City of Morgan Hill Development Services Department



Llagas - Stralata Project

## Initial Study/Mitigated Negative Declaration

May 2020

Prepared by



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## INITIAL STUDY May 2020



Α.	BACKGROUND	
1.	Project Title:	Llagas – Stralata Project
2.	Lead Agency Name and Address:	City of Morgan Hill Development Services Department Morgan Hill, CA 17575 Peak Avenue Morgan Hill, CA 95037
3.	Contact Person and Phone Number:	Tiffany Brown Associate Planner (408) 310-4655
4.	Project Location:	1110 Llagas Road Morgan Hill, CA 95037 APN 773-32-013
5.	Project Sponsor's Name and Address:	Paul Latala Latala Homes 1999 South Bascom Avenue, Suite 700 Campbell, CA 95008 (408) 505-9205
6.	Existing General Plan Designation:	Residential Estate
7.	Existing Zoning Designation:	Residential Estate (RE 1)

- 8. Required Approvals from Other Public Agencies:
- 9. Surrounding Land Uses and Setting:

The project site consists of a 4.48-acre parcel located at 1110 Llagas Road in the City of Morgan Hill, California. The site is identified by Assessor's Parcel Number (APN) 773-32-013. The City's General Plan land use designation for the site is Residential Estate (RE) and the site is zoned Residential Estate (RE 1). Currently, the project site is undeveloped and slopes generally north to south. Ruderal grasses and a variety of orchard and native trees currently exist on-site.

The project site is bounded by Sabini Court to the southwest, and surrounded on all sides by rural residential development. Undeveloped hills exist approximately 700 feet to the south of the site, and the Chesbro Reservoir is located approximately 1.2-miles southwest of the site.

None

11. Project Description Summary:

The proposed project would include a Design Permit and Amended Tentative Map to add a fourth lot into an approved three lot residential subdivision along Sabini Court. The project would be developed consistent with the site's General Plan land use and zoning designations.

#### B. SOURCES

The following documents are referenced information sources used within this analysis:

- 1. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2017.
- 2. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. January 20, 2017.
- 3. California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 2020.
- 4. California Department of Conservation. CGS Information Warehouse: Regulatory Maps. Available at: http://maps.conservation.ca.gov/cgs/informationwarehouse /index.html?map=regulatorymaps. Accessed March 2020.
- 5. California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark*; <u>http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/</u>; accessed April 27, 2020.
- 6. California Department of Forestry & Fire Protection. *Fire and Resource Assessment Program Very High Fire Hazard Severity Zones in LRA: Morgan Hill.* October 9, 2008.
- 7. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Johnson Canyon Sanitary Landfill (27-AA-0005)*. Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/27-AA-0005. Accessed March 2020.
- 8. California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.
- 9. California Geologic Survey. *Earthquake Zones of Required Investigation*. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed March 2020.
- 10. City of Morgan Hill. 2015 Urban Water Management Plan. 2016.
- 11. City of Morgan Hill. 2035 General Plan Draft EIR. January 2016.
- 12. City of Morgan Hill. 2035 General Plan, City of Morgan Hill. Adopted July 2016.
- 13. City of Morgan Hill. City Council Staff Report 2163, Accept Report Regarding Wastewater System Needs and Rate Study Schedule. February 6, 2019.
- 14. City of Morgan Hill. *Emergency Operations Plan.* January 11, 2018.
- 15. City of Morgan Hill. *Housing Element.* Adopted February 18, 2015.
- 16. City of Morgan Hill. *Morgan Hill 2035 Final Environmental Impact Report.* Adopted July 2016.
- 17. Department of Toxic Substances Control. *Hazardous Waste and Substances Site List.* Available at: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search& reporttype=CORTESE&site\_type=CSITES,FUDS &status=ACT,BKLG,COM&reporttitle=

HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTES E%29. Accessed March 2020.

- 18. Federal Emergency Management Agency. National Flood Insurance Program Flood Insurance Rate Map: Santa Clara County, California. May 18, 2009.
- 19. Federal Highway Administration. *Roadway Construction Noise Model User's Guide.* January 2006.
- 20. Santa Clara County. Comprehensive Land Use Plan, Santa Clara County, South County Airport. Amended November 16, 2016.
- 21. Santa Clara Valley Transportation Authority. 2015 Congestion Management Plan. October 2015.
- 22. Santa Clara Valley Water District. 2016 Groundwater Management Plan, Santa Clara and Llagas Subbasins. November 2016.
- 23. Smith Tree Specialists, Inc. Arborist Report, Property at: 1110 Llagas Rd X Sabini Ct, Morgan Hill, APN #773-32-013. August 12, 2018.
- State Water Resources Control Board. GeoTracker. Available at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=morgan+hill. Accessed March 2020.
- 25. U.S. Census Bureau. *QuickFacts Morgan Hill, California*. Available at: https://www.census.gov/quickfacts/morganhillcitycalifornia. Accessed March 2020.
- U.S. Department of Agriculture. Web Soil Survey. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed March 2020.
- 27. Valley Water. Inundation Map for the Hypothetical Fair Weather Failure of Elmer J Chesbro Dam. August 2019.
- 28. Wood Biological Consulting. *Biological Constraints, Sabini Court, Morgan Hill.* July 1, 2018.

## C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

	Aesthetics	Agriculture and Forest	Air Quality
		Resources	
×	<b>Biological Resources</b>	Cultural Resources	Energy
	Geology and Soils	Greenhouse Gas Emissions	Hazards and Hazardous Materials
	Hydrology and Water	Land Use and Planning	Mineral Resources
	Quality		
×	Noise	Population and Housing	Public Services
	Recreation	Transportation	Tribal Cultural Resources
	Utilities and Service	Wildfire	Mandatory Findings of
	Systems		Significance

#### D. 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 applicant. 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" 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Jennifer Carman, Development Services Director Printed Name

<u>City of Morgan Hill</u>

## E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the Llagas – Stralata Project. The information and analysis presented in this document is organized in accordance with the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed. The mitigation measures prescribed for environmental effects described in this IS/MND will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project conditions of approval. The City will adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with approval of the project.

In July 2016, the City of Morgan Hill adopted the 2035 General Plan,<sup>1</sup> as well as an associated Environmental Impact Report (EIR) for the updated General Plan.<sup>2</sup> The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq.*). The General Plan EIR analyzed full implementation of the General Plan and identified measures to mitigate the significant adverse impacts associated with the General Plan to the maximum extent feasible.

The City of Morgan Hill 2035 General Plan designates the site as Residential Estate (RE), which permits detached residential homes with a maximum allowable density of one dwelling unit per acre (du/ac). According to the City of Morgan Hill Zoning Map, updated February of 2019, the project site is designated as Residential Estate (RE 1). The purpose of the RE zoning district is to provide locations for detached single-family homes on large lots in a semi-rural setting, with the RE 1 zoning district intended for residences on one-acre lots. The proposed project would entail four single-family houses built on 4.48 acres, for a proposed unit density of approximately one du/ac. Thus, the proposed project would be consistent with the General Plan land use and zoning designations for the site.

As noted under PRC 21083.3, the environmental review for a project that is consistent with the City's General Plan or zoning may limit the analysis to environmental effects that are peculiar to the subject parcel or to the project and which were not addressed as significant effects in the prior EIR. As such, the environmental analysis contained in this IS/MND limits analysis in CEQA areas where the project is not considered peculiar.

## F. **PROJECT DESCRIPTION**

The following provides a description of the project site's current location and setting, as well as the proposed components and discretionary actions required for the project.

#### Project Location and Setting

The project site consists of a 4.48-acre parcel located at 1110 Llagas Road in the City of Morgan Hill, California (see Figure 1 and Figure 2). The site is identified by APN 773-32-013. The City's General Plan land use designation for the site is RE, and the project site is zoned RE 1. The project site is characterized by gently rolling topography and a broad, seasonally flowing swale in the western portion of the parcel. Part of the project site was formerly used as an orchard, and the site currently supports several untended walnut trees and stone fruit trees. A majority of the parcel has been regularly disked for weed control, and structures do not currently exist on-site.

<sup>&</sup>lt;sup>1</sup> City of Morgan Hill. 2035 General Plan, City of Morgan Hill. Adopted July 2016.

<sup>&</sup>lt;sup>2</sup> City of Morgan Hill. *Morgan Hill* 2035 *Final Environmental Impact Report*. Adopted July 2016.



Figure 1 Regional Project Location

Figure 2 Project Vicinity Map



The project site is bound by Sabini Court to the southwest and the Morgan Hill city limits to the northeast, and is located within a low-density rural residential neighborhood. The site is surrounded on all sides by rural residential development, as well as scattered remnant orchards to the east, and undeveloped woodland further to the south.

#### Project Components

On January 10, 2017, the Planning Commission adopted Resolution No. 17-01, awarding the project three (3) Fiscal Year 2018-19 residential building allotments. A Tentative Map was approved for the site in November of 2018 (Certificate No. 18-023) proposing to subdivide the project site into four lots, three lots for development of single-family residential units including an internal drive aisle (see Figure 3), plus one remainder lot. The map also included a right-of-way dedication of 22,700 square feet for future access improvements along Sabini Court and 16-foot right-of-way vacation by the City of Morgan Hill along the project frontage on the northern edge of Sabini Court. The approved lots ranged in size from 43,560 to 44,867 square feet, orienting around a central drive aisle (Rose Orchard Lane). Rose Orchard Lane would be 28 feet wide, and would connect to Sabini Court. The remainder lot was not slated for development. Since approval of the Tentative Map, the remainder lot is now slated for development. With the adoption of SB330, the project will not need the award of an additional unit by Planning Commission. The developer wishes to move forward with the development of that lot, and therefore, in accordance with the Subdivision Map Act, the Tentative Map must be amended to include the remainder as a developable lot prior to recording a Final Map.

A Design Review permit is also a required entitlement for the project. The Design Review Permit ensures the project includes high-quality design that is consistent with the General Plan. The proposed residential units would be between 5,400 and 6,200 square feet, and would each include a driveway from Rose Orchard Lane. The residential designs are included in Figure 4. Pursuant to Section 18.64.050 of the Morgan Hill Municipal Code, landscaping is required throughout the site. The Landscaping Plan for Lot 2 has been provided as Figure 5. All lots would be landscaped in a similar fashion.

In order to level the site topography, 500 cubic yards of net soil import would be required during grading. Five bioretention basins are proposed in order to treat all on-site runoff. The preliminary Stormwater Control Plan, which shows the location of the proposed bioretention basins, is included as Figure 6. As shown in Figure 6, runoff from Lot 3 would be directed southward along a swale on the eastern site boundary.

Water and sewer service would be provided by the City of Morgan Hill through new connections to an existing eight-inch water line in Sabini Court and to an existing six-inch sewer line in Sabini Court, respectively.

#### Requested/Required Approvals

The proposed project would require the following City approvals:

- Adoption of the Initial Study/Mitigated Negative Declaration (IS/MND) and Mitigation Monitoring and Reporting Program
- Design Review Permit
- Amended Tentative Map
- Vacation of Sabini Court right-of-way (16 feet)

Figure 3 Site Plan



Figure 4 Design Plan







Figure 5 Landscaping Plan – Lot 2





Figure 6 Preliminary Stormwater Control Plan

## G. ENVIRONMENTAL CHECKLIST

The following checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. For this checklist, the following designations are used:

**Potentially Significant Impact:** An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

**Less-Than-Significant Impact:** Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I. Wa	AESTHETICS. ould the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
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.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			*	
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			×	

#### Discussion

a,. Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. The Morgan Hill General Plan does not designate official scenic view corridors or vistas.

The General Plan does note that the hillsides that surround the City to the east and west are considered scenic, and the project site is located near the hillsides to the west of the City. Development of the proposed residences may obstruct nearby residences' views of the hills. However, it is important to distinguish between public and private views. Private views are views seen from privately-owned land and are typically viewed by individual viewers, including views from private residences. Public views are views that are experienced by the collective public. CEQA (Pub. Resources Code, § 21000 et seq.) case law has established that only public views, not private views, are protected under CEQA. As such, views of the hills from nearby private residences would be considered private views, and analysis of such is not required under CEQA. Public roadways do not exist in the immediate vicinity of the project site, and the proposed project would not impact public views of scenic resources. Furthermore, the proposed project would be consistent with the project site's General Plan land use and zoning designations.

Based on the above, the proposed project would not have a substantial adverse effect on a scenic vista, and a *less-than-significant* impact would occur.

- b. According to the California Department of Transportation (Caltrans) map of Santa Clara County prepared for the Scenic Highway Mapping System, officially-designated State or County scenic highways do not occur in the project vicinity. Scenic resources, including rock outcroppings or historically significant buildings, do not exist on the project site. Therefore, the proposed project would not substantially damage scenic resources within a State scenic highway, and **no impact** would occur.
- c. The proposed project would involve the construction of four single-family residences on approximately four acres of undeveloped land. The proposed use of the site for residential development would be consistent with the General Plan land use and zoning designations

for the site. Thus, the City has anticipated buildout of the project site and associated impacts related to aesthetics in the General Plan EIR.<sup>3</sup> The City's General Plan EIR concluded that buildout of the General Plan, including the project site, would result in a less-than-significant impact related to visual character and quality. Pursuant to PRC 21083.3, environmental review and analysis for a project that is consistent with the City's General Plan or zoning may be limited to environmental effects that are peculiar to the subject parcel or to the project and which were not addressed as significant effects in the prior EIR. There is nothing peculiar about the proposed project or the project site that would result in a peculiar impact to visual character. In addition, the project site is surrounded by rural residential development and, therefore, the proposed project would be consistent with existing development in the area.

Furthermore, the Design Review permit, in accordance with Morgan Hill Municipal Code Section 18.108.040, requires the proposed project be consistent with the Design Review findings.

Based on the above, implementation of the project would not conflict with applicable zoning and other regulations governing scenic quality, and the proposed project would have a *less-than-significant* impact.

d. The project site is currently vacant and does not include any sources of light or glare. The proposed residential uses and internal driveway would introduce new sources of light and glare, including, but not limited to, headlights on cars using the on-site street system, exterior light fixtures, light reflecting off windows, and interior light spilling through windows. The project would be required to comply with Section 18.76.060 (Glare) of the Morgan Hill Municipal Code, which includes such requirements as the use of cut-off lenses to direct light downward and minimum maintained lighting on parking surfaces. Compliance with such would help to ensure that the light and glare created by the proposed project would be consistent with the levels of light and glare currently emitted in the surrounding environment. Therefore, the proposed project would not introduce new sources of substantial light or glare to the site which would adversely affect day or nighttime views in the area, and a *less-than-significant* impact would occur.

<sup>&</sup>lt;sup>3</sup> City of Morgan Hill. *Morgan Hill 2035 Final Environmental Impact Report* [pg. 4.1-10]. Adopted July 2016.

Less-Than-

No

Less-Than-

Significant

Potentially

# II. AGRICULTURE AND FOREST RESOURCES.

#### 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?

Significant Impact	with Mitigation Incorporated	Significant Impact	Impact
			*
			*
			*
			×
			*

#### **Discussion**

- a,e. Pursuant to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the project site is designated as "Urban and Built-Up Land", "Grazing Land", and "Other Land".<sup>4</sup> The project site is not currently used for grazing. While remnant orchard trees are located on the project site, the site is no longer used for agricultural production. Given the site designations, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use. Therefore, *no impact* would occur as a result of the proposed project.
- b. The project site is not covered by a Williamson Act contract and is not zoned for agricultural uses. Therefore, buildout of the proposed project would not conflict with an agricultural use or a Williamson Act contract, and **no impact** would occur.
- c,d. The project site is not considered forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). Therefore, the proposed project would have **no impact** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

<sup>&</sup>lt;sup>4</sup> California Department of Conservation. California Important Farmland Finder. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 2020.

<b>II</b> Wa	I. AIR QUALITY. build the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?			×	
b.	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?			×	
C.	Expose sensitive receptors to substantial pollutant concentrations?			×	
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			×	

#### **Discussion**

a,b. The City of Morgan Hill is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB area is currently designated as a nonattainment area for State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter (PM<sub>2.5</sub>), and State respirable particulate matter 10 microns in diameter (PM<sub>10</sub>) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour PM<sub>2.5</sub> federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal PM<sub>2.5</sub> AAQS until such time as the BAAQMD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation. The USEPA has not yet approved a request for redesignation of the SFBAAB; therefore, the SFBAAB remains in nonattainment for 24-hour PM<sub>2.5</sub>.

In compliance with regulations, due to the nonattainment designations of the area, the BAAQMD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM<sub>10</sub> standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure

continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. For development projects, BAAQMD establishes significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO<sub>X</sub>), as well as for PM<sub>10</sub> and PM<sub>2.5</sub>, expressed in pounds per day (lbs/day) and tons per year (tons/yr). The thresholds are listed in Table 1. Thus, by exceeding the BAAQMD's mass emission thresholds for operational emissions of ROG, NO<sub>X</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Table 1							
	BAAQMD Thresholds of Significance						
	Construction Operational						
	Average Daily	Average Daily	Maximum Annual				
	Emissions	Emissions	Emissions				
Pollutant	(lbs/day)	(lbs/day)	(tons/year)				
ROG	54	54	10				
NOx	54	54	10				
PM <sub>10</sub> (exhaust)	82	82	15				
PM <sub>2.5</sub> (exhaust)	54	54	10				
Source: BAAQMD	Source: BAAQMD, CEQA Guidelines, May 2017.						

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 - a Statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information is applied in the model. The proposed project's modeling assumed the following:

- Construction would commence in July of 2020 and occur over an approximately one-year period;
- Approximately 500 cubic yards (CY) of soil material would be imported during grading activities; and
- The project would comply with all applicable provisions of the 2019 CBSC, including generation of 100 percent of electricity on-site from renewable sources.

The proposed project's estimated emissions associated with construction and operations and the project's contribution to cumulative air quality conditions are provided below. All CalEEMod results are included as Appendix A to this IS/MND.

#### **Construction Emissions**

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance.

Table 2					
Maximum U	nmitigated Const	ruction Emissio	ons (Ibs/day)		
	Proposed Project	Threshold of	Exceeds		
Pollutant	Emissions	Significance	Threshold?		
ROG	4.14	54	NO		
NOx	42.46	54	NO		
PM <sub>10</sub> (exhaust)	2.20	82	NO		
PM <sub>10</sub> (fugitive)	18.21	None	N/A		
PM <sub>2.5</sub> (exhaust)	2.02	54	NO		
PM <sub>2.5</sub> (fugitive) 9.97 None N/A					
Source: CalEEMod, Mar	rch 2020 (see Appendix A)				

Although thresholds of significance for mass emissions of fugitive dust PM<sub>10</sub> and PM<sub>2.5</sub> have not been identified by the City of Morgan Hill or BAAQMD, the proposed project's estimated fugitive dust emissions have been included for informational purposes. All projects within the jurisdiction of the BAAQMD are required to implement the BAAQMD's Basic Construction Mitigation Measures, which would be required by the City as Conditions of Approval:

- 1. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 2. 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.
- 3. All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 4. 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.
- 5. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five 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.
- 6. All construction equipment shall be maintained and properly tuned in accordance with manufacturers specifications. All equipment shall be checked by a certified visible emissions evaluator.
- 7. 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.

The proposed project's required implementation of the BAAQMD's Basic Construction Mitigation Measures listed above for the project's construction activities, would help to further minimize construction-related emissions.

Because the proposed project would be below the applicable thresholds of significance for construction emissions, project construction would not result in a significant air quality impact.

#### **Operational Emissions**

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's operational emissions would be well below the applicable thresholds of significance. As such, the proposed project would not result in a significant air quality impact during operations.

Table 3						
Uni	Unmitigated Maximum Operational Emissions					
Pollutant	Proposed Project Threshold of Pollutant Emissions Significance					
	lbs/day	tons/yr	lbs/day	tons/yr	Threshold?	
ROG	4.84	0.15	54	10	NO	
NOx	0.38	0.05	54	10	NO	
PM <sub>10</sub> (exhaust)	0.76	0.00589	82	15	NO	
PM <sub>10</sub> (fugitive)	0.19	0.03	None	None	N/A	
PM <sub>2.5</sub> (exhaust)	0.76	0.00589	54	10	NO	
PM <sub>2.5</sub> (fugitive)	0.05	0.00872	None	None	N/A	
PM <sub>2.5</sub> (fugitive)	0.05	0.00872	None	None	N/A	

burce: CalEEwod, way 2020 (see Appendix A).

#### Cumulative Emissions

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented in Table 1 represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality conditions. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be expected to result in a cumulatively considerable contribution to the region's existing air quality conditions.

#### Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 CAP. According to BAAQMD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans. Because the proposed project would result in emissions below the applicable thresholds of significance, the project would not be considered to conflict with or obstruct implementation of regional air quality plans.

Because the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, impacts would be considered **less than significant**.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors to the project site would be the single-family residences located on both sides of the project site, approximately 25 feet north and south of the project site boundary.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and toxic air contaminants (TAC) emissions, which are addressed in further detail below.

#### **Localized CO Emissions**

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAQMD has established screening criteria for localized CO emissions. According to BAAQMD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

The project would not conflict with the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP).<sup>5</sup> In addition, as discussed in Section XVII, Transportation, of this IS/MND, the project is not expected to generate a significant increase in peak hour trips. Based on the CalEEMod results for the proposed project, the

<sup>&</sup>lt;sup>5</sup> Santa Clara Valley Transportation Authority. *2015 Congestion Management Plan.* October 2015.

proposed residences are anticipated to generate approximately 38 trips per day, which would contribute a nominal increase in local traffic levels, and would not increase traffic volumes at any intersection to more than 44,000 vehicles per hour. Furthermore, intersections where vertical and/or horizontal mixing is limited are not located in the project vicinity. Therefore, based on the BAAQMD's screening criteria for localized CO emissions, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards or cause health hazards.

#### TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The nearest existing sensitive receptors to the project site would be the single-family residences located approximately 25 feet north and south of the project site.

The proposed project does not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the proposed project would not expose sensitive receptors to excess concentrations of TACs.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Specifically, as noted above, construction would occur over an approximately one-year period. The exposure period typically analyzed in health risk assessments is 30 years or greater, which is substantially longer than the estimated one-year construction period associated with the proposed project. In addition, all construction equipment and operation thereof would be regulated by the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Furthermore, the project applicant would be required to prepare, and include on all site development and grading plans, a management plan detailing strategies for control of noise, dust and vibration, and storage of hazardous materials during construction of the project. Pursuant to Section 18.76.040 (Air contaminants) of the City's Municipal Code, the management plan must include all applicable BAAQMD rules and regulations, as well as the City's standard conditions for construction activity, 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 visible emissions evaluator.
- 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.

The City of Morgan Hill Development Services Department would ensure that the conditions listed above would be noted on project construction drawings prior to issuance of a building permit or approval of improvement plans.

During construction, only portions of the project site would be disturbed at a time. Operation of construction equipment would occur on such portions of the site intermittently throughout the course of a day over the overall construction period. Because construction equipment on-site would not operate for any long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, sensitive receptors in the area would not be exposed to pollutants for a permanent or substantially extended period of time. Furthermore, any one nearby sensitive receptor would be exposed to varying concentrations of DPM emissions throughout the construction period. According to BAAQMD, research conducted by CARB indicates that DPM is highly dispersive in the atmosphere. Thus, emissions at the project site would be substantially dispersed at the nearest sensitive receptors.

Considering the short-term nature of construction activities, the regulated and intermittent nature of the operation of construction equipment, and the highly dispersive nature of DPM, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

#### Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of localized CO or TACs from construction or operation. Therefore, the proposed project would result in a *less-than-significant* impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Emissions such as those leading to odors have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Pursuant to the BAAQMD CEQA Guidelines, odors are generally regarded as an annoyance rather than a health hazard.<sup>6</sup> Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on several variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantification of significant odor impacts is relatively difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty diesel trucks, which can create odors associated with diesel fumes, which could be found to be objectionable. However, as discussed above, construction activities would be temporary, and operation of construction equipment would be regulated and intermittent. Project construction would also be required to comply with all applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Accordingly, substantial objectionable odors would not occur during construction activities or affect a substantial number of people. In addition, the BAAQMD rules and regulations would act to reduce construction-related dust, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, the project site would not include any exposed topsoil. Thus, project operations would not include any substantial sources of dust.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a *less-than-significant* impact would result.

<sup>&</sup>lt;sup>6</sup> Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines* [pg. 7-1]. May 2017.

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## IV. 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 Wildlife 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, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?
- c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of 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 Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?

Potentially Significant Impact	Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
	×		
		*	
		×	
		×	
	*		
	*		

## **Discussion**

The following is based primarily on the Biological Constraints Memorandum prepared for the proposed project by Wood Biological Consulting, included as Appendix B to this IS/MND.<sup>7</sup> As part of the Biological Constraints Memorandum, a review of databases maintained by the California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS), and the U.S. Fish and Wildlife Service (USFWS) was conducted to evaluate the potential for special-status species to occur within the project area. In addition, a site reconnaissance survey was conducted on July 20, 2018.

a. A portion of the project site is a former orchard that supports several dozen untended walnut trees and several stone fruit trees. A broad and shallow swale winds across the western portion of the project site. Structures do not exist on the property, with the exception of a well head near Sabini Court. At the time of the site visit conducted as part of the Biological Constraints Memorandum, the majority of the site had been disked for weed control.

Certain plant and animal species are considered to have special status if they are listed or proposed for listing under the federal or State Endangered Species Acts, meet the definition of Rare or Endangered under CEQA, or are considered rare locally. In addition, nesting birds and raptors are protected under the Federal Migratory Bird Treaty Act (MBTA), which prohibits killing, possessing, or trading of migratory birds, except in

<sup>&</sup>lt;sup>7</sup> Wood Biological Consulting. *Biological Constraints, Sabini Court, Morgan Hill.* July 1, 2018

accordance with regulations prescribed by the Secretary of the Interior. The MBTA covers take of whole birds, parts of birds, and bird nests and eggs.

The project site is located within the boundaries of the Santa Clara Valley Habitat Plan (SCVHP), which provides take authorization for 18 listed and non-listed species (i.e., covered species). In addition, the SCVHP includes conservation measures to protect the species covered by the SCVHP, as well as a conservation strategy designed to mitigate impacts on covered species and contribute to the recovery of the species in the study area. Compliance with the SCVHP is discussed under question 'f' below.

Based on the Biological Constraints Memorandum, a total of 58 special-status plant species and 50 special-status wildlife species are known to occur in the project region. In addition, a total of 17 bird species of conservation concern and numerous migratory bird species are expected to occur in the project region. The project site is not located within designated Critical Habitat for any federally-listed plant or animal species. The potential for any of the identified special-status species to occur on the project site is addressed below.

#### **Special-Status Plant Species**

Of the 58 special-status plant species identified in the Biological Constraints Memorandum, a total of five special-status plant species have been recorded within a onemile radius of the project site. Of the five, four are strongly associated with serpentine soils, which do not exist on the site. The remaining species, arcuate bush mallow (Malacothamnus arcuatus), is a perennial shrub that would have been identified, if present, during the site reconnaissance conducted on July 20, 2018; however, the species was not found on the project site during the site survey. Based on the presence of suitable or marginally suitable grassland habitat, four additional special-status plant species [bentflowered fiddleneck (Amsinckia lunaris), Tracy's eriastrum (Eriastrum tracyi), San Benito pentachaeta (Pentachaeta exilis ssp. aeolica), and two-fork clover (Trifolium amoenum)] were determined to have low potential to occur in the project area. However, all four species are unlikely to exist on-site due to habitat disturbance resulting from cultivation of the orchard trees, annual disking of vegetation where the species would occur, and the considerable distance between the project site and the nearest known populations. Similarly, several plant species with California Rare Plant Rank 4 also have low potential to occur in the project area, but are not expected to be present on the project site due to modifications of habitat and distance from known populations.

Due to the absence of serpentine soil, historic and ongoing disking of the herbaceous layer, and the dominance of non-native and invasive plants on the project site, special-status plant species are not likely to occur on the project site. As such, development of the proposed project would not result in substantial adverse effects to special-status plant species.

#### **Special-Status Wildlife Species**

Based on presence of suitable or marginally suitable habitat, several special-status wildlife species have the potential to occur on-site. In addition, various other nesting and migratory birds protected by the MBTA have been documented within the region. The potential for such species to be impacted by the proposed project is discussed further below.

#### Special-Status and Other Migratory Birds

As stated in the Biological Constraints Memorandum, the existing on-site trees represent potential habitat for protected migratory birds and the special-status white-tailed kite, which is considered Fully Protected by the California Department of Fish and Wildlife. Therefore, project construction activities could reduce habitat for protected birds and could result in an adverse impact. In addition, grading and tree removal occurring during the nesting period for migratory birds (typically between February 1 to August 31) could have the potential to result in nest abandonment or death of any live eggs or young, should migratory birds or their nests be present within or near the project site. In such an event, the proposed project could result in a potentially significant impact.

#### American Badger and San Francisco Dusky-Footed Woodrat

American badger and San Francisco dusky-footed woodrat are not covered under the SCVHCP, but are considered Species of Special Concern by CDFW. The American badger has been documented relatively recently within 2.1 miles of the project site, and suitable habitat is present on the project site and surrounding area. However, evidence of American badgers, such as large burrows or dens, was not identified during the site survey, and the regular disking of the project site would prevent establishment of den sites and effectively reduce prey base. The San Francisco dusky-footed woodrat has been recorded in riparian habitat associated with Coyote Creek, located approximately 2.7 miles northeast of the project site and separated from the site by residential and commercial development and major roads, including the highway. Nests of the San Francisco dusky-footed woodrat were not observed during the survey. Based on the above, development of the proposed project would not result in substantial adverse effects to American badger or San Francisco dusky-footed woodrat.

#### Special-Status Bats

Special-status bats, such as the pallid bat and Townsend's big-eared bat, were not identified on the wildlife agency databases, but several of the large and decadent on-site orchard trees had fissured bark or cavities that could support bat roosts. Although evidence of occupation was not observed in and around the trees during the site survey, the potential exists for occupation to occur prior to the commencement of construction. If bats are present on-site at the time of construction, a potentially significant impact could occur.

#### Special-Status Amphibians/Reptiles

California tiger salamander, California red-legged frog, and western pond turtle have been documented in the Chesbro Reservoir, which is located 1.5 miles east-southeast of the site. In addition, an occurrence of California tiger salamander has been documented on private land 1.6 miles southeast of the project site, but separated from the site by the topography of El Toro. Another record for a California tiger salamander was documented in 1981, approximately two miles north of the study area, but the area has since been developed with housing and, therefore, the record is considered extirpated.

The Biological Constraints Memorandum concludes that the likelihood of any of the species to occur on the project site is very low due to the lack of suitable breeding, nesting, or aestivation habitat. In addition, the project site is separated from the Chesbro Reservoir by the intervening foothills, and migration of the animals onto the project site is unlikely. Thus, development of the project site is not expected to result in any substantial adverse effects to California tiger salamander, California red-legged frog, or western pond turtle.

### Conclusion

Based on the above, development of the proposed project would not result in any substantial adverse effects to special-status plants. However, the project site provides potential habitat for special-status bird and bat species, as well as other migratory bird species protected by the MBTA. If such species occur on the project site during construction activities, the project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special status-species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS), and a **potentially significant** impact could occur.

#### Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

#### Special-Status and Migratory Birds

IV-1(a) If demolition, site clearing, grading or tree removal or pruning are to be conducted during the breeding season (i.e., February 1 through August 31), a preconstruction nesting bird survey shall be conducted. The survey shall be performed by a qualified biologist no more than two weeks prior to the initiation of work. If nesting or breeding activity is not observed, further action is not required and work may proceed without restrictions. To the extent allowed by access, all active nests identified within 300 feet for raptors and 100 feet for passerines shall be mapped. All survey results shall be submitted to the City of Morgan Hill Development Services Department prior to the start of construction.

If demolition, site clearing, grading or tree removal or pruning are to be conducted outside of the breeding season (i.e., September 1 through January 31), preconstruction surveys for nesting migratory birds are not necessary.

IV-1(b) If any active nests are located within the study area, an appropriate buffer zone shall be established around the nests, as determined by the project biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the end of breeding season or the young have successfully fledged. Buffer zones are typically between 100 feet and 250 feet for migratory bird nests and between 250 feet and 500 feet for a raptor nest. If active nests are found within the project footprint, a qualified biologist shall monitor nests daily for a minimum of five days during construction to evaluate potential nesting disturbance by construction activities. If construction activities cause the nesting bird(s) to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then an exclusionary buffer shall be increased, as determined by the gualified biologist, such that activities are far enough from the nest to stop the agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

#### Special-Status Bats

IV-2

- Prior to the removal or pruning of mature trees, or the commencement of construction activities within 100 feet of mature trees, the following avoidance measures shall be performed:
  - 1. <u>Bat Habitat Assessment.</u> If work is to take place during the bat breeding season (April 1 through August 31), a qualified biologist shall conduct a survey of the project site and vicinity to determine if active maternity roosts are present. The survey shall be conducted no more than 14 days prior to the initiation of work. All survey results shall be submitted to the City of Morgan Hill Development Services Department prior to the start of construction.
  - <u>Maternal Roosts</u>. If any trees are determined to support or potentially support maternal bat roosts, work may not proceed if the work would destroy or disrupt breeding. Maternal bat roosts may only be removed or demolished after coordination with the CDFW and/or USFWS. Passive exclusion of roosting bats would be required and may only be performed during the non-breeding season (i.e., between October 1 and March 30).
  - 3. <u>Preconstruction Survey</u>. A preconstruction survey shall be conducted by a qualified biologist to identify suitable bat roosting sites. The survey shall be performed no more than 48 hours prior to the initiation of work. The study area shall include an area extending up to 100 feet of the limits of work, access permitting. All survey results shall be submitted to the City of Morgan Hill Development Services Department prior to the start of construction.
  - 4. <u>Protocol for Observations of Live Bats.</u> If live bats are detected in the work area, work shall not proceed until CDFW has been consulted. The project contractor or others shall not attempt to disturb (e.g., shake, prod) roosting features to coax bats to leave. Such actions would constitute "harassment" under the California Code of Regulations (CCR).
  - 5. <u>Day or Night Roosts</u>. Any trees determined to provide suitable day or night roosting sites for bats shall be identified and marked on site plans. Such roosting sites include snags, rotten stumps, and decadent trees with broken limbs, exfoliating bark, cavities, and openings leading to interior portions of any structures. If suitable roost sites or evidence of bat roosting are not identified, impact minimization measures are not warranted. If suitable roosting sites or evidence of bat roosting are identified, the following measures shall be conducted:
    - a. A qualified biologist shall survey suitable roost sites immediately prior to the removal or significant pruning of any of the larger trees.
    - b. If the project biologist identifies suitable day or night roost sites or evidence of bat occupation, the following steps related to tree work shall be followed to discourage use of the sites by bats and to ensure that any bats present are able to safely relocate:

- Tree limbs smaller than 7.6 cm (3 in) in diameter shall be removed and any loose bark shall be peeled away.
- Any competing limbs that provide shelter around the potential roost site shall be removed to create as open of an area as possible.
- The tree shall then be left alone to allow any bats using the tree/snag to find another roost during their nocturnal activity period.
- Trees shall be re-surveyed 48 hours after trimming.
- If no bats are present, work may proceed.
- If bats remain on site, additional measures shall be prescribed by the biologist.
- Jurisdictional wetlands or other waters of the U.S. or of the state, including streams or b,c. other small drainages, riparian habitats, or other aquatic features regulated by federal or State laws, are not present on the project site. An ephemeral swale is present on the southwestern edge of the project site, but does not exhibit hydrological, geomorphological. or biogeochemical indications of a regulated wetland or other waters. The swale follows a topographic depression from the southern corner of the project site, meandering close to the western edge, and flattening out near the northern boundary. The swale does not exhibit bed and bank morphology, and water flows only during substantial rain events and dissipates guickly thereafter. As noted in the Biological Constraints Memorandum, the swale was characterized as a "surface water drainage" feature that may convey sheet flow during intense or long-duration rainfall, but that the majority of rainwater infiltrates. The report confirmed the absence of geomorphic features that would indicate ongoing or seasonal transport or alluvial sediment by flowing water within a channel. Therefore, the on-site drainage feature is not considered riparian habitat, a State or federally protected wetland, or other sensitive natural community. As noted in the Biological Constraints Memorandum, certain natural plant communities and wildlife habitats are considered to have special status due to their restricted occurrence in the State, their tendency to support rare plant or animal species, or because impacts are restricted or otherwise regulated under federal, State, or local laws or ordinances. No such sensitive habitats occur on-site. Accordingly, implementation of the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS or have a substantial adverse effect on State or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Based on such, a less-than-significant impact would occur.
- d. Movement corridors or landscape linkages are usually linear habitats that connect two or more habitat patches, providing assumed benefits to the species by reducing inbreeding depression and increasing the potential for recolonization of habitat patches. The project site is bounded on the southwest by Sabini Court, and on all sides by rural residential development. The project site was previously used as an orchard and, thus, has been subject to prior disturbance associated with such uses. In addition, the site has been regularly disked. Due to the disturbed nature of the project site, the site does not offer, and is not adjacent to, any prime habitat such as wetlands, riparian, or forest, and, as such, the potential for use of the site as a wildlife corridor or native wildlife nursery site is limited. Furthermore, sufficient land in the greater vicinity of the site, specifically in the

woodland area farther southeast of the site, exists for continued wildlife movement in the area. Therefore, development of the proposed project would not substantially interfere with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites, and a *less-than-significant* impact would occur.

e. Section 12.32.030 (Permit-Required) of the City of Morgan Hill's Municipal Code requires the approval of a tree removal permit prior to the removal of any Ordinance Sized Trees, except that a permit shall not be required for Developments which have been reviewed and approved by the planning commission or development services director and the tree removal conforms with the landscape plans of those developments. An ordinance-sized tree is defined as a non-indigenous tree with a circumference greater than 40 inches (approximately 12.7-inch diameter) or any indigenous tree with circumference greater than 18 inches (approximately 5.7 inches diameter). According to the City's Code, non-indigenous tree species in residential zones and orchards (including individual fruit trees) are not considered Ordinance Sized Trees. Indigenous tree means any tree native to the Morgan Hill region, such as oaks (all types), sycamore, California bay, madrone, or alder.

An Arborist Report was prepared for the proposed project by Smith Tree Specialists, Inc. (see Appendix C).<sup>8</sup> Based on the results of the Arborist Report, the project site contains 68 walnut trees, four valley oak trees, a sycamore tree, three olive trees, three persimmon trees, and a California live oak tree. The majority of the on-site trees are not considered Ordinance Sized Trees and may be removed to facilitate construction. However, three of the trees, the California live oak and two valley oaks, that may require removal are considered Ordinance Sized Trees. In addition, the sycamore tree is considered an Ordinance Sized Tree, and the Arborist Report recommends tree removal due to base instability. If any of the four Ordinance Sized Trees are to be removed, replacement plantings consistent with the Municipal Code would be required through either an approved Landscape Plan or a permit. If any Ordinance Sized Trees are to remain on the site, preservation and/or protection measures would be required.

Therefore, the proposed project could have a *potentially significant* impact related to conflicting with local policies or ordinances protecting biological resources, particularly related to Chapter 12.32 (Restrictions on Removal of Significant Trees) of the City's Municipal Code.

#### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

IV-3 Ordinance Sized Trees shall be avoided and preserved to the maximum extent feasible, as determined by a qualified arborist. If Ordinance Sized Trees cannot be avoided during construction, the project applicant shall mitigate for the removal of the Ordinance Sized Trees located within the project site, as identified in the tree survey prepared for the proposed project, by providing an on-site replacement planting at a minimum 1:1 ratio with 24-inch box sized trees. The City will condition the project to replace the Oaks at a 2:1 ratio. Replacement shall be overseen and verified with

<sup>&</sup>lt;sup>8</sup> Smith Tree Specialists, Inc. *Arborist Report, Property at: 1110 Llagas Rd X Sabini Ct, Morgan Hill, APN #773-32-013.* August 12, 2018.

an International Society of Arboriculture certified arborist and the City of Morgan Hill.

