of water (City of Sunnyvale, 2008).

Because the proposed project's drinking fountains, toilets, and water play element would not substantially affect this demand, the proposed project would result in a less-than-significant impact to water supply and treatment provisions.

f,g) **Less than Significant.** Specialty Solid Waste & Recycling (Specialty) is the contracted service provider for all garbage collection in Sunnyvale. Specialty transports solid waste to the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station®), which is located at 301 Carl Road, in Sunnyvale. The SMaRT Station is owned by the City of Sunnyvale and serves the cities of Mountain View, Palo Alto, and Sunnyvale. It is currently operated by Bay Counties Waste Services. Solid waste delivered to the SMaRT Station undergoes a materials recovery process that extracts recyclable materials. The SMaRT Station diverts from disposal 78% of the construction and demolition material delivered there. The solid waste that remains after the materials recovery process is hauled from the SMaRT Station to the Kirby Canyon Recycling and Disposal Facility (operated by Waste Management, Inc.), 27 miles away in San Jose. Sunnyvale has contracted for disposal capacity (with a maximum of 4,123,310 tons) ending on December 31, 2021 (City of Sunnyvale, 1996). Kirby Canyon's remaining capacity is estimated to be approximately 57.2 million cubic yards, although its current permitted capacity is only 36 million cubic yards (CalRecycle, 2011).

The County of Santa Clara Health Services Department is certified by the California Integrated Waste Management Board as the Local Enforcement Agency (LEA) for solid waste in Santa Clara County including the SMaRT Station. The City of San Jose is the LEA for Kirby Canyon Landfill. LEAs have the primary responsibility for ensuring the correct operation and closure of solid waste facilities in the state. They also have responsibility for guaranteeing the proper storage and transportation of solid wastes.

Assembly Bill 939 (AB 939), enacted in 1989, requires each city's and county's Source Reduction and Recycling Element to include an implementation schedule to divert 50 percent of its solid waste from landfill disposal by January 1, 2000, through source reduction, recycling, and composting activities. As of 2009, (the most recent statistic available) waste diversion for Sunnyvale was 65 percent.

In 2008, the City of Sunnyvale adopted a Zero Waste Policy which requires the designing and managing of products and processes to reduce the volume and toxicity of waste and materials and to conserve and recover all resources. The City's long-term Zero Waste Plan will include an analysis of the materials that are most prevalent in the waste stream and present a range of options for further reducing the amount of waste disposed by the City.

The proposed project would create a public recreational facility, the use of which could incrementally generate solid waste. The Department of Public Works would be responsible for trash pickups with waste collected by Specialty. In addition, construction waste could be generated during construction activities. Whenever feasible, solid waste would be recycled for reuse to help the City to comply with AB 939 and with the Zero Waste Policy. Complying with AB 939 would result in less-than-significant impacts to landfill capacity and compliance with solid waste regulations.

References

CalRecycle website, http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0008/Detail/, accessed on April 6, 2011.

City of Sunnyvale, Department of Public Works, *City of Sunnyvale Solid Waste Sub-element of the General Plan*, June 4, 1996.

City of Sunnyvale, Department of Public Works, *City of Sunnyvale Wastewater Management Sub-element of the General Plan*, 2001 Update.

City of Sunnyvale, Department of Public Works Field Services Division, *2005 Urban Water Management Plan*, December, 2005.

City of Sunnyvale, Department of Public Works, *City of Sunnyvale Water Resources Sub-element of the General Plan*, 2008 Update.

City of Sunnyvale Department of Public Works website, http://sunnyvale.ca.gov/Departments/PublicWorks/WaterPollutionControlPlant.aspx, accessed March 29, 2011.

Mandatory Findings of Significance

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE — Would the project:				
a) Have the potential to 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, 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?	☐	☒	☐	☐
b) 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)?	☐	☒	☐	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) **Less than Significant with Mitigation.** Based upon background research and site visits, the project does not have the potential to 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, 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. Any potential short-term increases in potential effects to the environment during construction are mitigated to a less than significant level, as described throughout the Initial Study.

b) **Less than Significant with Mitigation.** In accordance with CEQA Guidelines Section 15183, the environmental analysis in this Initial Study was conducted to determine if there were any project-specific effects that are peculiar to the project or its site. No project-specific significant effects peculiar to the project or its site were identified that could not be mitigated to a less than significant level. The proposed project would contribute to environmental effects in the areas of biological resources, air quality, temporary increases in construction-generated dust and noise, a temporary increase in sedimentation and water quality effects during construction, potential hazardous materials considerations with new development, and short-term traffic impacts during demolition and construction. Mitigation measures incorporated herein mitigate any potential contribution to cumulative impacts associated with these environmental issues.

Therefore, the proposed project does not have impacts that are individually limited, but cumulatively considerable.

c) **Less than Significant with Mitigation.** The project may have significant adverse effects on human beings in the areas of air quality, noise, and traffic during construction, and with hazardous materials considerations (final remediation completion report will be submitted and approved by DTSC) with redevelopment of the site. Mitigation measures identified in this Initial Study would reduce the effects to a less than significant level.

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5. Mitigation Measures Identified in this Initial Study

1. **Mitigation Measure AES-1:** The project will be designed to reduce light and glare impacts to surrounding residential properties to a less than significant level, including use of cut-off light fixtures, and landscape elements to substantially reduce light and glare, and avoid light spillage onto adjacent residential properties.

2. **Mitigation Measure AIR-1a:** During active construction, the City shall require construction contractors to implement all the BAAQMD's Basic Construction Mitigation Measures, listed below:

    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 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.

3. **Mitigation Measure AIR-1b:** During temporary gaps of inactivity between construction phases, such as between demolition and soil remediation and between soil remediation and park construction, the City shall require construction contractors to implement the following fugitive dust control measures[15]:

    1. Restrict vehicular access to the area; and

[15] These measures are specified for the "Temporary Stabilization During Periods of Inactivity" in the San Joaquin Valley Air Pollution Control District Regulation VIII, Fugitive PM10 Prohibition. The BAAQMD has not established similar controls, and as such, it is recommended to incorporate best practice measures from another air district if available (BAAQMD, 2011).

2. Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface (i.e., resistant to wind blown fugitive dust emissions), such as:

   i. A visible crust; or

   ii. A threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 centimeters per second or greater; or

   iii. A flat vegetative cover of at least 50 percent that is attached or rooted vegetation; or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind; or

   iv. A standing vegetative cover of at least 30 percent that is attached or rooted vegetation with a predominant vertical orientation; or

   v. A standing vegetative cover that is attached or rooted vegetation with a predominant vertical orientation that is at least 10 percent and where the TFV is at least 43 centimeters per second when corrected for non-erodible elements; or

   vi. A surface that is greater than or equal to 10 percent of non-erodible elements such as rocks, stones, or hard-packed clumps of soil.

4. **Mitigation Measure BIO-1:** Construction or vegetation removal during the months of March to August shall have pre-construction surveys conducted by a qualified biologist no more than 14 days prior to these activities, to locate any active nests. These surveys shall be performed in the project area and surrounding 500 feet, in coordination with the City. Vegetation removal and construction activities performed between September and February avoid the general nesting period for birds and therefore would not require pre-construction surveys.

1. If active nests are observed on either the project site or the surrounding area, the project applicant shall establish buffer zones around the nests, with the size to be determined in consultation with California Department of Fish and Game (usually 100 feet for perching birds and 300 feet for raptors). No ground-disturbance activities shall occur within this buffer zone until young have fledged or the nest is otherwise abandoned.

2. If work during the nesting season stops for 14 days or more and then resumes, then nesting bird surveys shall be repeated, to ensure that no new birds have begun nesting in the area.

5. **Mitigation Measure BIO-2:** The City shall require garbage cans to have secure lids and for litter to be removed regularly to avoid attracting pets or feral cats to the park.

6. **Mitigation Measure CUL-1a:** Extended Phase I Archaeological Survey

Following final design plans, a qualified archaeologist with experience in geoarchaeology shall conduct an Extended Phase I excavation. A Native American monitor shall be invited to monitor the test excavations. This test excavation should be conducted within the areas of the ADI that will be disturbed to a depth of six feet or more (i.e. proposed utility

trenches) during project implementation. Methods used for this Extended Phase I excavation should be based on the level and precise location of actual proposed project impacts. A plan shall be prepared that will focus on identifying testing locations, expected depth of testing, and expected cultural materials.

If cultural materials are found during the Extended Phase I excavation, a qualified archaeologist shall prepare an Archaeological Evaluation Plan (AEP). The AEP shall create a program to determine the potential of the expected resource to meet the California Register criteria—particularly Criterion 4, the resource's potential to address important research questions identified in the AEP. The archaeologist shall then conduct an evaluation consistent with the AEP. The methods and findings of the evaluation shall be presented in an Archaeological Evaluation and Effects Report (AEER).

Based on the conclusions of the AEER, it shall be determined if the project will adversely affect a CEQA-significant archaeological resource. If the project will have an adverse effect on such a resource, an Archaeological Research Design and Treatment Plan (ARDTP) shall be prepared by the archaeologist. A data-recovery investigation and/or other treatment consistent with the ARDTP shall be conducted by a qualified archaeologist.

7. **Mitigation Measure CUL-1b:** Following the implementation of Mitigation Measure 1a, if prehistoric or historic-period cultural materials are unearthed during ground-disturbing activities, it is recommended that all work within 100 feet of the find halt until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, capping, or data recovery.

8. **Mitigation Measure CUL-2:** If human remains are encountered during ground disturbing activities, State Health and Safety Code Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will make recommendations for the treatment of any human remains.

9. **Mitigation Measure HAZ-1a:** The City shall obtain a qualified environmental professional to prepare a health and safety plan based on the site conditions. The health and safety plan, in accordance with OSHA's Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), shall identify the potential contaminants that may be encountered, appropriate personal protective equipment, and worker safety procedures.