- IV-4 For the Ordinance Sized Trees to be preserved as part of the project, the project applicant shall include the following Tree Preservation Measures, which shall be noted on Improvement Plans, subject to review and approval by the Development Services Department:
  - Locate structures, grade changes, etc. as far as feasible from the `dripline' area of the tree.
  - Avoid root damage through grading, trenching, compaction, etc., at least within an area 1.5 times the `dripline' area of trees. Where root damage cannot be avoided, roots encountered (over 1" diameter) should be exposed approximately 12" beyond the area to be disturbed (towards tree stem), by hand excavation, or with specialized hydraulic or pneumatic equipment, cut cleanly with hand pruners or power saw, and immediately back-filled with soil. Avoid tearing, or otherwise disturbing that portion of the root(s) to remain.
  - Construct a temporary fence as far from the tree stem (trunk) as possible, completely surrounding the tree, and 6-8 feet in height. Post no parking or storage signs outside / on fencing. Do not attach posting to the main stem of the tree.
  - Do not allow vehicles, equipment, pedestrian traffic; building materials or debris storage; or disposal of toxic or other materials inside of the fenced off area.
  - Avoid pruning immediately before, during, or immediately after construction impact. Perform only that pruning which is unavoidable due to conflicts with proposed development. Aesthetic pruning should not be performed for at least 1-2 years following completion of construction.
  - Trees that will be impacted by construction may benefit from fertilization, ideally performed in the fall, and preferably prior to any construction activities, with not more than 6 lbs. of actual nitrogen per 1,000 square feet of accessible `drip line' area or beyond.
  - Mulch `rooting' area with an acidic, organic compost or mulch.
  - Arrange for periodic (Biannual/Quarterly) inspection of tree's condition, and treatment of damaging conditions (insects, diseases, nutrient deficiencies, etc.) as they occur, or as appropriate.
  - Individual trees likely to suffer significant impacts may require specific, more extensive efforts and/or a more detailed specification than those contained within these general guidelines.
- f. As noted above, the project site is located within the boundaries of the SCVHP permit area. The SCVHP was developed through a partnership between Santa Clara County, the cities of San José, Morgan Hill, and Gilroy, the Santa Clara Valley Water District (SCVWD), the Santa Clara VTA, the USFWS, and the CDFW. The SCVHP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in approximately 500,000 acres of southern Santa Clara County. The SCVHP provides take authorization for 18 covered

species and includes conservation measures to protect the species covered by the SCVHP, as well as a conservation strategy designed to mitigate impacts on covered species and contribute to the recovery of the species in the study area. Per the SCVHP, the project site is designated predominantly as "Orchard", and partially as "Rural Residential", land cover types.

Compliance with the SCVHP requires payment of fees according to the Fee Zone designation of the property. The project site is within Fee Zone B (Agricultural and Valley Floor Lands), which imposes development fees of \$14,725 per acre. Payment of such fees would be required to ensure that the proposed project would not conflict with the provisions of the adopted Habitat Conservation Plan. Should the proposed project not fulfill payment of the necessary fees, the project could conflict with the SCVHP. Thus, a **potentially significant** impact could occur.

#### Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

IV-5. No later than submittal of the first construction or grading permit for the proposed project, the owner or designee shall pay the Santa Clara Valley Habitat Plan per-acre fee in effect for the appropriate fee zone of the project site, as determined by the Santa Clara Valley Habitat Agency, in compliance with Section 18.132.050 of the Morgan Hill Municipal Code.
V. Wa	<b>CULTURAL RESOURCES.</b> build the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			×	
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?			×	
C.	Disturb any human remains, including those interred outside of dedicated cemeteries.			×	

- a-c. The site does not currently contain any structures, and has been subjected to disturbance including regular disking and activities associated with the site's previous use as an orchard. However, as noted in the General Plan EIR, archaeological surveys conducted in Morgan Hill have identified numerous prehistoric sites with shell midden components, including human burials. Based on such findings, the potential exists for subsurface historical resources and previously unknown archaeological resources to be found on-site during grading and excavation associated with development of the proposed project. In the event that such resources are unearthed, the following City standard Conditions of Approval related to the protection of historical and archaeological resources would be implemented, consistent with Section 18.60.090 of the City's Municipal Code:
  - 1. An archaeologist shall be present on-site to monitor all grounddisturbing activities. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:
    - a. Work at the location of the find shall halt immediately within thirty feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter;
    - b. If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist shall prepare a brief informal memo/letter that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find;
    - c. If the find appears significant and to qualify as a unique archaeological resource, the archaeologist shall determine if the resource can be avoided and shall detail avoidance procedures in a formal memo/letter; and
    - d. If the resource cannot be avoided, the archaeologist shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the Development Services Director. The action plan shall be in conformance with California Public Resources Code 21083.2.

- 2. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans,
  - a. If human remains are encountered, they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
  - b. Remains should not be held by human hands. Surgical gloves shall be worn if remains need to be handled.
  - c. Surgical mask shall also be worn to prevent exposure to pathogens that may be associated with the remains.
- 3. In the event that known or suspected Native American remains are encountered, or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the exclusion zone as defined below.
- 4. An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the contractor foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the monitoring archaeologist (typically twenty-five to fifty feet for single burial or archaeological find).
- 5. The exclusion zone shall be secured (e.g., twenty-four-hour surveillance) as directed by the city or county if considered prudent to avoid further disturbances.
- 6. The contractor foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition:
  - a. The City of Morgan Hill Development Services Director,

- b. The contractor's point(s) of contact,
- c. The coroner of the county of Santa Clara (if human remains found), and
- d. The Native American Heritage Commission (NAHC) in Sacramento.
- 7. The coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American, the Coroner has twenty-four hours to notify the NAHC.
- 8. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD). (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.).
- 9. Within twenty-four hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose,
- 10. Within twenty-four hours of their notification by the NAHC, the MLD may recommend to the City's Development Services Director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the appropriate tribe may be considered and carried out.
- 11. If the MLD recommendation is rejected by the City of Morgan Hill, the parties will attempt to mediate the disagreement with the NAHC. If mediation fails, then the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

Compliance with the above standard Conditions of Approval would ensure that construction of the proposed project would have a *less-than-significant* impact related to historical resources and unique archeological resources, as well as the disturbance of human remains.

VI Wa	<b>. ENERGY.</b> build the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			×	
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			×	

a,b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the California Green Building Standards Code and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

# California Green Building Standards Code

The California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the California Building Standards Code (CBSC), which became effective with the rest of the CBSC on January 1, 2020. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies;
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board; and
- For some single-family and low-rise residential development developed after January 1, 2020, mandatory on-site solar energy systems capable of producing 100 percent of the electricity demand created by the residence(s). Certain residential developments, including those developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement.

# **Building Energy Efficiency Standards**

The 2019 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy-efficiency measures from the 2016 Building Energy Efficiency Standards. The 2019 Building Energy Efficiency Standards are in effect for building permit applications submitted after January 1, 2020.

The 2019 standards provide for additional efficiency improvements beyond the current 2016 standards. Non-residential buildings built in compliance with the 2019 standards are anticipated to use approximately 30 percent less energy compared to the 2016 standards, primarily due to lighting upgrades.<sup>9</sup>

For residential buildings, compliance with the 2019 standards will use approximately seven percent less energy due to energy efficiency measures compared to homes built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards.

# **Construction Energy Use**

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated by the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has recently prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),<sup>10</sup> which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would

<sup>&</sup>lt;sup>9</sup> California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.

<sup>&</sup>lt;sup>10</sup> California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. January 20, 2017.

support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The In-Use Off-Road Diesel Vehicle Regulation described above, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

### **Operational Energy Use**

In response to the growing climate crisis, the City has determined that natural gas use in local buildings, which accounts for approximately one-third of the community's carbon footprint, represents the City's greatest opportunity to reduce future greenhouse gas emissions. Requiring all new buildings to be constructed without natural gas will dramatically reduce future emission growth as electricity procured by Silicon Valley Clean Energy is 100 percent carbon free. The City Council adopted Ordinance No. 2306 on November 6, 2019, which prohibits natural gas infrastructure in new buildings.

Following implementation of the proposed project, PG&E would provide electricity to the project site. Energy use associated with operation of the proposed project would be typical of residential developments, requiring electricity for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed residences.

The proposed project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as door and window interlocks, direct digital controls for HVAC systems, and high efficiency outdoor lighting. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the project by PG&E would comply with the State's Renewable Portfolio Standard (RPS), which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during project operations would originate from renewable sources. With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy

# Conclusion

Based on the context above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a *less-than-significant* impact would occur.

VI Wc	I. GEOLOGY AND SOILS.	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Directly or indirectly cause 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 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?			*	
0.	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 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect 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?				×
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			*	

ai,aii. The General Plan EIR notes that Morgan Hill is located between two major active fault lines, including the Sargent and San Andreas faults to the west in the Santa Cruz Mountains, and the Calaveras fault in the Diablo Range to the east. However, according to the California Geological Survey Alquist-Priolo Earthquake Fault Zone Maps, the proposed project site is not located within the vicinity of an Alquist-Priolo Earthquake Fault Zone.<sup>11</sup> While numerous earthquakes have been felt in the City of Morgan Hill, faults do not run directly through the City's planning area. Therefore, the proposed development would not be subject to risks related to fault rupture.

In addition, the project would be designed to comply with all applicable State and local regulations, including the CBSC. The CBSC provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBSC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, and the strength of ground shaking with specified probability of occurring at a site. Structures built according to the seismic design provisions of the CBSC should be able to:

<sup>&</sup>lt;sup>11</sup> California Department of Conservation. CGS Information Warehouse: Regulatory Maps. Available at: http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps. Accessed March 2020.

- 1) Resist minor earthquakes without damage;
- 2) Resist moderate earthquakes without structural damage but with some nonstructural damage; and
- 3) Resist major earthquakes without collapse but with some structural as well as nonstructural damage.

Although conformance with the CBSC does not guarantee that substantial structural damage would not occur in the event of a maximum magnitude earthquake, conformance with the CBSC can reasonably be assumed to ensure that the proposed structure would be survivable, allowing occupants to safely evacuate in the event of a major earthquake.

Based on the above, the proposed project would not expose people and structures to potential substantial adverse effects involving rupture of a known earthquake fault or strong seismic ground-shaking and a *less-than-significant* impact would occur.

### aiii,aiv,

c. The proposed project's potential effects related to liquefaction, landslides, lateral spreading, and subsidence/settlement are discussed in detail below.

### Liquefaction

Liquefaction is a phenomenon in which granular material is transformed from a solid state to a liquefied state as a consequence of increased pore-water pressure and reduced effective stress. Increased pore-water pressure is induced by the tendency of granular materials to densify when subjected to cyclic shear stresses associated with earthquakes. According to the Association of Bay Area Governments (ABAG) Resilience Program's interactive Hazards Map, the project site is located in an area of moderate liquefaction susceptibility.<sup>12</sup> However, The Safety, Services, and Infrastructure Element of the General Plan acknowledges the hazards associated with seismically induced liquefaction in the planning area, and includes a number of policies (SSI-1.1, 1.2, 2.1, and 2.3) that are relevant to the potential hazards. Furthermore, the CBSC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which would further reduce the potential for seismic-related ground failure, including liquefaction. Compliance with the aforementioned regulations would ensure that the potential for risks related to liquefaction would be less than significant.

### Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The topography of the project site is considered a gentle slope. Per the California Geologic Survey, the site is not located within a designated seismic hazard zone for landslides.<sup>13</sup> Further, the General Plan EIR concludes that compliance with the policies within the Safety, Services, and Infrastructure Element of the General Plan, along with the CBSC and Morgan Hill Building Code, would reduce any potential impacts related to landslides to a less-than-significant level.

<sup>&</sup>lt;sup>12</sup> Association of Bay Area Governments. *Resilience Program.* Available at: http://gis.abag.ca.gov/website/Hazards/?hlyr=liqSusceptibility. Accessed April 2020.

<sup>&</sup>lt;sup>13</sup> Ibid.

# Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The project site is located on a gentle slope, but the grade is less than 20 percent. In addition, the site is not located near any open faces that would be considered susceptible to lateral spreading. Therefore, the potential for lateral spreading to pose a risk to the proposed development is relatively low. Further, the General Plan EIR concludes that impacts related to lateral spreading would be reduced to a less-than-significant level with compliance with the CBSC, the Santa Clara County General Plan, and the Morgan Hill Municipal Code.

### Subsidence/Settlement

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. Given that the proposed project would comply with the CBSC, the potential for subsidence to pose a risk to the proposed development is relatively low. In addition, the General Plan EIR concludes that impacts related to subsidence/settlement would be reduced to a less-than-significant level with compliance with the CBSC, the Santa Clara County General Plan, and the Morgan Hill Municipal Code.

### Conclusion

Based on the above, the proposed project would not be subject to substantial risks related to liquefaction, landslides, lateral spreading, and subsidence/settlement. Compliance with standard construction regulations included in the CBSC would ensure that the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction, subsidence, or settlement, and would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site subsidence, liquefaction, or collapse. Thus, a *less-than-significant* impact would occur.

b. Development of the proposed project site would cause ground disturbance of mostly topsoil related to construction activity. The ground disturbance would be limited to the areas proposed for grading and excavation, including building pads; curb, gutter, and sidewalk improvement areas; and drainage, sewer, and water infrastructure alignments. After grading and excavation and prior to overlaying the disturbed ground surfaces with impervious surfaces and structures, the potential exists for wind and water erosion to occur, which could adversely affect downstream storm drainage facilities.

New development within the City that disturbs one or more acres of land is required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) incorporating BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The proposed project would disturb approximately 4.48 acres and, thus, would be subject to such requirements. In addition, pursuant to Chapter 13.30 (Urban Storm Water Quality Management and Discharge Control) of the City's Municipal Code, the project applicant would be required to submit a sediment and erosion control plan to the City of Morgan Hill, Engineering Land Development Division, prior to the approval of improvement plans and issuance of building

permits. The plan(s) shall be acceptable and conform to City standards to prevent significant sediment and soil erosion during construction and include the standards and guidelines found in the California Stormwater Quality Association, Stormwater Best Management Practice Handbook. Based on the above, the proposed project would not result in substantial soil erosion or the loss of topsoil. Thus, a *less-than-significant* impact would occur.

d. Expansive soils increase in volume when they absorb water and have the potential to crack or otherwise compromise the integrity of building foundations. Per the U.S. Department of Agriculture's Web Soil Survey, the project site consists of 70 percent Keefers clay loam, and 30 percent Gilroy clay loam. Both soil types have a shrink-swell rating of 0.5, which is considered moderate.<sup>14</sup> However, the proposed project would be required to comply with all applicable CBSC standards to ensure the structural integrity of the proposed structures. Furthermore, to avoid damage due to soil expansion and shrinkage, Section 15.08.090 (Section 1907A.1 amended-Minimum slab provisions) of the City's Municipal Code includes requirements for minimum thickness of concrete floor slabs, as well as required reinforcement with wire mesh or an approved alternative. Given required compliance with the CBSC and the slab and foundation construction standards provided in the Municipal Code, the proposed project would not be subject to substantial risks related to expansive soils.

Based on the above, the proposed project would not create substantial direct or indirect risks to life or property related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property. Thus, a *less-than-significant* impact would occur.

- e. The proposed project would connect to existing City sewer services. Accordingly, the construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the project. Therefore, **no impact** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.
- f. Paleontological resources or fossils are the remains of prehistoric plant and animal life. As noted in the General Plan EIR, based on a review of the University of California's Museum of Paleontology's fossil locality database conducted for all of Santa Clara County, paleontological resources have not been explicitly identified as being found within Morgan Hill.<sup>15</sup> Nonetheless, previously unknown paleontological resources could potentially exist within the project site, and any ground-disturbing activity associated with implementation of the proposed project could have the potential to disturb or destroy such resources. The project would be subject to the City's standard measures listed in Chapter V, Cultural Resources, of this IS/MND, which, as noted in the General Plan EIR, would ensure that impacts to paleontological resources are less than significant.

The General Plan EIR notes that unique geological features do not exist within the project site, and concludes that impacts related to the destruction of unique geological and paleontological features would be considered less than significant upon buildout of the General Plan. Considering the proposed project would be consistent with the General Plan

<sup>&</sup>lt;sup>14</sup> U.S. Department of Agriculture. *Web Soil Survey*. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx . Accessed March 2020.

<sup>&</sup>lt;sup>15</sup> City of Morgan Hill. 2035 General Plan, City of Morgan Hill [pg. 4.5-17]. Adopted July 2016.

land use and zoning designations, the resulting impact to paleontological and geological features would not be more severe than what has been previously anticipated in the General Plan EIR.

Therefore, the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and a *less-than-significant* impact would occur.

### VIII. GREENHO Would the project:

<b>I. GREENHOUSE GAS EMISSIONS.</b> uld the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			*	
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			*	

# Discussion

a.

b.

Emissions of Greenhouse Gases (GHGs) contributing to global climate change are a.b. attributable in large part to human activities associated with the industrial/manufacturing. utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide  $(CO_2)$  and, to a lesser extent, other GHG pollutants, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO<sub>2</sub> equivalents  $(MTCO_2 e/vr).$ 

The proposed project is located within the jurisdictional boundaries of BAAQMD. The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100  $MTCO_2 e/yr$  or 4.6  $MTCO_2 e/yr$  per service population (population + employees). BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move towards climate stabilization. If a project would generate GHG emissions above the threshold level, the project would be considered to generate significant GHG emissions and conflict with applicable GHG regulations.

The proposed project's GHG emissions were quantified with CalEEMod using the same assumptions as presented in the Air Quality section of this IS/MND, and compared to the thresholds of significance noted above. The proposed project's required compliance with the 2019 California Building Energy Efficiency Standards Code was assumed in the modeling. In addition, the CO<sub>2</sub> intensity factor within the model was adjusted to reflect the PG&E's anticipated CO<sub>2</sub> emissions factor for 2022. All CalEEMod results are included in Appendix A to this IS/MND.

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAQMD has an adopted threshold of significance for construction-related GHG emissions and does not require quantification. Nonetheless, the proposed project's construction GHG emissions have been estimated. The CalEEMod emissions estimates prepared for the proposed project determined that unmitigated project construction would result in total emissions of  $352.43 \text{ MTCO}_2 e$  over the course of the construction period.

The estimated maximum annual GHG emissions related to operations of the proposed project are presented in Table 5 below. As shown in Table 5, the project's maximum annual unmitigated operation GHG emissions were estimated to be approximately 48.40 MTCO<sub>2</sub>*e*/yr. Thus, implementation of the proposed project would result in operational emissions well below the BAAQMD's applicable 1,100 MTCO<sub>2</sub>*e*/yr threshold of significance for GHG emissions. Even if the total construction emissions are added to the annual operations emissions, the sum would be 400.83 MTCO<sub>2</sub>*e*, which remains below the BAAQMD threshold of significance.

Table 4				
Unmitigated Operational GHG Emissions				
Source	GHG Emissions (MTCO <sub>2</sub> e/yr)			
Area	0.72			
Energy	10.23			
Mobile	34.53			
Waste	2.32			
Water	0.60			
<b>Total Annual Operational GHG Emissions</b>	48.40			
BAAQMD Threshold	1,100 MTCO₂ <i>e</i> /yr			
Exceeds Threshold? NO				
Source: CalEEMod, March 2020 (see Appendix A).				

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; and impacts would be considered **less than** *significant*.

### IX. 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 likely 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 or excessive noise for people residing or working in the project area?
- f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- g. Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?

Potentia Signific Impac	Less-Than- ally Significant ant with ct Mitigation Incorporated	Less-Than- Significant Impact	No Impact
		×	
		*	
			×
		×	
			×
		×	
		×	

### **Discussion**

- a. Residential uses are not typically associated with the routine transport, use, disposal, or generation of hazardous materials. Operations would likely involve use of common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount utilized on the site, occasional use of such products would not represent a substantial risk to public health or the environment. Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a *less-than-significant* impact would occur.
- b,d. Per the State Water Resources Control Board's (SWRCB) GeoTracker data management system, hazardous materials sites, including leaking underground storage tank (LUST) sites and Department of Toxic Substances Control (DTSC) cleanup sites, have not been identified on or within a 1,000-foot radius of the project area.<sup>16</sup> In addition, the project site is not located on or near any hazardous waste sites identified on the Envirostor's Hazardous Waste and Substance Site List.<sup>17</sup>

 <sup>&</sup>lt;sup>16</sup> State Water Resources Control Board. *GeoTracker*. Available at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=morgan+hill. Accessed March 2020.
 <sup>17</sup> Department of Toxic Substances Control. *Hazardous Waste and Substances Site List.* Available at:

bepartment of Toxic Substances Control. Hazardous waste and Substances Site List. Available at: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site\_type=CSITES,FUDS &status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTES E%29. Accessed March 2020.

The proposed residential uses would not involve any operations that could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. However, hazardous materials would be stored, used, and transported in varying amounts during construction of the proposed project. Construction activities associated with the proposed project would involve the use of various products such as concrete, paints, and adhesives. In addition, heavy-duty construction equipment operating on the project site would contain hydraulic fluid, diesel fuel, and other petroleum products. Small quantities of such potentially toxic substances would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local County ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Compliance with such regulations would ensure that the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment during construction activities.

Based on the above, the proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and implementation of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. As such, a **less-than-significant** impact would occur.