10. **Mitigation Measure HAZ-1b:** The City shall retain a qualified environmental consulting firm to direct the remediation of surface soil contamination at the project site in accordance

with any Department of Toxic Substances Control (DTSC) requirements as the overseeing regulatory agency. Upon completion of contaminated soil removal and confirmation soil sampling that demonstrates residual contaminant concentrations are less than the approved cleanup levels, the site shall be ready for unrestricted use. A final remediation completion report will then be submitted to DTSC within one to two months after the completion of excavation. The proposed park shall not be open to the public until final approval of the remediation report and DTSC certification that the site has been cleared for public use.

11. **Mitigation Measure NOI-1:** The project sponsor shall require construction contractors to implement the following mitigation measures:

    - Consistent with Section 16.08.030of the Municipal Code, all noise generating construction activities shall be limited to the hours of ~~7:00~~ 7:30 a.m. to 6:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturday. There shall be no construction activity on Sunday or national holidays when city offices are closed.

    - All construction vehicles and equipment, fixed and mobile, shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

    - Construction staging areas shall be located as far as practicable from dwellings and existing recreational uses so as to cause minimal disruption to these activities.

    - Route all construction traffic to and from the project site via designated truck routes where possible. Prohibit construction related heavy truck traffic in residential areas where feasible.

    - Prohibit unnecessary idling of internal combustion engines.

    - Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a day and evening contact number for the City in the event of problems.

12. **Mitigation Measure NOI-2:** Powered equipment as defined in the Sunnyvale Noise Ordinance shall be operated within daytime hours.

13. **Mitigation Measure NOI-3:** The City shall require the contractor to commit to a mitigation plan, developed and implemented during the final design and construction phases of the project. The objective of the plan shall be to minimize construction vibration damage using all reasonable and feasible means available. The plan shall provide a procedure for establishing appropriate threshold and limiting vibration values for potentially affected structures (adjacent walls and buildings) based on an assessment of each structure's ability to withstand construction vibrations. The plan shall minimize use of large equipment near adjacent walls and buildings.

14. **Mitigation Measure NOI-4:** The City shall require that the construction contractor conduct crack surveys before construction that could cause architectural damage to adjacent walls and multi-family residential buildings. The survey shall be done by photographs, video tape, or visual inventory, and shall include all outside locations. All

existing cracks in the masonry walls, walks, and driveways should be documented with sufficient detail for comparison after construction to determine whether actual vibration damage occurred. A post-construction survey should be conducted to document the condition of the surrounding buildings after the construction is complete.

15. **Mitigation Measure TRAN-1a:** As part of pre-construction submittals, the contractor(s) shall submit a truck route plan to the City of Sunnyvale Public Works Department for review and approval to help minimize impacts to adjacent neighborhoods.

16. **Mitigation Measure TRAN-1b:** To the extent possible, truck movements should be limited to the hours between 9:00 a.m. and 3:30 p.m. (or other times, if approved by the Public Works Department).

Appendix

A. Mini Park and Neighborhood Park Design Guidelines

B. Air Quality and Greenhouse Gas Emissions Calculations

C. Garcia & Associates Cultural Resources Investigation, April 2010. With partial redaction to protect the named cultural resource sites.

D. Approval Conditions for Special Development Permit Number 2004-0603.

E. URS - Phase I Environmental Site Assessment, June 17, 2009

F. EKI - Results of Phase II Soil & Grab Groundwater Sampling, April 2010

G. EKI - Additional Soil Characterization, August 20, 2010

H. Cohen Group - Pre-demolition Hazardous Materials Survey, April 22, 2010

I. DTSC/City Voluntary Cleanup Agreement (VCA) (Final Agreement, but not yet executed), July 2011

J. Notice of Intent to Adopt a Mitigated Negative Declaration

K. Response to Comments on the Draft Initial Study/Mitigated Negative Declaration

L. Mitigation Monitoring and Reporting Program

ESA

Appendix A

Mini-Park and Neighborhood Park Design Guidelines

ESA

TABLE E-1: MINI PARK & NEIGHBORHOOD PARK DESIGN GUIDELINES							
CLASSIFICATION	DEFINITION	BENEFITS	SIZE AND ACCESS	EXAMPLES	MINIMUM RESOURCES	MAY INCLUDE ADDITIONAL RESOURCES	DOES NOT INCLUDE CONFLICTING RESOURCES
Mini Parks	Mini parks are small parks that provide residents with nearby opportunities for recreation activities. Up to 3 acres in size, these parks are designed to serve residents within a ¼-mile walking radius or in the immediately adjacent neighborhoods. Mini parks provide basic neighborhood recreation amenities, like playgrounds, benches, and landscaping.	• Provides access to basic recreation opportunities for nearby residents of all ages • Contributes to neighborhood identity • Provides green space within neighborhoods • Contributes to health and wellness • Provides opportunities for outdoor recreation in built-out areas	• 0-3 acre minimum • Street frontage on at least two sides of the park	• AMD Site • Cannery Park • Fairwood Park • Greenwood Manor Park • Orchard Gardens Park • Victory Village Park	• Tot Lot (Ages 2-5) • 1-5 Non-reservable picnic tables • Trees • Open Turf Area	• Children's play area (Ages 6-12), • Sports courts (1/2 court basketball or single tennis court) • Restrooms • Shelter, or gazebo • Interactive water feature (small-scale) • Off-street parking • Shade structures for appropriate facilities	• Community garden • Sports fields (baseball, football, soccer, softball, multi-purpose) • Destination facilities or resources with communitywide draw • Full-service recreation centers • Swimming pools (indoor or outdoor)
Neighborhood Parks	Neighborhood parks provide access to basic recreation opportunities for nearby residents. These parks are generally 3-8 acres size and serve residents within a ½-mile radius. Neighborhood parks provide informal, non-organized recreation opportunities, enhance neighborhood identity, and preserve neighborhood open space. Neighborhood parks often include amenities such as playgrounds, sport courts, turf areas, picnic tables, and benches.	• Provides access to basic recreation opportunities for nearby residents of all ages • Contributes to neighborhood identity • Provides green space within neighborhoods • Provides a space for family and small group gatherings • Contributes to health and wellness	• 3-8 acres • Street frontage on at least two sides of the park	• Braly Park • Encinal Park • Murphy Park • Panama Park • San Antonio Park	• Tot Lot (Ages 2-5) • Children's play area (Ages 6-12) • Non-reservable picnic tables • Reservable picnic area • Perimeter path or sidewalks • Trees • At least two active recreation resources (see "May Include" list) • Open Turf Area • Off-street parking • Maintenance Area/Shed/Storage • Sports Field	• Additional Sports fields (baseball, football, soccer, softball, multi-purpose, cricket pitch) • Sports courts (basketball court, tennis court, volleyball court) • Other small-scale active recreation resources (skate spot, horseshoe pits, bocce court, shuffleboard lane, lawn bowling, mini skate park) • Interactive or ornamental water feature (small-scale) • Shelter, or gazebo • Par course • Neighborhood activity building (multi-purpose) • Fire pit • Community Garden • Restroom • Shade structures for appropriate facilities	• Destination facilities or resources with communitywide draw • Memorials (except for memorial trees or benches) • Sports complexes • Full-service recreation centers • Swimming pools (indoor or outdoor)

Appendix B

Air Quality Calculations

URBEMIS Outputs
Generator Emissions
Greenhouse Gas Emissions

ESA

APPENDIX B

Criteria Pollutant and GHG Emissions

Introduction to the Air Quality Models and Results

The Urban Emissions model (URBEMIS 2007), version 9.2.4, was used to quantify direct emissions of criteria pollutants and CO_2 from proposed project construction and operations, including off-road equipment and fugitive dust emissions during construction activities and area source and on-road vehicle pollutant emissions during operations. URBEMIS results from project build-out were then incorporated into the Bay Area Greenhouse Gas Model (BGM) in order to quantify additional sources of greenhouse gases (GHGs).

Results of the URBEMIS2007 and BGM modeling are presented below for the project. Notably, CO_2 emissions are output from URBEMIS in short tons, but are listed in the document as metric tons. The conversion factor is: 1 short ton = 0.9072 metric tons.

This Appendix is separated into the following sub-sections:

- URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS (SUMMER EMISSIONS)
- URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS (WINTER EMISSIONS)
- URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS (ANNUAL EMISSIONS)
- BGM RESULTS FOR OPERATIONS AT PROJECT BUILD-OUT

URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS

(SUMMER EMISSIONS)

7/11/2011 10:29:33 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Current Project Shortcuts\210070 - Morse Park IS-MND\AQ Data\Morse-Park Revised July 2011.urb924

Project Name: Morse-Park Const and Ops

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

7/11/2011 10:29:33 AM

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	3.27	33.86	15.16	0.04	33.23	1.50	34.73	6.93	1.38	8.31	5,204.55
2012 TOTALS (lbs/day unmitigated)	4.95	38.51	23.17	0.01	26.45	2.19	28.65	5.53	2.02	7.55	4,595.81

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.18	0.17	1.85	0.00	0.33	0.06	184.26

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.30	0.19	3.40	0.00	0.34	0.07	187.07

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

7/11/2011 10:29:33 AM

Time Slice 9/5/2011-12/2/2011 Active Days: 65	2.78	33.86	14.29	**0.04**	**33.23**	1.50	**34.73**	**6.93**	1.38	**8.31**	**5,204.55**
Demolition 09/05/2011-12/02/2011	2.78	33.86	14.29	0.04	33.23	1.50	34.73	6.93	1.38	8.31	5,204.55
Fugitive Dust	0.00	0.00	0.00	0.00	33.07	0.00	33.07	6.88	0.00	6.88	0.00
Demo Off Road Diesel	1.05	7.22	4.58	0.00	0.00	0.55	0.55	0.00	0.50	0.50	700.30
Demo On Road Diesel	1.69	26.57	8.57	0.04	0.15	0.95	1.11	0.05	0.88	0.93	4,402.44
Demo Worker Trips	0.04	0.06	1.14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.81
Time Slice 12/5/2011-12/30/2011 Active Days: 20	3.27	29.90	15.16	0.01	26.44	1.40	27.85	5.53	1.29	6.82	3,408.40
Fine Grading 12/05/2011-03/02/2012	3.27	29.90	15.16	0.01	26.44	1.40	27.85	5.53	1.29	6.82	3,408.40
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.83	23.44	11.96	0.00	0.00	1.17	1.17	0.00	1.08	1.08	2,247.32
Fine Grading On Road Diesel	0.41	6.39	2.06	0.01	0.04	0.23	0.27	0.01	0.21	0.22	1,059.27
Fine Grading Worker Trips	0.04	0.06	1.14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.81
Time Slice 1/2/2012-2/17/2012 Active Days: 35	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading 12/05/2011-03/02/2012	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.37	5.61	1.84	0.01	0.04	0.20	0.24	0.01	0.18	0.20	1,059.27
Fine Grading Worker Trips	0.03	0.06	1.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.87