- c. The nearest school relative to the project site is the Crossroads Christian School, located approximately 0.23-mile south of the site. As discussed above, development of the proposed project would not result in any significant hazards related to the use, transport, disposal, or upset of hazardous materials. Thus, **no impact** would result relating to the emission or handling of hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- e. The public airport nearest to the project site is the San Martin Airport, which is located approximately 5.4 miles southeast of the project site at 13030 Murphy Avenue. The project site is located well outside of the Airport Influence Area (AIA) identified in the South County Airport Comprehensive Land Use Plan.<sup>18</sup> In addition, the project site is not located within the vicinity of a private airstrip. Therefore, the proposed project would not result in an airport-related safety hazard for people residing or working in the project area, and **no** *impact* would occur.
- f. Implementation of the proposed project would not result in any substantial modifications to the City's existing roadway system. The project would not interfere with potential evacuation or response routes used by emergency response teams. In addition, the project would not conflict with the City's Emergency Operations Plan.<sup>19</sup> The proposed project is consistent with the site's current General Plan land use and zoning designations; thus, development of the site and associated effects on emergency evacuation routes has been anticipated per the General Plan and analyzed in the General Plan EIR. Therefore,

<sup>&</sup>lt;sup>18</sup> Santa Clara County. *Comprehensive Land Use Plan, Santa Clara County, South County Airport.* Amended November 16, 2016.

<sup>&</sup>lt;sup>19</sup> City of Morgan Hill. *Emergency Operations Plan.* January 11, 2018.

the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and a *less-than-significant* impact would occur.

g. Issues related to wildfire hazards are discussed in Section XX, Wildfire, of this IS/MND. As noted therein, according to CAL FIRE's Fire and Resource Assessment Program, the project site is located within a Very High Fire Hazard Severity Zone (VHFHSZ), but several standards are in place to minimize hazards related to wildfire.<sup>20</sup> In addition, buildout of the project site has been previously considered by the City, and the General Plan EIR concludes that compliance with applicable federal, State, and local laws and regulations would ensure impacts related to wildland fire hazards would be less than significant. There is nothing peculiar about this site that would change the conclusion of the General Plan. Therefore, implementation of the proposed project would not expose people or structures, either directly or indirectly, to the risk of loss, injury, or death involving wildland fire, and the impact would be *less than significant*.

<sup>&</sup>lt;sup>20</sup> California Department of Forestry & Fire Protection. Morgan Hill: Very High Fire Hazard Severity Zones in LRA. October 9, 2008.

Χ.	HYDROLOGY AND WATER QUALITY.	Potentially Significant	Less-Than- Significant with	Less-Than- Significant	No Impact
Would t	the project:	Impact	Incorporated	Impact	•
a. Viol requ or g	ate any water quality standards or waste discharge uirements or otherwise substantially degrade surface ground water quality?			×	
b. Sub sub proj mar	estantially decrease groundwater supplies or interfere stantially with groundwater recharge such that the ject may impede sustainable groundwater magement of the basin?			×	
c. Sub site of a surf	ostantially alter the existing drainage pattern of the or area, including through the alteration of the course a stream or river or through the addition of impervious faces, in a manner which would:				
	<ul> <li>Result in substantial erosion or siltation on- or off-site;</li> </ul>			×	
	<li>Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</li>			×	
	iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			×	
	iv. Impede or redirect flood flows?			×	
d. In flo	ood hazard, tsunami, or seiche zones, risk release of utants due to project inundation?			×	
e. Con cont plan	nflict with or obstruct implementation of a water quality trol plan or sustainable groundwater management			×	

a. The proposed project's potential to result in water quality impacts during construction and operations is discussed in further detail separately below.

# Construction

Project construction activities such as grading, excavation, and trenching for site improvements would result in the disturbance of on-site soils. The exposed soils have the potential to affect water quality in two ways: 1) suspended soil particles and sediments transported through runoff; or 2) sediments transported as dust that eventually reach local water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites also have the potential to enter runoff. Typical pollutants include, but are not limited to, petroleum and heavy metals from equipment and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff containing the sediment or contaminants should enter receiving waters in sufficient quantities. Impacts from construction-related activities would generally be short-term.

Water quality degradation is regulated by the federal NPDES Program, established by the Clean Water Act, which controls and reduces pollutants to water bodies from point and non-point discharges. In California, the NPDES permitting program is administered by the SWRCB through nine Regional Water Quality Control Boards (RWQCBs). As discussed

in Section VII, Geology and Soils, of this IS/MND, new development within the City that disturbs one or more acres of land is required to comply with the NPDES General Construction Permit and prepare a SWPPP incorporating BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The proposed project would disturb approximately four acres, and, thus, would be subject to the State NPDES General Permit conditions.

The proposed project would also be subject to all regional and local water quality regulations. In order to meet water quality objectives for the region, the City of Morgan Hill, City of Gilroy, and County of Santa Clara have prepared and are implementing a Revised Regional Storm Water Management Plan (SWMP). The SWMP incorporates the efforts of the City of Morgan Hill, the City of Gilroy, and the unincorporated portion of Santa Clara County, within the watershed of the Pajaro River and Monterey Bay, to meet the Phase II Storm Water Permit requirements for small municipal separate storm sewer systems (MS4s). The Upper Pajaro River Watershed is located within the jurisdiction of the Central Coast Regional Water Quality Control Board (CCRWQCB). The City of Morgan Hill implements the SWMP through an extensive program that entails: 1) the establishment of SWMP goals for the City; 2) public education and outreach; 3) public involvement and participation; 4) illicit discharge control; 5) construction site storm water runoff control; 6) post-construction storm water management in development; and 7) pollution prevention. For construction activities, the SWMP presents BMPs that are required for the control of storm water runoff quality during construction.

# Operation

After project completion, impervious surfaces on the project site could contribute incrementally to the degradation of downstream water quality during storm events. During the dry season, vehicles and other urban activities may release contaminants onto the impervious surfaces, where they would accumulate until the first storm event. During the initial storm event, or first flush, the concentrated pollutants would be transported via stormwater runoff from the site to the stormwater drainage system and eventually a downstream waterway. Typical urban pollutants that would likely be associated with the proposed project include sediment, household pesticides, oil and grease, nutrients, metals, bacteria, and trash. In addition, stormwater runoff could cause soil erosion if not properly addressed and provide a more lucrative means of transport for pollutants to enter the waterways.

The proposed project would be managed in accordance with Resolution R3-2013-0032 issued by the California Regional Water Quality Control Board, Central Coast Region. This resolution formally adopts post-construction stormwater management requirements for development projects in the Central Coast Region. The requirements identify 10 Watershed Management Zones (WMZs) in the covered area, and specify stormwater management requirements for each zone, depending on the size of the development project. Because the project site is located in an area classified as WMZ-2, stormwater management at the project site must include site design and runoff features to limit the amount of runoff from the project site as well as on-site water quality treatment to reduce pollutant loads in the stormwater runoff using a Low Impact Development (LID) treatment system such as biofiltration. In WMZ-2, the treatment system must retain 95 percent of the runoff from the project site and also maintain peak runoff flows such that they do not exceed pre-project flows.

A preliminary Stormwater Control Plan (SWCP) has been prepared for the proposed project (see Figure 6). On-site stormwater runoff from impervious surfaces would be collected and transported, by way of gutters and earth swales, into bioretention basins that would treat and detain all on-site runoff prior to discharging to the City's existing stormwater drain located in Sabini Court during large storm events. The storm drain and retention system is designed to accommodate storage for runoff retention as required by the Central Coast RWQCB.

The design, construction, operation, and maintenance of the proposed drainage system would be addressed in a final SWCP to be submitted to the City of Morgan Hill in accordance with the stormwater management requirements adopted by Resolution R3-2013-0032. The final SWCP would demonstrate how the drainage system would meet the specified water quality, runoff retention, and peak flow management requirements. Prior to occupancy of the project, the stormwater controls would be field verified by the City of Morgan Hill to confirm design of the controls in accordance with the specified standards, and the controls would be subject to later operation and maintenance inspections by the City.

Pursuant to Chapter 18.140 (Post Construction Stormwater Pollution Prevention) of the City's Municipal Code, the proposed project would be subject to permanent storm water pollution prevention measures. As such, the proposed project would be required to comply with the design standards set forth in Section 18.140.040 (Design standards and selection of best management practices), and select and implement BMPs to the satisfaction of the City in accordance with the requirements contained in the most recent versions of the following documents:

- 1. City of Morgan Hill Stormwater Post Construction Best Management Practices Development Standards for new development and redevelopment;
- 2. California Storm Water Quality Association Best Management Practice Handbooks;
- 3. City of Gilroy, City of Morgan Hill and County of Santa Clara Regional Stormwater Management Plan (SWMP), as approved by the Central Coast Regional Water Quality Control Board; and
- 4. City of Morgan Hill Hydro-modification Management Plan, as approved by the Central Coast Regional Water Quality Control Board.

The final design of the proposed drainage system would be reviewed and approved by the City of Morgan Hill Engineering Land Development Division, which would ensure that the proposed drainage system complies with the City's Post Construction Stormwater Pollution Prevention Ordinance with respect to incorporating sufficient permanent stormwater treatment control BMPs. Therefore, water quality standards or waste discharge requirements would not be violated, and water quality would not be degraded as a result of the proposed project operations.

# Conclusion

Based on the above discussions, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction and operations. Therefore, a *less-than-significant* impact would occur.

b,e. The City's water supplies currently consist entirely of groundwater. Approximately 25 percent of the City's supply is extracted from the Coyote Valley subarea of the Santa Clara Subbasin, and approximately 75 percent is extracted from the Llagas Subbasin. The project site is located within the Llagas Subbasin. Neither of the subbasins are in a condition of overdraft, and groundwater levels are not expected to drop.<sup>21</sup> It should be noted that water supply is discussed in Section XIX, Utilities and Service Systems, of this IS/MND.

Groundwater within the Llagas Subbasin is managed by the SCVWD. The 2016 Groundwater Management Plan (GWMP), prepared pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), describes the SCVWD's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, located entirely in Santa Clara County and identified by the Department of Water Resources (DWR) as Basins 2-9.02 and 3-3.01, respectively. Pursuant to the DWR, the Llagas Subbasin is designated as a high-priority basin.<sup>22</sup>

The proposed project is relatively small in size, and development of the four proposed residences would not substantially impact groundwater recharge. In addition, groundwater levels within the subbasin underlying the project site are currently stable, and that the proposed project would provide for opportunities for on-site groundwater recharge. Thus, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and a *less-than-significant* impact would occur.

ci-iii. The project site consists primarily of vacant land with several untended orchard trees and grassland vegetation. Development of the proposed project would include approximately 24,000 square feet of impervious surfaces, which would alter the existing drainage pattern of the site. However, as discussed above, on-site stormwater runoff would be guided into bioretention basins for on-site retention and treatment prior to discharge to the City's stormwater system, The proposed stormwater system would be required to maintain peak runoff flows such that they do not exceed pre-project flows in accordance with the stormwater management requirements adopted by Resolution R3-2013-0032.

Furthermore, stormwater runoff associated with the site would be required to comply with the City's SWMP standards. As such, the project would not significantly increase stormwater flows into the existing system. The final drainage system design for the project would be subject to review and approval by the City of Morgan Hill Engineering Land Development Division, who would confirm that the proposed drainage system for the project is consistent with the City's Storm Drainage Master Plan and standard stormwater-related conditions of approval. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion, siltation, or flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Thus, a *less-than-significant* impact would occur.

<sup>&</sup>lt;sup>21</sup> City of Morgan Hill. *Morgan Hill 2035 Final Environmental Impact Report* [pg. 4.9-18]. Adopted July 2016.

<sup>&</sup>lt;sup>22</sup> Santa Clara Valley Water District. 2016 Groundwater Management Plan, Santa Clara and Llagas Subbasins [pg. ES-1]. November 2016.

civ. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06085C0444H, the project site lies within Flood Zone D, which is defined as areas in which flood hazards are undetermined, but possible. If it is determined that the project site is located within a flood hazard zone, the project would be required to comply with the standards set forth in Chapter 15.80, Flood Damage Prevention, of the Municipal Code. In addition, it should be noted that the area adjacent to the project site is designated Flood Zone X, which is not considered a Special Flood Hazard Area.<sup>23</sup>

The flood hazard risk at the project site has not been determined, and therefore the site is not currently considered a designated Special Flood Hazard Area. If the site is determined to be in a flood hazard zone in the future, the project would be required to comply with all applicable regulations to ensure that risks related to flood hazards are minimized. The General Plan EIR indicates that the project site falls within an "unstudied area". However, the General Plan EIR notes that most of the City is within the 500-year floodplain, and all of the known 100-year floodplain areas within the City are immediately adjacent to creeks and streams. Considering that project site is not immediately adjacent to a stream, the project site is likely not within a 100-year floodplain. As such, the proposed project would not impede or redirect flood flows, and a *less-than-significant* impact would occur.

d. A seiche is defined as a wave generated by rapid displacement of water within a reservoir or lake, due to an earthquake that triggers land movement within the water body or land sliding into or beneath the water body. The project site is located near the Chesbro Reservoir, which is a water body that is susceptible to seiche hazard. However, according to the Chesbro Dam Inundation Map, the project site is not located within an inundation zone, and would not be susceptible to flooding from potential dam failure.<sup>24</sup> In addition, the distance to the nearest coastline does not subject the site to tsunami hazards. Therefore, the proposed project would not be exposed to substantial risks related to flooding as a result of the failure of a dam, tsunamis, or seiches. In addition, as discussed under question 'cvi' above, the project site would not include development within a currently designated Special Flood Hazard Area. Therefore, the project would not result in the release of pollutants due to project inundation, and a *less-than-significant* impact would occur.

<sup>&</sup>lt;sup>23</sup> Federal Emergency Management Agency. National Flood Insurance Program Flood Insurance Rate Map: Santa Clara County, California. May 18, 2009.

<sup>&</sup>lt;sup>24</sup> Valley Water. *Inundation Map for the Hypothetical Fair Weather Failure of Elmer J Chesbro Dam*. August 2019.

#### LAND USE AND PLANN XI. Would the project:

LAND USE AND PLANNING.	Potentially Significant Impact	Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
Physically divide an established community?			×	
Cause a significant environmental impact due to a				
conflict with any land use plan, policy, or regulation			*	
adopted for the purpose of avoiding or mitigating an			**	

### **Discussion**

environmental effect?

a.

b.

- A project risks dividing an established community if the project would introduce a. infrastructure or alter land use so as to change the land use conditions in the surrounding community or isolate an existing land use. The proposed project would be consistent with the existing rural residential neighborhood surrounding the project site. In addition, the project would include sidewalk improvements along the project frontage to increase pedestrian connectivity in the project area. Therefore, the proposed project would be a continuation of the surrounding development and would not isolate an existing land use. As such, the project would not physically divide an established community, and a lessthan-significant impact would occur.
- b. The proposed project would be generally consistent with Municipal Code standards and General Plan policies, as well as other applicable policies and regulations adopted for the purpose of avoiding or mitigating environmental effects. For example, with implementation of Mitigation Measures IV-1 through IV-5, the project would not conflict with any applicable policies, regulations, or ordinances related to the protection of biological resources. As discussed under Section XIII, Noise, of this IS/MND, the project would comply with the noise level thresholds established in the City's General Plan and Municipal Code during construction and operation with implementation of Mitigation Measures XIII-1 and XIII-2.

Based on the above, the proposed project would not cause a substantial adverse environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and a less-thansignificant impact would result.

XI Wa	I. MINERAL RESOURCES.	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
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?				×

a,b. The City's General Plan does not identify any regionally or locally important mineral resources within the City of Morgan Hill. The *Santa Clara County General Plan* does identify mineral resources of importance; however, the project site is not in proximity to the quarries currently in operation. Consequently, the proposed project would not result in the loss of a known mineral resource that would be of value to the region nor would the project result in the loss of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, *no impact* to mineral resources would occur as a result of the proposed project.

XIII. NOISE. Would the project result in:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		*		
<ul> <li>b. Generation of excessive groundborne vibration or groundborne noise levels?</li> </ul>		×		
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise				×

levels?

a. The following section includes a discussion of noise standards and criteria applicable to various land uses, as well as potential traffic noise and non-transportation noise sources associated with the proposed project.

# **City Noise Standards and Criteria**

Chapter 9, Safety, Service, and Infrastructure, of the City's General Plan contains the following policies which would be applicable to the proposed project:

- SSI-8.1 Exterior Noise Level Standards. Require new development projects to be designed and constructed to meet acceptable exterior noise level standards (see Table SSI-1 [of the General Plan]), as follows:
  - Apply a maximum exterior noise level of 60 dBA L<sub>dn</sub> in residential areas where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). Where the City determines that providing an L<sub>dn</sub> of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, an L<sub>dn</sub> of 65 dBA may be permitted.
  - Indoor noise levels should not exceed an L<sub>dn</sub> of 45 dBA in new residential housing units.
  - Noise levels in new residential development exposed to an exterior L<sub>dn</sub> 60 dBA or greater should be limited to a maximum instantaneous noise level (e.g., trucks on busy streets, train warning whistles) in bedrooms of 50 dBA. Maximum instantaneous noise levels in all other habitable rooms should not exceed 55 dBA. The maximum outdoor noise level for new residences near the railroad shall be 70 dBA L<sub>dn</sub>, recognizing that train noise is characterized by relatively few loud events.
- SSI-8.2 Impact Evaluation. The impact of a proposed development project on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.

- SSI-8.5 Traffic Noise Level Standards. Consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA L<sub>dn</sub> or greater, with a future noise level of less than 60 dBA L<sub>dn</sub>, or b) the noise level increase is 3 dBA L<sub>dn</sub> or greater, with a future noise level of 60 dBA L<sub>dn</sub> or greater.
- SSI-8.6 Stationary Noise Level Standards. Consider noise levels produced by stationary noise sources associated with new projects significant if they substantially exceed existing ambient noise levels.
- SSI-8.7 Other Noise Sources. Consider noise levels produced by other noise sources (such as ballfields) significant if an acoustical study demonstrates they would substantially exceed ambient noise levels.
- SSI-8.9 Site Planning and Design. Require attention to site planning and design techniques other than sound walls to reduce noise impacts, including: a) installing earth berms, b) increasing the distance between the noise source and the receiver, c) using non-sensitive structures such as parking lots, utility areas, and garages to shield noise-sensitive areas, d) orienting buildings to shield outdoor spaces from the noise source, and e) minimizing the noise at its source.

In addition to the policies listed above, Section 18.76.090 (Noise) of the City's Municipal Code contains maximum noise levels for non-transportation noise sources. The City's quantitative exterior noise standards are reproduced below in Table 6. Noise standards shown below do not apply to noise generated by vehicle traffic in the public right-of-way or from temporary construction, demolition, and vehicles that enter or leave the site of the noise-generating use (e.g., construction equipment, trains, trucks). According to City staff, such standards are interpreted as being hourly average noise level standards ( $L_{eq}$ ).

Table 5				
Noise Level Performance Standards				
Maximum Noise Level at Lot Lin				
Receiving Land Use	of Receiving Use			
Industrial and Wholesale	70 dBA			
Commercial	65 dBA			
Residential or Public/Quasi Public 60 dBA				
Notes:				

 The planning commission may allow an additional 5 dBA noise level at the lot line if the maximum noise level shown above cannot be achieved with reasonable and feasible mitigation.

Source: City of Morgan Hill Municipal Code.

Furthermore, Section 8.28.040.D of the Morgan Hill Municipal Code, limits construction activity noise as follows:

"Construction activities" are defined as including but not limited to excavation, grading, paving, demolition, construction, alteration or repair of any building, site, street or highway, delivery or removal of construction material to a site, or movement of construction materials on a site. Construction activities are prohibited other than between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday and between the hours of 9:00 a.m. to 6:00 p.m. on Saturday. Construction activities may not occur on Sundays or federal holidays. No third person, including

but not limited to landowners, construction company owners, contractors, subcontractors, or employers, shall permit or allow any person working on construction activities which are under their ownership, control or direction to violate this provision.

### **Sensitive Receptors**

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are considered to be sensitive to noise because intrusive noise can be disruptive to such activities. Within the project vicinity, the nearest sensitive receptors include the single-family residences located approximately 25 feet from the north and south boundaries of the project site.

# **Project Construction Noise**

Construction of the proposed project would involve the use of heavy-duty equipment for demolition, grading, excavation, paving, and building construction, which would result in temporarily increased noise levels. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point.

As noted above, the nearest noise-sensitive receptor is located approximately 25 feet from the project site boundary. According to the Federal Highway Administration, activities involved in construction typically generate maximum noise levels ranging from 84 to 98 dBA L<sub>max</sub> at a distance of 20 feet.<sup>25</sup> Because the nearest receptor is 25 feet away, noise levels are expected to be slightly less than the aforementioned range.

The Morgan Hill Municipal Code does not specify any short-term noise level limits. In addition, pursuant to Section 8.28.040.D of the Morgan Hill Municipal Code, construction is prohibited between 8:00 PM and 7:00 AM, Monday through Friday, and between 6:00 PM and 9:00 AM on Saturdays. Construction activities may not occur on Sundays or federal holidays. Enforcement of the time restrictions specified in the Morgan Hill Noise Ordinance and the use of noise-dampened equipment would be required to ensure that the temporary or periodic increase in ambient noise levels in the project vicinity associated with construction of the proposed project would not be considered substantial.

# **Project Operational Noise**

Noise sources associated with operations of the proposed project would include noise from nearby traffic, and non-transportation noise such as landscaping, maintenance activities, and heating and air conditioning equipment. Operational noise is discussed in further detail below.

# Traffic Noise

The primary noise source associated with operation of the proposed project would be traffic noise. Pursuant to General Plan Policy SSI-8.5, noise level increases resulting from traffic associated with new projects are considered significant if: a) the noise level increase is 5 dBA  $L_{dn}$  or greater, with a future noise level of less than 60 dB  $L_{dn}$ ; or b) the noise level increase is 3 dB  $L_{dn}$  or greater, with a future noise level of 60 dB  $L_{dn}$  or greater.

<sup>&</sup>lt;sup>25</sup> Federal Highway Administration. *Roadway Construction Noise Model User's Guide*. January 2006.

Based on the Existing Noise Contours figure included in the General Plan EIR, the project site is located in an area with existing noise levels of 60 dB or less. As discussed in Section XVII, Transportation, of this IS/MND, the proposed project would generate approximately 38 daily vehicle trips, which is not expected to trigger the aforementioned criteria. Table 4.11-7 of the General Plan EIR shows a decrease in noise levels by 5.9 dB by 2035 along Llagas Road, east of the project site. The vehicle trips generated by the proposed project would be included in the estimate of buildout of the General Plan. Considering the anticipated decrease in transportation noise on adjacent roadways following implementation of the General Plan, the project would not contribute to any additional roadway noise that would negate the decrease. Therefore, traffic noise increases attributable to the project would be less than significant.

### Non-Transportation Noise

Noise-generating operations associated with the proposed project would primarily consist of landscaping maintenance and heating, ventilation, and air conditioning (HVAC) systems, typical of other existing residential development in the project vicinity. In general, residential uses do not include substantial noise-generating uses. Assuming the project HVAC systems and maintenance equipment would be in normal working order, stationary noise sources associated with the proposed project would not substantially increase noise levels from what currently exists in the project area.

### Conclusion

Based on the above, operation of the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City's General Plan and the Municipal Code. Without compliance with the measures outlined in Mitigation Measures XIII-1 and XIII-2, temporary construction noise levels could be considered **potentially significant**.

# Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

- XIII-1. Noise-generating construction activities associated with the proposed project shall only occur within the hours identified in Municipal Code Section 8.28.040(D). The above language shall be included on final project improvement plans prior to approval by the City of Morgan Hill Development Services Department.
- XIII-2. To the maximum extent practical, the following measures shall be implemented during project construction:
  - All noise-producing project equipment and vehicles using internalcombustion engines shall be equipped with manufacturersrecommended mufflers and maintained in good working condition;
  - All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, State, or local agency shall comply with such regulations while in the course of project construction;
  - Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible;

- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors;
- Project area and site access road speed limits shall be established and enforced during the construction period; and
- Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.

The above requirements shall be included via notation on project grading plans, subject to review and approval by the Development Services Department.

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 7, which was developed by Caltrans, shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with the construction phases of the project would add to the noise environment in the immediate project vicinity, construction activities would be temporary in nature and occur during normal daytime working hours.

The primary vibration-generating activities associated with the proposed project would occur during grading, paving, placement of utilities, and construction of foundations. Table 7, below, shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could potentially be required during construction of the proposed drive aisles.

Table 6						
Effects	Effects of Vibration on People and Buildings					
PPV						
(in/sec)	Human Reaction	Effect on Buildings				
0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type				
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected				
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings				
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage				
0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage				
Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.						

Table 7					
Vibration Levels for Various Construction Equipment					
Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)			
Large Bulldozer	0.089	0.029			
Loaded Trucks	0.076	0.025			
Small Bulldozer	0.003	0.000			
Auger/drill Rigs	0.089	0.029			
Jackhammer	0.035	0.011			
Vibratory Hammer	0.070	0.023			
Vibratory Compactor/roller	0.210	0.070			
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.					

Operation of vibratory compactors/rollers used for construction of the drive aisle could operate at a distance of approximately 25 feet from the nearest existing off-site residences. Thus, based on the information presented in Table 8, groundborne vibration at the nearest residences could potentially exceed 0.2 in/sec PPV.

It should be noted that paving activities associated with the proposed project would occur at different portions of the site at different times. Thus, groundborne vibration at the nearby residences would occur intermittently over a short period of time. Nonetheless, based on the above, the use of vibratory rollers during construction activities could expose people to or generate excessive groundborne vibration or groundborne noise levels, and impacts could be **potentially significant**.

# Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

- XIII-3 During construction activities associated with the proposed project, any compaction required within 25 feet of existing residential structures adjacent to the project site shall be accomplished by using static drum rollers rather than vibratory compactors. The above requirement shall be included via notation on any grading plans approved for the project to the satisfaction of the City of Morgan Hill Development Services Department.
- c. The public airport nearest to the project site is the San Martin Airport, which is located approximately 5.4 miles southeast of the project site at 13030 Murphy Avenue. The project site is located well outside of the Airport Influence Area (AIA) identified in the South County Airport Comprehensive Land Use Plan.<sup>26</sup> In addition, the project site is not located within the vicinity of a private airstrip. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with air traffic, and *no impact* would occur.

<sup>&</sup>lt;sup>26</sup> Santa Clara County. Comprehensive Land Use Plan, Santa Clara County, South County Airport. Amended November 16, 2016.

#### XIV. POPULATION AND HOUSING. Would the project:

V. <b>POPULATION AND HOUSING.</b> uld the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact	
Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?			×		
Displace substantial numbers of existing people or				×	

b. Displace substantial numbers of existing people necessitating construction housing, the replacement housing elsewhere?

# Discussion

a.

a. The proposed project would include the development of a total of four single-family residential units. According to the General Plan, Morgan Hill is anticipated to have an average of 3.15 persons per household in the year 2020. As a result, the proposed project would add approximately 13 new residents to the City. Considering that the total population of the City is anticipated to reach approximately 45,000 as of July 2019,<sup>27</sup> an increase in 13 residents is considered negligible.

In addition, as discussed throughout this IS/MND, the proposed project would be consistent with the General Plan land use and zoning designations for the site. As such, the increase in population associated with the proposed project has been previously anticipated. Thus, implementation of the proposed project would not induce substantial unplanned population growth in the area, and a *less-than-significant* impact would occur.

Residences do not currently exist on the project site. Therefore, the proposed project b. would not displace any people or housing, and *no impact* would occur.

<sup>27</sup> U.S. Census Bureau. QuickFacts Morgan Hill, California. Available at: https://www.census.gov/quickfacts/morganhillcitycalifornia. Accessed March 2020.

# XV. PUBLIC SERVICES.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Potentially Significant Impact
Impact
Less-Than-Significant Mitigation Incorporated
No Impact

a.	Fire protection?		×	
b.	Police protection?		×	
c.	Schools?		×	
d.	Parks?		×	
e.	Other Public Facilities?		×	

# Discussion

a-c,e. The City of Morgan Hill contracts with CAL FIRE (California Department of Forestry and Fire Protection) for fire protection services. Three fire stations are located within the City boundaries: El Toro Station, located at 18300 Old Monterey Road; Dunne-Hill Station, located at 2100 Dunne Avenue; and the CAL FIRE station at 15670 Monterey Road. The nearest fire station (El Toro station) is located approximately 1.2-miles to the northeast of the site. The incremental increase in demand associated with the proposed project would not necessitate new or physically altered facilities and would not be substantial enough that the current response times could not be maintained. Accordingly, the response time from the El Toro station would be anticipated to be within the City's preferred response time of five minutes or less.

The Morgan Hill Police Department is located at 16200 Vineyard Boulevard, approximately two miles east of the project site. Based on the 2016 Police Operations Report, the project site is located in an area with an extremely low rate of crime.<sup>28</sup> The project site is also located within the Morgan Hill Police Department's normal patrol routes, and, thus, police response times would be comparable to nearby existing developments. Furthermore, given that the project is consistent with the site's current General Plan land use and zoning designations, impacts related to provision of new or physically altered fire and police protection facilities have been previously analyzed in the General Plan EIR. The General Plan EIR concluded that buildout of the City would have a less-than-significant impact related to the provision of such public services. There is nothing peculiar about the site or project that would alter the General Plan EIR conclusion.

The Morgan Hill Unified School District (MHUSD) operates public education facilities that serve the project site and surrounding area. The City of Morgan Hill is served by eight elementary schools, two middle schools, two high schools, one continuation school, one K-8 home school program, and one community adult school. Using the MHUSD student yield rate of 0.465 students per household, the total anticipated development potential for the project site (four residential units) could add approximately two new students to MHUSD schools.

The City collects development impact fees to help pay for public services that include public schools. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or

<sup>&</sup>lt;sup>28</sup> Center for Public Safety Management, LLC. Police Operations and Data Analysis Report: Morgan Hill, California. August 2016.

adjudicative act involving the planning, use, or development of real property." (Government Code 65996(b).) Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." Therefore, according to SB 50, the payment of the necessary school impact fees for the project would be full and satisfactory CEQA mitigation.

With regard to other public facilities, such as libraries, given the relatively small number of units included in the proposed project, the project would not be anticipated to result in a substantial increase in demand for library services, or other public facilities, such that expanded facilities would be required. Future residents of the proposed project would have access to the Morgan Hill Library, which is operated by the Santa Clara County Library District. In addition, the General Plan EIR concluded that buildout of the City, including the project site, would have a less-than-significant impact related to libraries.

Based on the above, the project would have a *less-than-significant* impact with respect to creating adverse physical environmental impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, and schools.

d. The proposed project is anticipated to generate an estimated 13 additional residents (4 units X 3.15 persons per household) in the City of Morgan Hill.<sup>29</sup> The City of Morgan Hill recently adopted Ordinance No.'s 2305 and 2315 updating Chapter 17.28 (Land Dedications and Reservations) of the Municipal Code requirements for park dedication or fees in lieu to allow for the use of Quimby Act fees. Chapter 17.28 of the Municipal Code requires residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. The acreage of parkland or amount of the in-lieu fee required is based upon criteria outlined in Chapter 17.28 of the City's Municipal Code. Given that the proposed project would be required to comply with Chapter 17.28 of the Morgan Hill Municipal Code, the project would have a *less-than-significant* impact with respect to creating adverse physical environmental impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for parks.

<sup>&</sup>lt;sup>29</sup> California Department of Finance. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark; <u>http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/</u>; accessed April 27, 2020.

X\ Wa	/I. RECREATION. build the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			×	
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the			×	

environment?

Considering the total of four residential units, the proposed project would generate a.b. approximately 13 additional residents (based on 3.15 persons per household) in the City of Morgan Hill.<sup>30</sup> Given the City's parkland goal of five acres per 1,000 residents, the proposed project's 13 additional residents would have a negligible effect on parkland demand. The City of Morgan Hill has adopted a Land Dedications and Reservations Ordinance (Municipal Code Chapter 17.28) that requires residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. If a park or recreational facility is not designated in the City's Bikeways, Trails, Parks and Recreation Master Plan to be located in whole or in part within the proposed subdivision to serve the immediate and future needs of the residents of the subdivision, the subdivision shall pay a fee equal to the value of the land prescribed for dedication per Section 17.28.060 of the Municipal Code. The proposed project does not include the dedication of any parkland to the City for recreational facilities and, therefore, the project applicant would pay in-lieu fees required per the Municipal Code. The park impact fees imposed by the City would generate revenue to acquire necessary land to develop new parks or rehabilitate existing neighborhood parks and recreation facilities reasonably related to serve the subdivision. Based on the above, a less-than-significant impact would occur with regard to recreational resources.

<sup>&</sup>lt;sup>30</sup> According to the persons per household demographic projection for Morgan Hill for the year 2015 (see Table 1-1 of City of Morgan Hill Housing Element, adopted February 18, 2015).

X\ Wa	<b>VII. TRANSPORTATION.</b> build the project:	Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			×	
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			×	
C.	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			*	
d.	Result in inadequate emergency access?			×	

a. The proposed project would include the construction of four single-family residences, as well as an internal roadway. Based on the trip generation rates included in CalEEMod, the proposed project would be anticipated to result in 38 average daily trips.

According to the City of Morgan Hill Guidelines for Preparation of Transportation Impact Reports, a transportation impact analysis is required for projects that add between 50 and 99 net new peak hour trips to the roadway system where nearby intersections are operating at LOS D or worse, or projected to operate at LOS D or worse with traffic added by approved developments, or when a project generates 100 or more net new peak hour trips (consistent with the Valley Transportation Authority [VTA] policy).

Due to the minimal increase in trips associated with the proposed project, the project does not require the preparation of a transportation impact report, and impacts to the surrounding roadway network would not result from the project. The proposed project is expected to generate four trips during AM peak hour, and four trips during PM peak hours. The addition of four trips during each peak hour would not result in a significant traffic impact.

The proposed project would provide a sidewalk along its internal roadway, Rose Orchard Lane. In addition, Rose Orchard Lane and Sabini Court are small, residential roads that are considered bikeable. Pursuant to the Bikeways, Trails, Parks and Recreation Master Plan, future bikeways and trails are not proposed in the immediate project vicinity. Thus, the proposed project would not conflict with any existing or planned pedestrian or bicycle facilities and would provide for improved connectivity in the project area. In addition, bus service is provided to the region by the Valley Transportation Authority (VTA), and the site is located approximately 0.8-mile southwest from the nearest bus stop, which is the Hale Avenue and Llagas Road bus stop. Thus, future project residents would have access to VTA transit services.

Based on the above, a *less-than-significant* impact would occur related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Pursuant to Section 15064.3 of the CEQA Guidelines, analysis of VMT attributable to a project is the most appropriate measure of transportation impacts. Other relevant considerations may include the effects of the project on transit
and non-motorized travel. It should be noted that currently, the provisions of Section 15064.3 apply only prospectively; determination of impacts based on VMT is not required Statewide until July 1, 2020.

Pursuant to Section 15064.3(3) of the CEQA Guidelines, a lead agency may analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving.

During operations, VMT would increase due to normal vehicle usage associated with the proposed residential land uses. Bus service is currently provided in the project region by the VTA, and the site is located approximately 0.8-mile southwest of the nearest bus stop. While marked bike lanes do not exist along Sabini Court, vehicle speeds along the street are relatively slow and the street is considered bikeable. Bike lanes and sidewalks do not exist along Llagas Road. The proposed project would include installation of new sidewalks along the Rose Orchard Lane. The availability of public transit, bicycle, and pedestrian infrastructure in the site vicinity is limited. However, considering the small project size and minimal daily vehicle trips, VMT is not anticipated to substantially increase due to implementation of the proposed project.

Pursuant to the Office of Planning and Research's Technical Advisory for SB 743, projects that generate fewer than 110 daily trips generally may be assumed to cause a less-than-significant impact. Because the project is expected to generate approximately 38 daily trips, and the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), a *less-than-significant* impact would occur.

- c. The proposed project would not include design features that would affect traffic safety, nor involve any incompatible uses. The project would involve the construction of a small internal roadway, Rose Orchard Lane, to connect the four proposed residences to Sabini Court. As such, the proposed project would not involve the creation any sharp turns or dangerous intersections. Significant adverse impacts related to roadway design features or incompatible uses would not result from implementation of the proposed project, and a *less-than-significant* would occur.
- d. During project construction, public roads in the vicinity would remain open and available for use by emergency vehicles and other traffic. The proposed project would construct an internal circulation road consistent with Title 19 Section 3.05 of the California Code of Regulations, which mandates right-of-way lanes not be less than 20 feet in width and fire/emergency access lanes be a minimum of 20 feet wide. Based on the site plan, Rose Orchard Lane would be 28-feet wide. Therefore, the proposed project would not result in inadequate emergency access to the project area, nor any road closures. The proposed project would include an on-site road of appropriate size to accommodate emergency vehicles, and a *less-than-significant* impact to emergency access would occur.

# XVIII.TRIBAL CULTURAL RESOURCES.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
		×	
		×	

## Discussion

a,b. As discussed in Section V, Cultural Resources, of this IS/MND, the project site does not contain any existing structures or any other known resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). In addition, the project site does not contain known resources that could be considered historic pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Ethnographic literature does not reference any Native American resources in or adjacent to the project area.

Based on the above, the proposed project is not expected to adversely impact tribal cultural resources. In addition, the project applicant would be required to comply with the City's standard conditions of approval related to cultural resource discovery, as presented in Section V of this IS/MND. Therefore, a *less-than-significant* impact to tribal cultural resources would occur.

#### XIX. UTILITIES AND SERVICE SYSTEMS.

#### Would the project:

- a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?
- c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Potentially Significant Impact	Significant Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
		×	
		×	
		×	
		*	
		×	

# **Discussion**

a-c. Brief discussions of the water, wastewater, stormwater drainage, electrical, natural gas, and telecommunications facilities that would serve the proposed project are included below.

## Water

The City of Morgan Hill provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. The City's water system facilities include 14 groundwater wells, 10 potable water storage tanks, 10 booster stations, and over 160 miles of pressured pipes ranging from two to 14 inches in diameter. The City's water distribution system meets the needs of existing customers. The City has planned and constructed water projects in conjunction with new street construction in anticipation of future growth and water needs.

According to the City's Urban Water Management Plan, the City's projected water supply far exceeds the water demand for normal, single-dry, and multiple-dry years until at least 2040.<sup>31</sup> For example, during a normal year in 2020, the anticipated supply exceeds the anticipated demand by 55,351 acre-feet per year. Given that the proposed project is consistent with the site's current land use and zoning designations, the type and intensity of growth that would be induced by the proposed project was generally considered in the General Plan. Therefore, the proposed project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, and sufficient water supplies would be available to serve the project from existing entitlements and resources.

<sup>&</sup>lt;sup>31</sup> City of Morgan Hill. 2015 Urban Water Management Plan [pg. 7-4 to 7-7]. 2016.

## Wastewater

The City of Morgan Hill sewer collection system consists of approximately 160 miles of gravity sewers, over 3,000 manholes, nearly 3 miles of force mains, and 14 lift stations. The sewer lines range in size from four inches to 30 inches in diameter and the piping system includes 26 siphons. The City's collection system moves the City's wastewater south to the South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Facility (WWTF) located in southern Gilroy. SCRWA is a joint powers authority formed by the cities of Morgan Hill and Gilroy to collectively treat the wastewater of both cities.<sup>32</sup> The City of Morgan Hill has an allocation of 3.56 million gallons per day (MGD) from the WWTF. The average dry weather flow from the City of Morgan Hill was approximately 2.7 MGD in 2015.<sup>33</sup>

The proposed project would connect to existing sewer lines located within the site vicinity. Based on the current and projected sewage flows associated with the WWTF, the incremental increase in wastewater generation associated with the development of the four proposed residences would not require the construction of new or expansion of existing wastewater treatment facilities, as adequate capacity is already sufficient to serve the proposed project. Furthermore, given that the project is consistent with the site's current General Plan land use and zoning designations, the type and intensity of growth that would be induced by the proposed project has been considered in the General Plan and associated wastewater generation has been analyzed in the General Plan EIR. The General Plan EIR determined that impacts related to wastewater treatment capacity would be less than significant.

## Stormwater

Issues related to stormwater infrastructure are discussed in Section X, Hydrology and Water Quality, of this IS/MND. As noted therein, the proposed project would include onsite bioretention basins and, therefore, would not significantly increase stormwater flows into the City's existing system. The final drainage system design for the project would be subject to review and approval by the City of Morgan Hill City Engineer to confirm that the proposed drainage system for the project is consistent with the City's Storm Drainage Master Plan. Therefore, the proposed project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

# Electricity, Natural Gas, and Telecommunications

Electricity would be provided by PG&E by way of existing electrical infrastructure in the project vicinity. Internet and telephone services would be provided by Frontier Communications, AT&T, Charter Communications, or a similar service provider operating within the City. The project would not require major upgrades to, or extension of, existing infrastructure. Thus, impacts to electricity and telecommunications infrastructure would be less than significant. The City prohibits the use of natural gas for new construction.

# Conclusion

Because the proposed project involves the development of four residences, the scale of the project is considered small, and water and sewer service demand would not be substantial. Sufficient water supplies would be available to serve the project and

<sup>&</sup>lt;sup>32</sup> City of Morgan Hill. City Council Staff Report 2163, Accept Report Regarding Wastewater System Needs and Rate Study Schedule. February 6, 2019.