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Time Slice 2/20/2012-3/2/2012 Active Days: 10	**4.95**	**38.51**	**23.17**	0.01	26.45	**2.19**	28.65	5.53	**2.02**	7.55	4,595.81
Asphalt 02/20/2012-03/16/2012	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Paving Off-Gas	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.16	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	29.84
Paving Worker Trips	0.06	0.10	1.86	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.28
Fine Grading 12/05/2011- 03/02/2012	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.37	5.61	1.84	0.01	0.04	0.20	0.24	0.01	0.18	0.20	1,059.27
Fine Grading Worker Trips	0.03	0.06	1.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.87
Time Slice 3/5/2012-3/16/2012 Active Days: 10	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Asphalt 02/20/2012-03/16/2012	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Paving Off-Gas	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.16	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	29.84
Paving Worker Trips	0.06	0.10	1.86	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.28
Time Slice 3/19/2012-8/31/2012 Active Days: 120	3.46	15.38	20.80	0.01	0.05	1.06	1.11	0.02	0.98	0.99	2,609.02
Building 03/19/2012-08/31/2012	3.46	15.38	20.80	0.01	0.05	1.06	1.11	0.02	0.98	0.99	2,609.02
Building Off Road Diesel	3.14	14.81	10.52	0.00	0.00	1.04	1.04	0.00	0.95	0.95	1,621.20
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.33	0.57	10.28	0.01	0.05	0.03	0.07	0.02	0.02	0.04	987.82

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Phase Assumptions

Phase: Demolition 9/5/2011 - 12/2/2011 - Type Your Description Here

Building Volume Total (cubic feet): 1248849

Building Volume Daily (cubic feet): 78732

On Road Truck Travel (VMT): 1093.5

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 12/5/2011 - 3/2/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 5.3

Maximum Daily Acreage Disturbed: 1.32

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 263.11

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/20/2012 - 3/16/2012 - Default Paving Description

Acres to be Paved: 0.5

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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Phase: Building Construction 3/19/2012 - 8/31/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
City park	0.18	0.17	1.85	0.00	0.33	0.06	184.26
TOTALS (lbs/day, unmitigated)	0.18	0.17	1.85	0.00	0.33	0.06	184.26

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
City park		4.91	acres	5.30	26.02	194.07
					26.02	194.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.2	0.5	99.3	0.2
Light Truck < 3750 lbs	11.8	1.7	95.8	2.5
Light Truck 3751-5750 lbs	20.6	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.2	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.7	0.0	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.9	62.1	37.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.7	0.0	85.7	14.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5

URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS

(WINTER EMISSIONS)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\mxm\Desktop\Current Project Shortcuts\210070 - Morse Park IS-MND\AQ Data\Morse-Park Revised July 2011.urb924

Project Name: Morse-Park Const and Ops

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	3.27	33.86	15.16	0.04	33.23	1.50	34.73	6.93	1.38	8.31	5,204.55
2012 TOTALS (lbs/day unmitigated)	4.95	38.51	23.17	0.01	26.45	2.19	28.65	5.53	2.02	7.55	4,595.81

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.17	0.26	1.99	0.00	0.33	0.06	158.65

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.17	0.26	1.99	0.00	0.33	0.06	158.65

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 9/5/2011-12/2/2011 Active Days: 65	2.78	33.86	14.29	**0.04**	**33.23**	1.50	**34.73**	**6.93**	1.38	**8.31**	**5,204.55**
Demolition 09/05/2011-12/02/2011	2.78	33.86	14.29	0.04	33.23	1.50	34.73	6.93	1.38	8.31	5,204.55
Fugitive Dust	0.00	0.00	0.00	0.00	33.07	0.00	33.07	6.88	0.00	6.88	0.00
Demo Off Road Diesel	1.05	7.22	4.58	0.00	0.00	0.55	0.55	0.00	0.50	0.50	700.30
Demo On Road Diesel	1.69	26.57	8.57	0.04	0.15	0.95	1.11	0.05	0.88	0.93	4,402.44
Demo Worker Trips	0.04	0.06	1.14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.81
Time Slice 12/5/2011-12/30/2011 Active Days: 20	3.27	29.90	15.16	0.01	26.44	1.40	27.85	5.53	1.29	6.82	3,408.40
Fine Grading 12/05/2011-03/02/2012	3.27	29.90	15.16	0.01	26.44	1.40	27.85	5.53	1.29	6.82	3,408.40
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.83	23.44	11.96	0.00	0.00	1.17	1.17	0.00	1.08	1.08	2,247.32
Fine Grading On Road Diesel	0.41	6.39	2.06	0.01	0.04	0.23	0.27	0.01	0.21	0.22	1,059.27
Fine Grading Worker Trips	0.04	0.06	1.14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.81
Time Slice 1/2/2012-2/17/2012 Active Days: 35	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading 12/05/2011-03/02/2012	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.37	5.61	1.84	0.01	0.04	0.20	0.24	0.01	0.18	0.20	1,059.27
Fine Grading Worker Trips	0.03	0.06	1.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.87

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Time Slice 2/20/2012-3/2/2012 Active Days: 10	**4.95**	**38.51**	**23.17**	0.01	26.45	**2.19**	28.65	5.53	**2.02**	7.55	4,595.81
Asphalt 02/20/2012-03/16/2012	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Paving Off-Gas	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.16	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	29.84
Paving Worker Trips	0.06	0.10	1.86	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.28
Fine Grading 12/05/2011- 03/02/2012	3.10	27.61	14.42	0.01	26.44	1.27	27.72	5.53	1.17	6.70	3,408.47
Fine Grading Dust	0.00	0.00	0.00	0.00	26.40	0.00	26.40	5.51	0.00	5.51	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.37	5.61	1.84	0.01	0.04	0.20	0.24	0.01	0.18	0.20	1,059.27
Fine Grading Worker Trips	0.03	0.06	1.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.87
Time Slice 3/5/2012-3/16/2012 Active Days: 10	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Asphalt 02/20/2012-03/16/2012	1.85	10.90	8.75	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,187.34
Paving Off-Gas	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.16	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	29.84
Paving Worker Trips	0.06	0.10	1.86	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.28
Time Slice 3/19/2012-8/31/2012 Active Days: 120	3.46	15.38	20.80	0.01	0.05	1.06	1.11	0.02	0.98	0.99	2,609.02
Building 03/19/2012-08/31/2012	3.46	15.38	20.80	0.01	0.05	1.06	1.11	0.02	0.98	0.99	2,609.02
Building Off Road Diesel	3.14	14.81	10.52	0.00	0.00	1.04	1.04	0.00	0.95	0.95	1,621.20
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.33	0.57	10.28	0.01	0.05	0.03	0.07	0.02	0.02	0.04	987.82

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Phase Assumptions

Phase: Demolition 9/5/2011 - 12/2/2011 - Type Your Description Here

Building Volume Total (cubic feet): 1248849

Building Volume Daily (cubic feet): 78732

On Road Truck Travel (VMT): 1093.5

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 12/5/2011 - 3/2/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 5.3

Maximum Daily Acreage Disturbed: 1.32

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 263.11

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/20/2012 - 3/16/2012 - Default Paving Description

Acres to be Paved: 0.5

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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Phase: Building Construction 3/19/2012 - 8/31/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
City park	0.17	0.26	1.99	0.00	0.33	0.06	158.65
TOTALS (lbs/day, unmitigated)	0.17	0.26	1.99	0.00	0.33	0.06	158.65

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
City park		4.91	acres	5.30	26.02	194.07
					26.02	194.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.2	0.5	99.3	0.2
Light Truck < 3750 lbs	11.8	1.7	95.8	2.5
Light Truck 3751-5750 lbs	20.6	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.2	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.7	0.0	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.9	62.1	37.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.7	0.0	85.7	14.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5

URBEMIS2007 MODEL RESULTS FOR CONSTRUCTION AND OPERATIONS

(ANNUAL EMISSIONS)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\mxm\Desktop\Current Project Shortcuts\210070 - Morse Park IS-MND\AQ Data\Morse-Park Revised July 2011.urb924

Project Name: Morse-Park Const and Ops

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	RO□	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.□ Dust	PM2.□ Exhaust	PM2.□	CO2
2011 TOTALS (tons/year unmitigated)	0.12	1.40	0.62	0.00	1.34	0.06	1.41	0.2□	0.06	0.34	203.23
2012 TOTALS (tons/year unmitigated)	0.30	1.6□	1.66	0.00	0.60	0.10	0.70	0.13	0.09	0.22	24□.11

AREA SOURCE EMISSION ESTIMATES

	RO□	NOx	CO	SO2	PM10	PM2.□	CO2
TOTALS (tons/year□unmitigated)	0.01	0.00	0.14	0.00	0.00	0.00	0.2□

OPERATIONAL (VE□ICLE) EMISSION ESTIMATES

	RO□	NOx	CO	SO2	PM10	PM2.□	CO2
TOTALS (tons/year□unmitigated)	0.03	0.04	0.3□	0.00	0.06	0.01	32.07

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	RO□	NOx	CO	SO2	PM10	PM2.□	CO2
TOTALS (tons/year□unmitigated)	0.04	0.04	0.49	0.00	0.06	0.01	32.32

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year□Unmitigated

RO□	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.□ Dust	PM2.5 Exhaust	PM2.□	CO2