<sup>&</sup>lt;sup>33</sup> City of Morgan Hill. 2035 General Plan Draft EIR. January 2016.

reasonably foreseeable future development during normal, dry, and multiple dry years. In addition, adequate wastewater capacity would be available to serve the project's projected demand in addition to the SCRWA's existing commitments. Furthermore, the project is located within a developed area and would not require major expansion or extension of existing water, wastewater, electrical, or telecommunications facilities in the project area.

Therefore, the proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater, electric power, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Accordingly, a *less-than-significant* impact would occur.

d,e. Recology South Valley provides solid waste and recycling services to the businesses and residents of the cities of Morgan Hill and Gilroy. Recology South Valley has contracted with the Salinas Valley Solid Waste Authority to dispose of municipal solid waste at Johnson Canyon Sanitary Landfill. Per the CalRecycle's SWIS Facility Details, the Landfill has a maximum permitted tonnage limit of 1,574 tons per day, a design capacity of 13,834,328 cubic yards, and an estimated closure date of 2055.<sup>34</sup> The proposed project would not produce enough solid waste for the landfill to exceed capacity. Therefore, sufficient permitted capacity exists at the Johnson Canyon Sanitary Landfill to accommodate the proposed project's incremental increase in solid waste disposal needs.

The proposed residences would involve the generation of typical solid waste types and would not require specialized solid waste disposal needs. Furthermore, per CBSC Section 4.408, the proposed project would be required to submit a Waste Management Plan to the City detailing on-site sorting of construction debris. Implementation of the Waste Management Plan would ensure that the proposed project meets established diversion requirements for reused or recycled construction waste. As such, the proposed project would comply with applicable federal, State, and local statutes and regulations related to solid waste. Therefore, the proposed project would have a *less-than-significant* impact related to solid waste.

<sup>&</sup>lt;sup>34</sup> California Department of Resources Recycling and Recovery (CalRecycle). Facility/Site Summary Details: Johnson Canyon Sanitary Landfill (27-AA-0005). Available at: https://www2.calrecycle.ca.gov/swfacilities/Directory/27-AA-0005. Accessed March 2020.

## XX. WILDFIRE.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- a. Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
		*	
		×	
		×	
		×	

# **Discussion**

a-d. According to the CAL FIRE's Fire Hazard Severity Zones Map for Morgan Hill, the project site is located within a Very High Fire Hazard Severity Zone.<sup>35</sup> As such, special precautions are required. Section 15.44.190 of the Municipal Code provides requirements and guidance for the development of structures within a Wildland-Urban Interface Area, including the preparation of a Fire Protection Plan to be reviewed and approved by the City. Item E of Section 15.44.190 reads:

The [Fire Protection] plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, defensible space and vegetation management, evacuation routes, peak load water supply requirements, and minimum road widths, as those items relate to identified fire hazards.

The Fire Protection Plan would ensure that wildfire risk would be substantially addressed and minimized to the extent feasible. In addition to the submittal and approval of the Fire Protection Plan, the project would be required to comply with all applicable requirements of the California Fire Code, as adopted by Chapter 15.44 of the City's Municipal Code, including installation of fire sprinkler systems.

As noted in Section IX, Hazards and Hazardous Materials, implementation of the proposed project would not result in any substantial modifications to the City's existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. The project would not conflict with the City's Emergency Operations Plan.<sup>36</sup> In addition, the project is not located on a substantial slope, and the project area does not include any existing features that would substantially increase fire risk for future residents. Lastly, as discussed in Section VII, Geology and Soils, and

<sup>&</sup>lt;sup>35</sup> California Department of Forestry & Fire Protection. *Fire and Resource Assessment Program Very High Fire Hazard Severity Zones in LRA: Morgan Hill.* October 9, 2008.

<sup>&</sup>lt;sup>36</sup> City of Morgan Hill. *Emergency Operations Plan.* January 11, 2018.

Section X, Hydrology and Water Quality, of this IS/MND, development of the proposed project would not expose people or structures to significant risks related to flooding or landslides.

The proposed project would be consistent with the land use and zoning designations for the site. Therefore, development of the site has been previously anticipated and analyzed in the General Plan EIR. The General Plan EIR concludes that compliance with the California Fire Code, CAL FIRE's 2012 Strategic Plan, California Code of Regulations (Section 2729), California Building Code, County of Santa Clara Injury and Illness Prevention Plan (Health and Safety Chapter), and Morgan Hill Municipal Code (Chapter 15.44) would ensure that impacts related to wildfire hazards would be less than significant.

Based on the above, regulations are in place to ensure that the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and a *less-than-significant* impact would occur.

# XXI. MANDATORY FINDINGS OF SIGNIFICANCE.

- a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

# Discussion

a. As discussed in Section IV, Biological Resources, of this IS/MND, while the potential exists for special-status birds and bats, as well as nesting birds protected by the MBTA, to occur on-site, Mitigation Measures IV-1 through IV-3 would ensure that impacts to special-status species would be less than significant. The project site has been previously disturbed due to its former use as an orchard, and does not contain any known historic or prehistoric resources. Thus, implementation of the proposed project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources. Nevertheless, standard requirements set forth in the Municipal Code would ensure that, in the event that historic or prehistoric resources are discovered within the project site during construction activities, such resources are protected in compliance with the requirements of CEQA.

Considering the above, the proposed project would not: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, a *less-than-significant* impact would occur.

b. As discussed in Section XI, Land Use and Planning, of this IS/MND, the proposed project would be consistent with the site's current General Plan land use and zoning designations. As such, the type and intensity of growth that would be induced by the proposed project were generally anticipated in the General Plan and associated cumulative environmental effects were analyzed in the General Plan EIR. Furthermore, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of the proposed project specific mitigation measures and compliance with General Plan policies and other applicable local, State, and federal regulations. When viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of

Potentially Significant Impact	Less-Than- Significant with Mitigation Incorporated	Less-Than- Significant Impact	No Impact
		×	
		×	
		×	

the proposed project would not contribute to cumulative impacts in the City of Morgan Hill, and the impact would be *less than significant.* 

c. As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, and other applicable local and State regulations. In addition, as discussed in Section III, Air Quality, Section VIII, Greenhouse Gas Emissions, Section IX, Hazards and Hazardous Materials, Section XIII, Noise, and Section XVII, Transportation, of this IS/MND, with implementation of all mitigation measures included herein, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutant and GHG emissions, hazardous materials, noise, and traffic. Therefore, the proposed project would result in a *less-than-significant* impact.

# Appendix A

Air Quality and Greenhouse Gas Modeling Results Page 1 of 32

Sabini Court - Bay Area AQMD Air District, Annual

# Sabini Court Bay Area AQMD Air District, Annual

# **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	4.00	Dwelling Unit	4.07	24,000.00	11
Other Asphalt Surfaces	0.41	Acre	0.41	17,859.60	0

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

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Ele	ectric Company			
CO2 Intensity (Ib/MWhr)	269.5	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

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

Project Characteristics - CO2 Intensity Factor adjusted to reflect the PG&E RPS projections for the operational year.

Land Use - Acreage and square footage were updated to represent the site plan.

Construction Phase - Architectural Coating timing adjusted to match building construction timing, to represent both phases happening concurrently

Grading - Total acres graded set to total project site

Energy Mitigation -

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Table Name	Column Name	Default Value	New Value				
tblConstructionPhase	NumDays	18.00	230.00				
tblConstructionPhase	PhaseEndDate	8/23/2021	7/14/2021				
tblConstructionPhase	PhaseEndDate	7/2/2021	6/30/2021				
tblConstructionPhase	PhaseEndDate	8/14/2020	7/17/2020				
tblConstructionPhase	PhaseEndDate	7/28/2021	8/12/2020				
tblConstructionPhase	PhaseEndDate	8/4/2020	7/7/2020				
tblConstructionPhase	PhaseStartDate	7/29/2021	8/27/2020				
tblConstructionPhase	PhaseStartDate	8/15/2020	8/13/2020				
tblConstructionPhase	PhaseStartDate	8/5/2020	7/8/2020				
tblConstructionPhase	PhaseStartDate	7/3/2021	7/18/2020				
tblConstructionPhase	PhaseStartDate	7/29/2020	7/1/2020				
tblGrading	AcresOfGrading	4.00	4.48				
tblGrading	MaterialImported	0.00	500.00				
tblLandUse	LandUseSquareFeet	7,200.00	24,000.00				
tblLandUse	LotAcreage	1.30	4.07				
tblProjectCharacteristics	CO2IntensityFactor	641.35	269.5				
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural				
tblTripsAndVMT	HaulingTripNumber	63.00	62.00				

# 2.0 Emissions Summary

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## 2.1 Overall Construction

# **Unmitigated Construction**

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					ton	s/yr							МТ	/yr		
2020	0.2211	1.3910	1.1891	2.0000e- 003	0.0796	0.0781	0.1577	0.0405	0.0734	0.1139	0.0000	173.8823	173.8823	0.0406	0.0000	174.8972
2021	0.2450	1.2514	1.2164	2.0400e- 003	6.8300e- 003	0.0685	0.0753	1.8400e- 003	0.0647	0.0666	0.0000	176.5888	176.5888	0.0376	0.0000	177.5290
Maximum	0.2450	1.3910	1.2164	2.0400e- 003	0.0796	0.0781	0.1577	0.0405	0.0734	0.1139	0.0000	176.5888	176.5888	0.0406	0.0000	177.5290

## Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					tor	MT/yr										
2020	0.2211	1.3910	1.1891	2.0000e- 003	0.0796	0.0781	0.1577	0.0405	0.0734	0.1139	0.0000	173.8821	173.8821	0.0406	0.0000	174.8970
2021	0.2450	1.2514	1.2164	2.0400e- 003	6.8300e- 003	0.0685	0.0753	1.8400e- 003	0.0647	0.0666	0.0000	176.5886	176.5886	0.0376	0.0000	177.5288
Maximum	0.2450	1.3910	1.2164	2.0400e- 003	0.0796	0.0781	0.1577	0.0405	0.0734	0.1139	0.0000	176.5886	176.5886	0.0406	0.0000	177.5288
	ROG	NOx	СО	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
					PIVITO	PIVITU	Total	PIVI2.5	PIVIZ.5	Total						
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CalEEMod Version: CalEEMod.2016.3.2

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.7726	0.7726
2	10-1-2020	12-31-2020	0.8261	0.8261
3	1-1-2021	3-31-2021	0.7377	0.7377
4	4-1-2021	6-30-2021	0.7456	0.7456
5	7-1-2021	9-30-2021	0.0163	0.0163
		Highest	0.8261	0.8261

# 2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton			MT	ī/yr							
Area	0.1366	8.6000e- 004	0.0640	7.0000e- 005		5.1100e- 003	5.1100e- 003		5.1100e- 003	5.1100e- 003	0.5084	0.1734	0.6818	1.0100e- 003	3.0000e- 005	0.7157
Energy	6.3000e- 004	5.3600e- 003	2.2800e- 003	3.0000e- 005		4.3000e- 004	4.3000e- 004	, , ,	4.3000e- 004	4.3000e- 004	0.0000	10.1602	10.1602	5.4000e- 004	2.0000e- 004	10.2339
Mobile	9.3800e- 003	0.0461	0.1052	3.8000e- 004	0.0325	3.4000e- 004	0.0328	8.7200e- 003	3.2000e- 004	9.0400e- 003	0.0000	34.4976	34.4976	1.2700e- 003	0.0000	34.5294
Waste						0.0000	0.0000		0.0000	0.0000	0.9378	0.0000	0.9378	0.0554	0.0000	2.3234
Water	n					0.0000	0.0000		0.0000	0.0000	0.0827	0.2427	0.3254	8.5200e- 003	2.1000e- 004	0.5997
Total	0.1466	0.0524	0.1715	4.8000e- 004	0.0325	5.8800e- 003	0.0384	8.7200e- 003	5.8600e- 003	0.0146	1.5289	45.0738	46.6028	0.0668	4.4000e- 004	48.4021

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# Sabini Court - Bay Area AQMD Air District, Annual

# 2.2 Overall Operational

# Mitigated Operational

	ROG	NC	Dx	CO		SO2	Fugi PM	tive 10	Exhaust PM10	PM10 Tota	0 Fu II F	ugitive M2.5	Exhau PM2	ust 2.5	PM2.5 Tot	al Bi	o- CO2	NBio- C	D2 Tot	al CO2	CH	4	N2O	CO	2e
Category	tons/yr										MT/yr														
Area	0.1366	8.600 00	00e- 4	0.064	0	7.0000e- 005			5.1100e- 003	5.1100 003	)e-		5.110 003	0e- 3	5.1100e- 003		).5084	0.1734	l 0.	6818	1.010 003	0e- 3	3.0000e- 005	0.71	57
Energy	5.9000e- 004	5.020 00	00e- 3	2.1400 003	le-	3.0000e- 005			4.1000e- 004	4.1000 004	)e-		4.100 004	0e- 4	4.1000e- 004	C	0.0000	5.8170	) 5.	8170	1.100 004	0e- 1	1.1000e- 004	5.85	515
Mobile	9.3800e- 003	0.04	61	0.105	2	3.8000e- 004	0.03	325	3.4000e- 004	0.032	28 8.1	7200e- 003	3.200 004	0e- 4	9.0400e- 003	C	0.0000	34.497	6 34	.4976	1.270 003	0e- 3	0.0000	34.5	294
Waste	n	 - - - -							0.0000	0.000	00		0.000	00	0.0000	C	).9378	0.0000	) 0.	9378	0.05	54	0.0000	2.32	234
Water	r,	, , , ,					 - - - -		0.0000	0.000	00		0.000	00	0.0000	C	).0827	0.2427	<b>'</b> 0.	3254	8.520 003	0e- 2 3	2.1000e- 004	0.59	97
Total	0.1466	0.05	520	0.171	4	4.8000e- 004	0.03	325	5.8600e- 003	0.038	33 8.7	7200e- 003	5.840 003	0e- 3	0.0146	1	.5289	40.730	6 42	.2595	0.06	63 3	3.5000e- 004	44.0	197
	ROG		NO	Dx	со	) S	02	Fugi PN	itive Ex 110 F	haust M10	PM10 Total	Fug PN	itive 12.5	Exha PM	aust Pl 2.5 T	A2.5 otal	Bio- (	CO2 NE	lio-CO2	Total	CO2	CH4	N	20	CO2e
Percent Reduction	0.03		0.6	55	0.08	8 0	.00	0.	00	).34	0.05	0.	.00	0.	34 (	.14	0.0	0	9.64	9.3	32	0.64	20	.45	9.05

# 3.0 Construction Detail

**Construction Phase** 

CalEEMod Version: CalEEMod.2016.3.2

#### Sabini Court - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/7/2020	5	5	
2	Grading	Grading	7/8/2020	7/17/2020	5	8	
3	Paving	Paving	7/18/2020	8/12/2020	5	18	
4	Building Construction	Building Construction	8/13/2020	6/30/2021	5	230	
5	Architectural Coating	Architectural Coating	8/27/2020	7/14/2021	5	230	

#### Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.48

#### Acres of Paving: 0.41

Residential Indoor: 48,600; Residential Outdoor: 16,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,072 (Architectural Coating – sqft)

#### OffRoad Equipment

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# Sabini Court - Bay Area AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

# Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	62.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	9.00	3.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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#### Sabini Court - Bay Area AQMD Air District, Annual

# **3.1 Mitigation Measures Construction**

# 3.2 Site Preparation - 2020

# Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e- 004		5.4900e- 003	5.4900e- 003		5.0500e- 003	5.0500e- 003	0.0000	8.3577	8.3577	2.7000e- 003	0.0000	8.4253
Total	0.0102	0.1060	0.0538	1.0000e- 004	0.0452	5.4900e- 003	0.0507	0.0248	5.0500e- 003	0.0299	0.0000	8.3577	8.3577	2.7000e- 003	0.0000	8.4253

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# 3.2 Site Preparation - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e- 004	1.1000e- 004	1.1100e- 003	0.0000	3.6000e- 004	0.0000	3.6000e- 004	9.0000e- 005	0.0000	1.0000e- 004	0.0000	0.3115	0.3115	1.0000e- 005	0.0000	0.3117
Total	1.5000e- 004	1.1000e- 004	1.1100e- 003	0.0000	3.6000e- 004	0.0000	3.6000e- 004	9.0000e- 005	0.0000	1.0000e- 004	0.0000	0.3115	0.3115	1.0000e- 005	0.0000	0.3117

# Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust			1 1 1		0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e- 004		5.4900e- 003	5.4900e- 003		5.0500e- 003	5.0500e- 003	0.0000	8.3577	8.3577	2.7000e- 003	0.0000	8.4252
Total	0.0102	0.1060	0.0538	1.0000e- 004	0.0452	5.4900e- 003	0.0507	0.0248	5.0500e- 003	0.0299	0.0000	8.3577	8.3577	2.7000e- 003	0.0000	8.4252

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# 3.2 Site Preparation - 2020

# Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e- 004	1.1000e- 004	1.1100e- 003	0.0000	3.6000e- 004	0.0000	3.6000e- 004	9.0000e- 005	0.0000	1.0000e- 004	0.0000	0.3115	0.3115	1.0000e- 005	0.0000	0.3117
Total	1.5000e- 004	1.1000e- 004	1.1100e- 003	0.0000	3.6000e- 004	0.0000	3.6000e- 004	9.0000e- 005	0.0000	1.0000e- 004	0.0000	0.3115	0.3115	1.0000e- 005	0.0000	0.3117

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust					0.0265	0.0000	0.0265	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e- 003	0.1055	0.0642	1.2000e- 004		5.0900e- 003	5.0900e- 003		4.6900e- 003	4.6900e- 003	0.0000	10.4235	10.4235	3.3700e- 003	0.0000	10.5078
Total	9.7200e- 003	0.1055	0.0642	1.2000e- 004	0.0265	5.0900e- 003	0.0316	0.0135	4.6900e- 003	0.0182	0.0000	10.4235	10.4235	3.3700e- 003	0.0000	10.5078

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# 3.3 Grading - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	2.6000e- 004	9.0600e- 003	1.8200e- 003	2.0000e- 005	5.2000e- 004	3.0000e- 005	5.5000e- 004	1.4000e- 004	3.0000e- 005	1.7000e- 004	0.0000	2.3758	2.3758	1.2000e- 004	0.0000	2.3788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 004	1.4000e- 004	1.4700e- 003	0.0000	4.7000e- 004	0.0000	4.8000e- 004	1.3000e- 004	0.0000	1.3000e- 004	0.0000	0.4154	0.4154	1.0000e- 005	0.0000	0.4156
Total	4.6000e- 004	9.2000e- 003	3.2900e- 003	2.0000e- 005	9.9000e- 004	3.0000e- 005	1.0300e- 003	2.7000e- 004	3.0000e- 005	3.0000e- 004	0.0000	2.7911	2.7911	1.3000e- 004	0.0000	2.7944

# Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Fugitive Dust		1 1 1			0.0265	0.0000	0.0265	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e- 003	0.1055	0.0642	1.2000e- 004		5.0900e- 003	5.0900e- 003		4.6900e- 003	4.6900e- 003	0.0000	10.4235	10.4235	3.3700e- 003	0.0000	10.5078
Total	9.7200e- 003	0.1055	0.0642	1.2000e- 004	0.0265	5.0900e- 003	0.0316	0.0135	4.6900e- 003	0.0182	0.0000	10.4235	10.4235	3.3700e- 003	0.0000	10.5078

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# 3.3 Grading - 2020

## Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	2.6000e- 004	9.0600e- 003	1.8200e- 003	2.0000e- 005	5.2000e- 004	3.0000e- 005	5.5000e- 004	1.4000e- 004	3.0000e- 005	1.7000e- 004	0.0000	2.3758	2.3758	1.2000e- 004	0.0000	2.3788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e- 004	1.4000e- 004	1.4700e- 003	0.0000	4.7000e- 004	0.0000	4.8000e- 004	1.3000e- 004	0.0000	1.3000e- 004	0.0000	0.4154	0.4154	1.0000e- 005	0.0000	0.4156
Total	4.6000e- 004	9.2000e- 003	3.2900e- 003	2.0000e- 005	9.9000e- 004	3.0000e- 005	1.0300e- 003	2.7000e- 004	3.0000e- 005	3.0000e- 004	0.0000	2.7911	2.7911	1.3000e- 004	0.0000	2.7944

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0107	0.1062	0.1105	1.7000e- 004		5.8600e- 003	5.8600e- 003		5.4000e- 003	5.4000e- 003	0.0000	14.7348	14.7348	4.6300e- 003	0.0000	14.8506
Paving	5.4000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0112	0.1062	0.1105	1.7000e- 004		5.8600e- 003	5.8600e- 003		5.4000e- 003	5.4000e- 003	0.0000	14.7348	14.7348	4.6300e- 003	0.0000	14.8506

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# 3.4 Paving - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e- 004	4.3000e- 004	4.4200e- 003	1.0000e- 005	1.4200e- 003	1.0000e- 005	1.4300e- 003	3.8000e- 004	1.0000e- 005	3.9000e- 004	0.0000	1.2461	1.2461	3.0000e- 005	0.0000	1.2469
Total	6.0000e- 004	4.3000e- 004	4.4200e- 003	1.0000e- 005	1.4200e- 003	1.0000e- 005	1.4300e- 003	3.8000e- 004	1.0000e- 005	3.9000e- 004	0.0000	1.2461	1.2461	3.0000e- 005	0.0000	1.2469

# Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.0107	0.1062	0.1105	1.7000e- 004		5.8600e- 003	5.8600e- 003		5.4000e- 003	5.4000e- 003	0.0000	14.7348	14.7348	4.6300e- 003	0.0000	14.8506
Paving	5.4000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0112	0.1062	0.1105	1.7000e- 004		5.8600e- 003	5.8600e- 003		5.4000e- 003	5.4000e- 003	0.0000	14.7348	14.7348	4.6300e- 003	0.0000	14.8506

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# 3.4 Paving - 2020

## Mitigated Construction Off-Site

	ROG	NOx	co	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e- 004	4.3000e- 004	4.4200e- 003	1.0000e- 005	1.4200e- 003	1.0000e- 005	1.4300e- 003	3.8000e- 004	1.0000e- 005	3.9000e- 004	0.0000	1.2461	1.2461	3.0000e- 005	0.0000	1.2469
Total	6.0000e- 004	4.3000e- 004	4.4200e- 003	1.0000e- 005	1.4200e- 003	1.0000e- 005	1.4300e- 003	3.8000e- 004	1.0000e- 005	3.9000e- 004	0.0000	1.2461	1.2461	3.0000e- 005	0.0000	1.2469

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Off-Road	0.1071	0.9689	0.8509	1.3600e- 003		0.0564	0.0564		0.0530	0.0530	0.0000	116.9630	116.9630	0.0285	0.0000	117.6764
Total	0.1071	0.9689	0.8509	1.3600e- 003		0.0564	0.0564		0.0530	0.0530	0.0000	116.9630	116.9630	0.0285	0.0000	117.6764

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# 3.5 Building Construction - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e- 004	0.0167	4.2000e- 003	4.0000e- 005	9.0000e- 004	8.0000e- 005	9.8000e- 004	2.6000e- 004	7.0000e- 005	3.3000e- 004	0.0000	3.6608	3.6608	2.0000e- 004	0.0000	3.6658
Worker	1.5100e- 003	1.0800e- 003	0.0112	3.0000e- 005	3.5900e- 003	2.0000e- 005	3.6200e- 003	9.6000e- 004	2.0000e- 005	9.8000e- 004	0.0000	3.1464	3.1464	8.0000e- 005	0.0000	3.1483
Total	2.0600e- 003	0.0178	0.0154	7.0000e- 005	4.4900e- 003	1.0000e- 004	4.6000e- 003	1.2200e- 003	9.0000e- 005	1.3100e- 003	0.0000	6.8072	6.8072	2.8000e- 004	0.0000	6.8141

# Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	'/yr		
Off-Road	0.1071	0.9689	0.8509	1.3600e- 003		0.0564	0.0564		0.0530	0.0530	0.0000	116.9629	116.9629	0.0285	0.0000	117.6763
Total	0.1071	0.9689	0.8509	1.3600e- 003		0.0564	0.0564		0.0530	0.0530	0.0000	116.9629	116.9629	0.0285	0.0000	117.6763

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# 3.5 Building Construction - 2020

# Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.5000e- 004	0.0167	4.2000e- 003	4.0000e- 005	9.0000e- 004	8.0000e- 005	9.8000e- 004	2.6000e- 004	7.0000e- 005	3.3000e- 004	0.0000	3.6608	3.6608	2.0000e- 004	0.0000	3.6658
Worker	1.5100e- 003	1.0800e- 003	0.0112	3.0000e- 005	3.5900e- 003	2.0000e- 005	3.6200e- 003	9.6000e- 004	2.0000e- 005	9.8000e- 004	0.0000	3.1464	3.1464	8.0000e- 005	0.0000	3.1483
Total	2.0600e- 003	0.0178	0.0154	7.0000e- 005	4.4900e- 003	1.0000e- 004	4.6000e- 003	1.2200e- 003	9.0000e- 005	1.3100e- 003	0.0000	6.8072	6.8072	2.8000e- 004	0.0000	6.8141

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons	s/yr							MT	/yr		
Off-Road	0.1226	1.1244	1.0691	1.7400e- 003		0.0618	0.0618		0.0581	0.0581	0.0000	149.4060	149.4060	0.0361	0.0000	150.3072
Total	0.1226	1.1244	1.0691	1.7400e- 003		0.0618	0.0618		0.0581	0.0581	0.0000	149.4060	149.4060	0.0361	0.0000	150.3072

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# 3.5 Building Construction - 2021

# Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e- 004	0.0194	4.8300e- 003	5.0000e- 005	1.1500e- 003	4.0000e- 005	1.1900e- 003	3.3000e- 004	4.0000e- 005	3.7000e- 004	0.0000	4.6314	4.6314	2.4000e- 004	0.0000	4.6374
Worker	1.7800e- 003	1.2300e- 003	0.0130	4.0000e- 005	4.5900e- 003	3.0000e- 005	4.6200e- 003	1.2200e- 003	3.0000e- 005	1.2500e- 003	0.0000	3.8777	3.8777	9.0000e- 005	0.0000	3.8799
Total	2.3600e- 003	0.0206	0.0179	9.0000e- 005	5.7400e- 003	7.0000e- 005	5.8100e- 003	1.5500e- 003	7.0000e- 005	1.6200e- 003	0.0000	8.5091	8.5091	3.3000e- 004	0.0000	8.5172

# Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	'/yr		
Off-Road	0.1226	1.1244	1.0691	1.7400e- 003		0.0618	0.0618		0.0581	0.0581	0.0000	149.4059	149.4059	0.0361	0.0000	150.3070
Total	0.1226	1.1244	1.0691	1.7400e- 003		0.0618	0.0618	· · · · · · · · · · · · · · · · · · ·	0.0581	0.0581	0.0000	149.4059	149.4059	0.0361	0.0000	150.3070

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# 3.5 Building Construction - 2021

# Mitigated Construction Off-Site

	ROG	NOx	co	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.8000e- 004	0.0194	4.8300e- 003	5.0000e- 005	1.1500e- 003	4.0000e- 005	1.1900e- 003	3.3000e- 004	4.0000e- 005	3.7000e- 004	0.0000	4.6314	4.6314	2.4000e- 004	0.0000	4.6374
Worker	1.7800e- 003	1.2300e- 003	0.0130	4.0000e- 005	4.5900e- 003	3.0000e- 005	4.6200e- 003	1.2200e- 003	3.0000e- 005	1.2500e- 003	0.0000	3.8777	3.8777	9.0000e- 005	0.0000	3.8799
Total	2.3600e- 003	0.0206	0.0179	9.0000e- 005	5.7400e- 003	7.0000e- 005	5.8100e- 003	1.5500e- 003	7.0000e- 005	1.6200e- 003	0.0000	8.5091	8.5091	3.3000e- 004	0.0000	8.5172

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	0.0683					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0766	0.0833	1.4000e- 004		5.0500e- 003	5.0500e- 003		5.0500e- 003	5.0500e- 003	0.0000	11.6173	11.6173	9.0000e- 004	0.0000	11.6398
Total	0.0793	0.0766	0.0833	1.4000e- 004		5.0500e- 003	5.0500e- 003		5.0500e- 003	5.0500e- 003	0.0000	11.6173	11.6173	9.0000e- 004	0.0000	11.6398

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# 3.6 Architectural Coating - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e- 004	2.2000e- 004	2.2400e- 003	1.0000e- 005	7.2000e- 004	0.0000	7.2000e- 004	1.9000e- 004	0.0000	2.0000e- 004	0.0000	0.6300	0.6300	2.0000e- 005	0.0000	0.6304
Total	3.0000e- 004	2.2000e- 004	2.2400e- 003	1.0000e- 005	7.2000e- 004	0.0000	7.2000e- 004	1.9000e- 004	0.0000	2.0000e- 004	0.0000	0.6300	0.6300	2.0000e- 005	0.0000	0.6304

# Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Archit. Coating	0.0683	1 1 1				0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0766	0.0833	1.4000e- 004		5.0500e- 003	5.0500e- 003		5.0500e- 003	5.0500e- 003	0.0000	11.6173	11.6173	9.0000e- 004	0.0000	11.6398
Total	0.0793	0.0766	0.0833	1.4000e- 004		5.0500e- 003	5.0500e- 003		5.0500e- 003	5.0500e- 003	0.0000	11.6173	11.6173	9.0000e- 004	0.0000	11.6398

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# 3.6 Architectural Coating - 2020

# Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e- 004	2.2000e- 004	2.2400e- 003	1.0000e- 005	7.2000e- 004	0.0000	7.2000e- 004	1.9000e- 004	0.0000	2.0000e- 004	0.0000	0.6300	0.6300	2.0000e- 005	0.0000	0.6304
Total	3.0000e- 004	2.2000e- 004	2.2400e- 003	1.0000e- 005	7.2000e- 004	0.0000	7.2000e- 004	1.9000e- 004	0.0000	2.0000e- 004	0.0000	0.6300	0.6300	2.0000e- 005	0.0000	0.6304

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.1044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1061	0.1263	2.1000e- 004		6.5400e- 003	6.5400e- 003		6.5400e- 003	6.5400e- 003	0.0000	17.7451	17.7451	1.2200e- 003	0.0000	17.7756
Total	0.1196	0.1061	0.1263	2.1000e- 004		6.5400e- 003	6.5400e- 003		6.5400e- 003	6.5400e- 003	0.0000	17.7451	17.7451	1.2200e- 003	0.0000	17.7756

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# Sabini Court - Bay Area AQMD Air District, Annual

# 3.6 Architectural Coating - 2021

# Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e- 004	2.9000e- 004	3.1200e- 003	1.0000e- 005	1.1000e- 003	1.0000e- 005	1.1100e- 003	2.9000e- 004	1.0000e- 005	3.0000e- 004	0.0000	0.9285	0.9285	2.0000e- 005	0.0000	0.9290
Total	4.3000e- 004	2.9000e- 004	3.1200e- 003	1.0000e- 005	1.1000e- 003	1.0000e- 005	1.1100e- 003	2.9000e- 004	1.0000e- 005	3.0000e- 004	0.0000	0.9285	0.9285	2.0000e- 005	0.0000	0.9290

# Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Archit. Coating	0.1044					0.0000	0.0000	, , ,	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1061	0.1263	2.1000e- 004		6.5400e- 003	6.5400e- 003		6.5400e- 003	6.5400e- 003	0.0000	17.7451	17.7451	1.2200e- 003	0.0000	17.7755
Total	0.1196	0.1061	0.1263	2.1000e- 004		6.5400e- 003	6.5400e- 003		6.5400e- 003	6.5400e- 003	0.0000	17.7451	17.7451	1.2200e- 003	0.0000	17.7755

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#### Sabini Court - Bay Area AQMD Air District, Annual

# 3.6 Architectural Coating - 2021

# Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e- 004	2.9000e- 004	3.1200e- 003	1.0000e- 005	1.1000e- 003	1.0000e- 005	1.1100e- 003	2.9000e- 004	1.0000e- 005	3.0000e- 004	0.0000	0.9285	0.9285	2.0000e- 005	0.0000	0.9290
Total	4.3000e- 004	2.9000e- 004	3.1200e- 003	1.0000e- 005	1.1000e- 003	1.0000e- 005	1.1100e- 003	2.9000e- 004	1.0000e- 005	3.0000e- 004	0.0000	0.9285	0.9285	2.0000e- 005	0.0000	0.9290

# 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

# Sabini Court - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Mitigated	9.3800e- 003	0.0461	0.1052	3.8000e- 004	0.0325	3.4000e- 004	0.0328	8.7200e- 003	3.2000e- 004	9.0400e- 003	0.0000	34.4976	34.4976	1.2700e- 003	0.0000	34.5294
Unmitigated	9.3800e- 003	0.0461	0.1052	3.8000e- 004	0.0325	3.4000e- 004	0.0328	8.7200e- 003	3.2000e- 004	9.0400e- 003	0.0000	34.4976	34.4976	1.2700e- 003	0.0000	34.5294

# 4.2 Trip Summary Information

	Aver	rage Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	38.08	39.64	34.48	87,277	87,277
Total	38.08	39.64	34.48	87,277	87,277

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

# 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768
Single Family Housing	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768

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#### Sabini Court - Bay Area AQMD Air District, Annual

# 5.0 Energy Detail

Historical Energy Use: N

# 5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							MT	/yr		
Electricity Mitigated				, , ,		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated	n		, , , , ,			0.0000	0.0000		0.0000	0.0000	0.0000	3.9561	3.9561	4.3000e- 004	9.0000e- 005	3.9930
NaturalGas Mitigated	5.9000e- 004	5.0200e- 003	2.1400e- 003	3.0000e- 005		4.1000e- 004	4.1000e- 004		4.1000e- 004	4.1000e- 004	0.0000	5.8170	5.8170	1.1000e- 004	1.1000e- 004	5.8515
NaturalGas Unmitigated	6.3000e- 004	5.3600e- 003	2.2800e- 003	3.0000e- 005		4.3000e- 004	4.3000e- 004		4.3000e- 004	4.3000e- 004	0.0000	6.2041	6.2041	1.2000e- 004	1.1000e- 004	6.2410

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# 5.2 Energy by Land Use - NaturalGas

# <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							МТ	/yr		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	116260	6.3000e- 004	5.3600e- 003	2.2800e- 003	3.0000e- 005		4.3000e- 004	4.3000e- 004		4.3000e- 004	4.3000e- 004	0.0000	6.2041	6.2041	1.2000e- 004	1.1000e- 004	6.2410
Total		6.3000e- 004	5.3600e- 003	2.2800e- 003	3.0000e- 005		4.3000e- 004	4.3000e- 004		4.3000e- 004	4.3000e- 004	0.0000	6.2041	6.2041	1.2000e- 004	1.1000e- 004	6.2410

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					ton	s/yr							МТ	/yr		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	1 1 1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	109006	5.9000e- 004	5.0200e- 003	2.1400e- 003	3.0000e- 005		4.1000e- 004	4.1000e- 004		4.1000e- 004	4.1000e- 004	0.0000	5.8170	5.8170	1.1000e- 004	1.1000e- 004	5.8515
Total		5.9000e- 004	5.0200e- 003	2.1400e- 003	3.0000e- 005		4.1000e- 004	4.1000e- 004		4.1000e- 004	4.1000e- 004	0.0000	5.8170	5.8170	1.1000e- 004	1.1000e- 004	5.8515

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#### Sabini Court - Bay Area AQMD Air District, Annual

# 5.3 Energy by Land Use - Electricity

# <u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		/yr		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	32362.3	3.9561	4.3000e- 004	9.0000e- 005	3.9930
Total		3.9561	4.3000e- 004	9.0000e- 005	3.9930

#### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		МТ	/yr	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

# 6.0 Area Detail

6.1 Mitigation Measures Area
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#### Sabini Court - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Mitigated	0.1366	8.6000e- 004	0.0640	7.0000e- 005		5.1100e- 003	5.1100e- 003		5.1100e- 003	5.1100e- 003	0.5084	0.1734	0.6818	1.0100e- 003	3.0000e- 005	0.7157
Unmitigated	0.1366	8.6000e- 004	0.0640	7.0000e- 005		5.1100e- 003	5.1100e- 003	 , , ,	5.1100e- 003	5.1100e- 003	0.5084	0.1734	0.6818	1.0100e- 003	3.0000e- 005	0.7157

# 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							МТ	/yr		
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0236	5.2000e- 004	0.0343	7.0000e- 005		4.9400e- 003	4.9400e- 003		4.9400e- 003	4.9400e- 003	0.5084	0.1248	0.6333	9.6000e- 004	3.0000e- 005	0.6660
Landscaping	9.0000e- 004	3.4000e- 004	0.0297	0.0000		1.6000e- 004	1.6000e- 004		1.6000e- 004	1.6000e- 004	0.0000	0.0485	0.0485	5.0000e- 005	0.0000	0.0497
Total	0.1366	8.6000e- 004	0.0640	7.0000e- 005		5.1000e- 003	5.1000e- 003		5.1000e- 003	5.1000e- 003	0.5084	0.1734	0.6818	1.0100e- 003	3.0000e- 005	0.7157

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#### 6.2 Area by SubCategory

#### Mitigated

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					ton	s/yr							MT	ī/yr		
Architectural Coating	0.0173					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0949					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0236	5.2000e- 004	0.0343	7.0000e- 005		4.9400e- 003	4.9400e- 003		4.9400e- 003	4.9400e- 003	0.5084	0.1248	0.6333	9.6000e- 004	3.0000e- 005	0.6660
Landscaping	9.0000e- 004	3.4000e- 004	0.0297	0.0000		1.6000e- 004	1.6000e- 004		1.6000e- 004	1.6000e- 004	0.0000	0.0485	0.0485	5.0000e- 005	0.0000	0.0497
Total	0.1366	8.6000e- 004	0.0640	7.0000e- 005		5.1000e- 003	5.1000e- 003		5.1000e- 003	5.1000e- 003	0.5084	0.1734	0.6818	1.0100e- 003	3.0000e- 005	0.7157

# 7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category		МТ	/yr	
Mitigated	0.3254	8.5200e- 003	2.1000e- 004	0.5997
Unmitigated	0.3254	8.5200e- 003	2.1000e- 004	0.5997

# 7.2 Water by Land Use

#### <u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	/yr	
Other Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.260616/ 0.164301	0.3254	8.5200e- 003	2.1000e- 004	0.5997
Total		0.3254	8.5200e- 003	2.1000e- 004	0.5997

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#### Sabini Court - Bay Area AQMD Air District, Annual

#### 7.2 Water by Land Use

#### Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		MT	/yr	
Other Asphalt Surfaces	0/0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.260616/ 0.164301	0.3254	8.5200e- 003	2.1000e- 004	0.5997
Total		0.3254	8.5200e- 003	2.1000e- 004	0.5997

# 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

### Category/Year

	Total CO2	CH4	N2O	CO2e				
	MT/yr							
Mitigated	0.9378	0.0554	0.0000	2.3234				
Unmitigated	0.9378	0.0554	0.0000	2.3234				

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#### Sabini Court - Bay Area AQMD Air District, Annual

#### 8.2 Waste by Land Use

### <u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		MT	/yr	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.62	0.9378	0.0554	0.0000	2.3234
Total		0.9378	0.0554	0.0000	2.3234

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	/yr	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	4.62	0.9378	0.0554	0.0000	2.3234
Total		0.9378	0.0554	0.0000	2.3234

# 9.0 Operational Offroad

Hours/Day

### Sabini Court - Bay Area AQMD Air District, Annual

# **10.0 Stationary Equipment**

### Fire Pumps and Emergency Generators

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

#### Boilers

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

#### User Defined Equipment

Equipment Type	Number

# 11.0 Vegetation

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Sabini Court - Bay Area AQMD Air District, Summer

# Sabini Court

#### Bay Area AQMD Air District, Summer

#### **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	4.00	Dwelling Unit	4.07	24,000.00	11
Other Asphalt Surfaces	0.41	Acre	0.41	17,859.60	0

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

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Ele	ctric Company			
CO2 Intensity (Ib/MWhr)	269.5	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

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

Project Characteristics - CO2 Intensity Factor adjusted to reflect the PG&E RPS projections for the operational year.

Land Use - Acreage and square footage were updated to represent the site plan.