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2011	0.12	1.40	0.62	0.00	1.34	0.06	1.41	0.2□	0.06	0.34	203.23
Demolition 09/0□/2011-12/02/2011	0.09	1.10	0.46	0.00	1.0□	0.0□	1.13	0.23	0.04	0.27	169.1□
Fugitive Dust	0.00	0.00	0.00	0.00	0.26	0.00	0.26	0.0□	0.00	0.0□	0.00
Demo Off Road Diesel	0.03	0.23	0.1□	0.00	0.00	0.02	0.02	0.00	0.02	0.02	22.76
Demo On Road Diesel	0.06	0.□6	0.2□	0.00	0.01	0.03	0.04	0.00	0.03	0.03	143.0□
Demo □ orker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.31
Fine □rading 12/0□/2011-03/02/2012	0.03	0.30	0.1□	0.00	0.26	0.01	0.2□	0.06	0.01	0.07	34.0□
Fine □rading Dust	0.00	0.00	0.00	0.00	0.26	0.00	0.26	0.06	0.00	0.06	0.00
Fine □rading Off Road Diesel	0.03	0.23	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	22.47
Fine □rading On Road Diesel	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.□9
Fine □rading □ orker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02

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2012	0.30	1.6□	1.66	0.00	0.60	0.10	0.70	0.13	0.09	0.22	24□.11
Fine □rading 12/0□/2011-03/02/2012	0.07	0.62	0.32	0.00	0.□9	0.03	0.62	0.12	0.03	0.1□	76.69
Fine □rading Dust	0.00	0.00	0.00	0.00	0.□9	0.00	0.□9	0.12	0.00	0.12	0.00
Fine □rading Off Road Diesel	0.06	0.49	0.26	0.00	0.00	0.02	0.02	0.00	0.02	0.02	□0.□6
Fine □rading On Road Diesel	0.01	0.13	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	23.□3
Fine □rading □ orker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29
Asphalt 02/20/2012-03/16/2012	0.02	0.11	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	11.□7
Paving Off-□as	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.02	0.11	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.79
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
Paving □ orker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7□
Building 03/19/2012-0□/31/2012	0.21	0.92	1.2□	0.00	0.00	0.06	0.07	0.00	0.06	0.06	1□6.□4
Building Off Road Diesel	0.19	0.□9	0.63	0.00	0.00	0.06	0.06	0.00	0.06	0.06	97.27
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building □ orker Trips	0.02	0.03	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	□9.27

Phase Assumptions

Phase: Demolition 9/□/2011 - 12/2/2011 - Type Your Description □ere

Building Volume Total (cubic feet): 124□□49

Building Volume Daily (cubic feet): 7□732

On Road Truck Travel (VMT): 1093.□

Off-Road E□uipment:

1 Concrete/Industrial Sa□s (10 hp) operating at a 0.73 load factor for □hours per day

1 Rubber Tired Do□ers (3□7 hp) operating at a 0.□9 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (10□hp) operating at a 0.□□ load factor for 6 hours per day

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Phase: Fine □rading 12/□/2011 - 3/2/2012 - Default Fine Site □rading Description

Total Acres Disturbed: □.3

Maximum Daily Acreage Disturbed: 1.32

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 263.11

Off-Road E□uipment:

1 □raders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Do□ers (3□7 hp) operating at a 0.□9 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (10□ hp) operating at a 0.□□ load factor for 7 hours per day

1 □ ater Trucks (1□9 hp) operating at a 0.□load factor for □hours per day

Phase: Paving 2/20/2012 - 3/16/2012 - Default Paving Description

Acres to be Paved: 0.□

Off-Road E□uipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.□6 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (9□ hp) operating at a 0.□6 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (10□ hp) operating at a 0.□□ load factor for 7 hours per day

Phase: Building Construction 3/19/2012 - □/31/2012 - Default Building Construction Description

Off-Road E□uipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (14□ hp) operating at a 0.3 load factor for 6 hours per day

1 □enerator Sets (49 hp) operating at a 0.74 load factor for □hours per day

1 Tractors/Loaders/Backhoes (10□ hp) operating at a 0.□□ load factor for □hours per day

3 □ elders (4□ hp) operating at a 0.4□load factor for □hours per day

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year□Unmitigated

Source	RO□	NOx	CO	SO2	PM10	PM2.□	CO2
Natural □as	0.00	0.00	0.00	0.00	0.00	0.00	0.00
□earth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.2□
Consumer Products	0.00						
Architectural Coatings	0.00						
TOTALS (tons/year□unmitigated)	0.01	0.00	0.14	0.00	0.00	0.00	0.2□

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year□Unmitigated

Source	RO□	NO□	CO	SO2	PM10	PM2□	CO2
City park	0.03	0.04	0.3□	0.00	0.06	0.01	32.07
TOTALS (tons/year□unmitigated)	0.03	0.04	0.3□	0.00	0.06	0.01	32.07

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
City park		4.91	acres	□.30	26.02	194.07
					26.02	194.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	□□.2	0.□	99.3	0.2
Light Truck □37□0 lbs	11.□	1.7	9□.□	2.□
Light Truck 37□1-□7□0 lbs	20.6	0.□	99.□	0.0
Med Truck □7□1-□□00 lbs	6.2	0.0	100.0	0.0
Lite-□eavy Truck □□01-10□000 lbs	0.7	0.0	71.4	2□.6
Lite-□eavy Truck 10□001-14□000 lbs	0.6	0.0	66.7	33.3
Med-□eavy Truck 14□001-33□000 lbs	0.□	0.0	2□.0	7□.0
□eavy-□eavy Truck 33□001-60□000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.9	62.1	37.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor □ome	0.7	0.0	□□.7	14.3

Travel Conditions

	Residential			Commercial		
	□ome-□ ork	□ome-Shop	□ome-Other	Commute	Non-□ ork	Customer
Urban Trip Length (miles)	10.□	7.3	7.□	9.□	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	□ome-□ ork	□ome-Shop	□ome-Other	Commute	Non-□ ork	Customer
Rural Trip Length (miles)	16.□	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	3□.0	3□.0	3□.0	3□.0	3□.0	3□.0
□ of Trips - Residential	32.9	1□.0	49.1			
□ of Trips - Commercial (by land use)						
City park				□.0	2.□	92.□

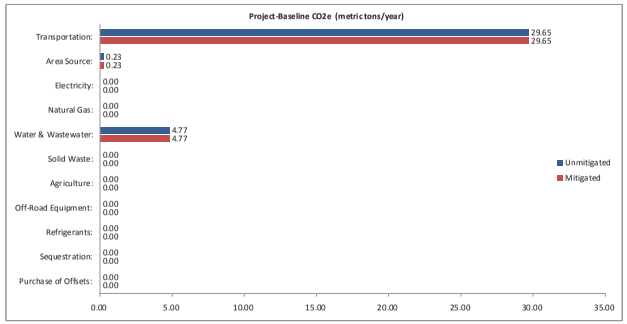
BGM RESULTS FOR OPERATIONS AT PROJECT BUILD-OUT

Summary Results

Project Name: Morse-Park Const and Ops
Project and Baseline Years: 2012 N/A

Results	Unmitigated Project-Baseline CO2e (metric tons/year)	Mitigated Project-Baseline CO2e (metric tons/year)
Transportation:	29.65	29.65
Area Source:	0.23	0.23
Electricity:	0.00	0.00
Natural Gas:	0.00	0.00
Water & Wastewater:	4.77	4.77
Solid Waste:	0.00	0.00
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	34.65	34.65

Baseline is currently: **OFF**
Baseline Project Name:
Go to Settings Tab to Turn On Baseline



Detailed Results

Unmitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				29.65	85.58%
Area Source:	0.23	0.00	0.00	0.23	0.65%
Electricity:	0.00	0.00	0.00	0.00	0.00%
Natural Gas:	0.00	0.00	0.00	0.00	0.00%
Water & Wastewater:	4.76	0.00	0.00	4.77	13.77%
Solid Waste:	0.00	0.00	N/A	0.00	0.00%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				34.65	100.00%

Baseline	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				0.00	N/A
Area Source:	0.00	0.00	0.00	0.00	N/A
Electricity:	0.00	0.00	0.00	0.00	N/A
Natural Gas:	0.00	0.00	0.00	0.00	N/A
Water & Wastewater:	0.00	0.00	0.00	0.00	N/A
Solid Waste:	0.00	0.00	N/A	0.00	N/A
Agriculture:	0.00	0.00	0.00	0.00	N/A
Off-Road Equipment:	0.00	0.00	0.00	0.00	N/A
Refrigerants:	N/A	N/A	N/A	0.00	N/A
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				0.00	0.00%

* Several adjustments were made to transportation emissions after they have been imported from URBEMIS.
After importing from URBEMIS, CO2 emissions are converted to metric tons and then adjusted to account for the "Pavley"
regulation. Then, CO2 is converted to CO2e by multiplying by 100/95 to account for the contribution of other GHGs (CH4, N2O, and HFCs [from leaking air conditioners]).
Finally, CO2e is adjusted to account for th low carbon fuels rule.

Mitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				29.65	85.58%
Area Source:	0.23	0.00	0.00	0.23	0.65%
Electricity:	0.00	0.00	0.00	0.00	0.00%
Natural Gas:	0.00	0.00	0.00	0.00	0.00%
Water & Wastewater:	4.76	0.00	0.00	4.77	13.77%
Solid Waste:	0.00	0.00	N/A	0.00	0.00%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	0.00	0.00%
Purchase of Offsets:	N/A	N/A	N/A	0.00	0.00%
Total:				34.65	100.00%

Mitigation Measures Selected:

Transportation: Go to the following tab: Transp. Detail Mit for a list of the transportation mitigation measures selected (in URBEMIS)

Electricity: The following mitigation measure(s) have been selected to reduce electricity emissions.

Natural Gas: The following mitigation measure(s) have been selected to reduce natural gas emissions.

Water and Wastewater: The following mitigation measure(s) have been selected to reduce water and wastewater emissions.

Solid Waste: The following mitigation measure has been selected to reduce solid waste related GHG emissions.

Ag: No existing mitigation measures available.

Off-Road Equipment: No existing mitigation measures available.

Refrigerants: The following mitigation measure has ben selected to reduce refrigerant emissions:

Carbon Sequestration: Project does not include carbon sequestration through tree planting.

Emission Offsets/Credits: Project does not include purchase of emission offsets/credits.