Construction Phase - Architectural Coating timing adjusted to match building construction timing, to represent both phases happening concurrently

Grading - Total acres graded set to total project site

Energy Mitigation -

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#### Sabini Court - Bay Area AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	PhaseEndDate	8/23/2021	7/14/2021
tblConstructionPhase	PhaseEndDate	7/2/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	8/14/2020	7/17/2020
tblConstructionPhase	PhaseEndDate	7/28/2021	8/12/2020
tblConstructionPhase	PhaseEndDate	8/4/2020	7/7/2020
tblConstructionPhase	PhaseStartDate	7/29/2021	8/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	8/13/2020
tblConstructionPhase	PhaseStartDate	8/5/2020	7/8/2020
tblConstructionPhase	PhaseStartDate	7/3/2021	7/18/2020
tblConstructionPhase	PhaseStartDate	7/29/2020	7/1/2020
tblGrading	AcresOfGrading	4.00	4.48
tblGrading	MaterialImported	0.00	500.00
tblLandUse	LandUseSquareFeet	7,200.00	24,000.00
tblLandUse	LotAcreage	1.30	4.07
tblProjectCharacteristics	CO2IntensityFactor	641.35	269.5
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	63.00	62.00

# 2.0 Emissions Summary

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 2.1 Overall Construction (Maximum Daily Emission)

#### **Unmitigated Construction**

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year					lb/e	day							lb/c	lay		
2020	4.1390	42.4552	21.9966	0.0395	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,832.841 3	3,832.841 3	1.1954	0.0000	3,862.726 3
2021	3.6655	19.2771	18.7327	0.0315	0.1087	1.0539	1.1626	0.0293	0.9965	1.0258	0.0000	3,002.003 1	3,002.003 1	0.6412	0.0000	3,018.032 8
Maximum	4.1390	42.4552	21.9966	0.0395	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,832.841 3	3,832.841 3	1.1954	0.0000	3,862.726 3

#### Mitigated Construction

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Tota	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Year												lb/day						
2020	4.1390	42.4552	21.9966	0.0395	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,832.841 3	3,832.841 3	1.1954	0.0000	3,862.726 3		
2021	3.6655	19.2771	18.7327	0.0315	0.1087	1.0539	1.1626	0.0293	0.9965	1.0258	0.0000	3,002.003 1	3,002.003 1	0.6412	0.0000	3,018.032 8		
Maximum	4.1390	42.4552	21.9966	0.0395	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,832.841 3	3,832.841 3	1.1954	0.0000	3,862.726 3		
	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e		
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category		lb/day											lb/c	day		
Area	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Energy	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958
Mobile	0.0619	0.2581	0.6302	2.2900e- 003	0.1945	1.9600e- 003	0.1965	0.0520	1.8400e- 003	0.0539		231.9034	231.9034	8.1300e- 003		232.1067
Total	4.8352	0.3711	6.3343	0.0126	0.1945	0.7643	0.9588	0.0520	0.7641	0.8162	81.5134	294.6767	376.1900	0.1102	6.4400e- 003	380.8641

#### Mitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category		lb/day											lb/c	day		
Area	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Energy	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003	,	2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
Mobile	0.0619	0.2581	0.6302	2.2900e- 003	0.1945	1.9600e- 003	0.1965	0.0520	1.8400e- 003	0.0539		231.9034	231.9034	8.1300e- 003	,	232.1067
Total	4.8350	0.3692	6.3335	0.0126	0.1945	0.7641	0.9586	0.0520	0.7640	0.8160	81.5134	292.3383	373.8516	0.1102	6.3900e- 003	378.5118

#### Sabini Court - Bay Area AQMD Air District, Summer

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.49	0.01	0.08	0.00	0.02	0.01	0.00	0.02	0.02	0.00	0.79	0.62	0.05	0.78	0.62

### **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/7/2020	5	5	
2	Grading	Grading	7/8/2020	7/17/2020	5	8	
3	Paving	Paving	7/18/2020	8/12/2020	5	18	
4	Building Construction	Building Construction	8/13/2020	6/30/2021	5	230	
5	Architectural Coating	Architectural Coating	8/27/2020	7/14/2021	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.48

Acres of Paving: 0.41

Residential Indoor: 48,600; Residential Outdoor: 16,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,072 (Architectural Coating – sqft)

OffRoad Equipment

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#### Sabini Court - Bay Area AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	62.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	9.00	3.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### **3.1 Mitigation Measures Construction**

# 3.2 Site Preparation - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/d	day		
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.101 6	3,685.101 6	1.1918		3,714.897 5
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.101 6	3,685.101 6	1.1918		3,714.897 5

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 3.2 Site Preparation - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		147.7398	147.7398	3.5600e- 003		147.8288
Total	0.0626	0.0379	0.4830	1.4800e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		147.7398	147.7398	3.5600e- 003		147.8288

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	day		
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307		1 1 1	0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.101 6	3,685.101 6	1.1918		3,714.897 5
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523	0.0000	3,685.101 6	3,685.101 6	1.1918		3,714.897 5

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.2 Site Preparation - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		147.7398	147.7398	3.5600e- 003		147.8288
Total	0.0626	0.0379	0.4830	1.4800e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		147.7398	147.7398	3.5600e- 003		147.8288

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Fugitive Dust					6.6230	0.0000	6.6230	3.3754	0.0000	3.3754			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	2.4288	26.3859	16.0530	0.0297	6.6230	1.2734	7.8965	3.3754	1.1716	4.5470		2,872.485 1	2,872.485 1	0.9290		2,895.710 6

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 3.3 Grading - 2020

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.0640	2.2200	0.4412	6.1700e- 003	0.1354	7.2600e- 003	0.1427	0.0371	6.9400e- 003	0.0440		659.3573	659.3573	0.0330		660.1819
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e- 003	0.1232	8.0000e- 004	0.1240	0.0327	7.4000e- 004	0.0334		123.1165	123.1165	2.9700e- 003		123.1907
Total	0.1161	2.2515	0.8437	7.4100e- 003	0.2586	8.0600e- 003	0.2667	0.0698	7.6800e- 003	0.0775		782.4737	782.4737	0.0360		783.3725

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust					6.6230	0.0000	6.6230	3.3754	0.0000	3.3754		1 1 1	0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	2.4288	26.3859	16.0530	0.0297	6.6230	1.2734	7.8965	3.3754	1.1716	4.5470	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 3.3 Grading - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0640	2.2200	0.4412	6.1700e- 003	0.1354	7.2600e- 003	0.1427	0.0371	6.9400e- 003	0.0440		659.3573	659.3573	0.0330		660.1819
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e- 003	0.1232	8.0000e- 004	0.1240	0.0327	7.4000e- 004	0.0334		123.1165	123.1165	2.9700e- 003		123.1907
Total	0.1161	2.2515	0.8437	7.4100e- 003	0.2586	8.0600e- 003	0.2667	0.0698	7.6800e- 003	0.0775		782.4737	782.4737	0.0360		783.3725

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.707 0	1,804.707 0	0.5670		1,818.883 0
Paving	0.0597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2434	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.707 0	1,804.707 0	0.5670		1,818.883 0

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 3.4 Paving - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		164.1553	164.1553	3.9600e- 003		164.2542
Total	0.0695	0.0421	0.5366	1.6500e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		164.1553	164.1553	3.9600e- 003		164.2542

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.707 0	1,804.707 0	0.5670		1,818.883 0
Paving	0.0597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2434	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.707 0	1,804.707 0	0.5670		1,818.883 0

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 3.4 Paving - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	lay							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0695	0.0421	0.5366	1.6500e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		164.1553	164.1553	3.9600e- 003		164.2542
Total	0.0695	0.0421	0.5366	1.6500e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		164.1553	164.1553	3.9600e- 003		164.2542

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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#### Sabini Court - Bay Area AQMD Air District, Summer

### 3.5 Building Construction - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0107	0.3269	0.0777	7.6000e- 004	0.0184	1.5200e- 003	0.0199	5.2900e- 003	1.4600e- 003	6.7500e- 003		80.8387	80.8387	4.1400e- 003		80.9423
Worker	0.0313	0.0189	0.2415	7.4000e- 004	0.0739	4.8000e- 004	0.0744	0.0196	4.4000e- 004	0.0201		73.8699	73.8699	1.7800e- 003		73.9144
Total	0.0420	0.3458	0.3191	1.5000e- 003	0.0923	2.0000e- 003	0.0943	0.0249	1.9000e- 003	0.0268		154.7086	154.7086	5.9200e- 003		154.8567

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	Jay		
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171	;	1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.5 Building Construction - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0107	0.3269	0.0777	7.6000e- 004	0.0184	1.5200e- 003	0.0199	5.2900e- 003	1.4600e- 003	6.7500e- 003		80.8387	80.8387	4.1400e- 003		80.9423
Worker	0.0313	0.0189	0.2415	7.4000e- 004	0.0739	4.8000e- 004	0.0744	0.0196	4.4000e- 004	0.0201		73.8699	73.8699	1.7800e- 003		73.9144
Total	0.0420	0.3458	0.3191	1.5000e- 003	0.0923	2.0000e- 003	0.0943	0.0249	1.9000e- 003	0.0268		154.7086	154.7086	5.9200e- 003		154.8567

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	Jay		
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3

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#### Sabini Court - Bay Area AQMD Air District, Summer

### 3.5 Building Construction - 2021

# Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.7900e- 003	0.2975	0.0697	7.6000e- 004	0.0184	6.1000e- 004	0.0190	5.2900e- 003	5.9000e- 004	5.8800e- 003		80.0756	80.0756	3.9100e- 003		80.1734
Worker	0.0289	0.0169	0.2211	7.1000e- 004	0.0739	4.7000e- 004	0.0744	0.0196	4.3000e- 004	0.0200		71.2764	71.2764	1.5900e- 003		71.3162
Total	0.0377	0.3144	0.2908	1.4700e- 003	0.0923	1.0800e- 003	0.0934	0.0249	1.0200e- 003	0.0259		151.3519	151.3519	5.5000e- 003		151.4896

#### Mitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/d	lay		
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.5 Building Construction - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.7900e- 003	0.2975	0.0697	7.6000e- 004	0.0184	6.1000e- 004	0.0190	5.2900e- 003	5.9000e- 004	5.8800e- 003		80.0756	80.0756	3.9100e- 003		80.1734
Worker	0.0289	0.0169	0.2211	7.1000e- 004	0.0739	4.7000e- 004	0.0744	0.0196	4.3000e- 004	0.0200		71.2764	71.2764	1.5900e- 003		71.3162
Total	0.0377	0.3144	0.2908	1.4700e- 003	0.0923	1.0800e- 003	0.0934	0.0249	1.0200e- 003	0.0259		151.3519	151.3519	5.5000e- 003		151.4896

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Archit. Coating	1.5015	1 1 1				0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.7437	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.6 Architectural Coating - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.9500e- 003	4.2100e- 003	0.0537	1.6000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		16.4155	16.4155	4.0000e- 004		16.4254
Total	6.9500e- 003	4.2100e- 003	0.0537	1.6000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		16.4155	16.4155	4.0000e- 004		16.4254

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Archit. Coating	1.5015					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.7437	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.6 Architectural Coating - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.9500e- 003	4.2100e- 003	0.0537	1.6000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		16.4155	16.4155	4.0000e- 004		16.4254
Total	6.9500e- 003	4.2100e- 003	0.0537	1.6000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		16.4155	16.4155	4.0000e- 004		16.4254

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Archit. Coating	1.5015					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	1.7204	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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#### Sabini Court - Bay Area AQMD Air District, Summer

### 3.6 Architectural Coating - 2021

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.4300e- 003	3.7600e- 003	0.0491	1.6000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		15.8392	15.8392	3.5000e- 004		15.8480
Total	6.4300e- 003	3.7600e- 003	0.0491	1.6000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		15.8392	15.8392	3.5000e- 004		15.8480

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Archit. Coating	1.5015	1 1 1				0.0000	0.0000	, , ,	0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	1.7204	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 3.6 Architectural Coating - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.4300e- 003	3.7600e- 003	0.0491	1.6000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		15.8392	15.8392	3.5000e- 004		15.8480
Total	6.4300e- 003	3.7600e- 003	0.0491	1.6000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		15.8392	15.8392	3.5000e- 004		15.8480

# 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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#### Sabini Court - Bay Area AQMD Air District, Summer

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/d	lay		
Mitigated	0.0619	0.2581	0.6302	2.2900e- 003	0.1945	1.9600e- 003	0.1965	0.0520	1.8400e- 003	0.0539		231.9034	231.9034	8.1300e- 003		232.1067
Unmitigated	0.0619	0.2581	0.6302	2.2900e- 003	0.1945	1.9600e- 003	0.1965	0.0520	1.8400e- 003	0.0539		231.9034	231.9034	8.1300e- 003		232.1067

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	38.08	39.64	34.48	87,277	87,277
Total	38.08	39.64	34.48	87,277	87,277

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768
Single Family Housing	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/d	Jay		
NaturalGas Mitigated	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
NaturalGas Unmitigated	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958

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#### Sabini Court - Bay Area AQMD Air District, Summer

# 5.2 Energy by Land Use - NaturalGas

### <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/e	day							lb/d	lay		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	318.522	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958
Total		3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958

#### Mitigated

	NaturalGa s Use	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/	day							lb/c	day		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.298645	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
Total		3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435

# 6.0 Area Detail

#### 6.1 Mitigation Measures Area

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#### Sabini Court - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Mitigated	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Unmitigated	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599	<b></b>	0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616

# 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
SubCategory	lb/day											lb/day						
Architectural Coating	0.0946					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000		
Consumer Products	0.5199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000		
Hearth	4.1453	0.0798	5.3612	0.0101		0.7581	0.7581		0.7581	0.7581	81.5134	24.7059	106.2192	0.1008	5.7500e- 003	110.4530		
Landscaping	9.9800e- 003	3.8100e- 003	0.3304	2.0000e- 005		1.8300e- 003	1.8300e- 003		1.8300e- 003	1.8300e- 003		0.5943	0.5943	5.7000e- 004		0.6086		
Total	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616		

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### 6.2 Area by SubCategory

#### **Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day												lb/d	day		
Architectural Coating	0.0946		1			0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.1453	0.0798	5.3612	0.0101		0.7581	0.7581		0.7581	0.7581	81.5134	24.7059	106.2192	0.1008	5.7500e- 003	110.4530
Landscaping	9.9800e- 003	3.8100e- 003	0.3304	2.0000e- 005		1.8300e- 003	1.8300e- 003		1.8300e- 003	1.8300e- 003		0.5943	0.5943	5.7000e- 004		0.6086
Total	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616

# 7.0 Water Detail

#### 7.1 Mitigation Measures Water

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### 9.0 Operational Offroad

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

# **10.0 Stationary Equipment**

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#### Sabini Court - Bay Area AQMD Air District, Summer

#### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
<u>Boilers</u>						
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type	
User Defined Equipment						
Equipment Type	Number					
11.0 Vegetation						

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Sabini Court - Bay Area AQMD Air District, Winter

# Sabini Court

Bay Area AQMD Air District, Winter

### **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	4.00	Dwelling Unit	4.07	24,000.00	11
Other Asphalt Surfaces	0.41	Acre	0.41	17,859.60	0

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

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Corr	npany			
CO2 Intensity (Ib/MWhr)	269.5	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

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

Project Characteristics - CO2 Intensity Factor adjusted to reflect the PG&E RPS projections for the operational year.

Land Use - Acreage and square footage were updated to represent the site plan.

Construction Phase - Architectural Coating timing adjusted to match building construction timing, to represent both phases happening concurrently

Grading - Total acres graded set to total project site

Energy Mitigation -

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#### Sabini Court - Bay Area AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	PhaseEndDate	8/23/2021	7/14/2021
tblConstructionPhase	PhaseEndDate	7/2/2021	6/30/2021
tblConstructionPhase	PhaseEndDate	8/14/2020	7/17/2020
tblConstructionPhase	PhaseEndDate	7/28/2021	8/12/2020
tblConstructionPhase	PhaseEndDate	8/4/2020	7/7/2020
tblConstructionPhase	PhaseStartDate	7/29/2021	8/27/2020
tblConstructionPhase	PhaseStartDate	8/15/2020	8/13/2020
tblConstructionPhase	PhaseStartDate	8/5/2020	7/8/2020
tblConstructionPhase	PhaseStartDate	7/3/2021	7/18/2020
tblConstructionPhase	PhaseStartDate	7/29/2020	7/1/2020
tblGrading	AcresOfGrading	4.00	4.48
tblGrading	MaterialImported	0.00	500.00
tblLandUse	LandUseSquareFeet	7,200.00	24,000.00
tblLandUse	LotAcreage	1.30	4.07
tblProjectCharacteristics	CO2IntensityFactor	641.35	269.5
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	63.00	62.00

# 2.0 Emissions Summary

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 2.1 Overall Construction (Maximum Daily Emission)

#### **Unmitigated Construction**

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Year	lb/day										lb/day						
2020	4.1427	42.4641	21.9672	0.0394	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,821.193 3	3,821.193 3	1.1952	0.0000	3,851.072 5	
2021	3.6681	19.2839	18.7262	0.0314	0.1087	1.0539	1.1627	0.0293	0.9965	1.0258	0.0000	2,992.937 1	2,992.937 1	0.6414	0.0000	3,008.971 9	
Maximum	4.1427	42.4641	21.9672	0.0394	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,821.193 3	3,821.193 3	1.1952	0.0000	3,851.072 5	

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Tota	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Year	lb/day											lb/day							
2020	4.1427	42.4641	21.9672	0.0394	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,821.193 3	3,821.193 3	1.1952	0.0000	3,851.072 5			
2021	3.6681	19.2839	18.7262	0.0314	0.1087	1.0539	1.1627	0.0293	0.9965	1.0258	0.0000	2,992.937 1	2,992.937 1	0.6414	0.0000	3,008.971 9			
Maximum	4.1427	42.4641	21.9672	0.0394	18.2141	2.1984	20.4125	9.9699	2.0225	11.9924	0.0000	3,821.193 3	3,821.193 3	1.1952	0.0000	3,851.072 5			
	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e			
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
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#### Sabini Court - Bay Area AQMD Air District, Winter

## 2.2 Overall Operational

#### Unmitigated Operational

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	lay							lb/c	lay		
Area	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Energy	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958
Mobile	0.0536	0.2706	0.6357	2.1500e- 003	0.1945	1.9700e- 003	0.1965	0.0520	1.8500e- 003	0.0539		217.1139	217.1139	8.3100e- 003		217.3217
Total	4.8269	0.3836	6.3397	0.0125	0.1945	0.7643	0.9588	0.0520	0.7641	0.8162	81.5134	279.8872	361.4006	0.1104	6.4400e- 003	366.0791

#### Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/	day							lb/o	day		
Area	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Energy	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
Mobile	0.0536	0.2706	0.6357	2.1500e- 003	0.1945	1.9700e- 003	0.1965	0.0520	1.8500e- 003	0.0539		217.1139	217.1139	8.3100e- 003		217.3217
Total	4.8266	0.3818	6.3390	0.0124	0.1945	0.7641	0.9586	0.0520	0.7640	0.8160	81.5134	277.5489	359.0622	0.1103	6.3900e- 003	363.7268

#### Sabini Court - Bay Area AQMD Air District, Winter

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.48	0.01	0.08	0.00	0.02	0.01	0.00	0.02	0.02	0.00	0.84	0.65	0.05	0.78	0.64

#### **3.0 Construction Detail**

#### **Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/7/2020	5	5	
2	Grading	Grading	7/8/2020	7/17/2020	5	8	
3	Paving	Paving	7/18/2020	8/12/2020	5	18	
4	Building Construction	Building Construction	8/13/2020	6/30/2021	5	230	
5	Architectural Coating	Architectural Coating	8/27/2020	7/14/2021	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.48

Acres of Paving: 0.41

Residential Indoor: 48,600; Residential Outdoor: 16,200; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,072 (Architectural Coating – sqft)

OffRoad Equipment

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#### Sabini Court - Bay Area AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	62.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	9.00	3.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### **3.1 Mitigation Measures Construction**

## 3.2 Site Preparation - 2020

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	day		
Fugitive Dust		, , ,			18.0663	0.0000	18.0663	9.9307	0.0000	9.9307		1 1 1	0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.101 6	3,685.101 6	1.1918		3,714.897 5
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.101 6	3,685.101 6	1.1918		3,714.897 5

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 3.2 Site Preparation - 2020

## Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		136.0918	136.0918	3.3300e- 003		136.1750
Total	0.0662	0.0468	0.4536	1.3700e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		136.0918	136.0918	3.3300e- 003		136.1750

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	day		
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307		1 1 1	0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.101 6	3,685.101 6	1.1918		3,714.897 5
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523	0.0000	3,685.101 6	3,685.101 6	1.1918		3,714.897 5

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.2 Site Preparation - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		136.0918	136.0918	3.3300e- 003		136.1750
Total	0.0662	0.0468	0.4536	1.3700e- 003	0.1479	9.6000e- 004	0.1488	0.0392	8.8000e- 004	0.0401		136.0918	136.0918	3.3300e- 003		136.1750

3.3 Grading - 2020

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Fugitive Dust					6.6230	0.0000	6.6230	3.3754	0.0000	3.3754			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	2.4288	26.3859	16.0530	0.0297	6.6230	1.2734	7.8965	3.3754	1.1716	4.5470		2,872.485 1	2,872.485 1	0.9290		2,895.710 6

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 3.3 Grading - 2020

## Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0657	2.2744	0.4750	6.0600e- 003	0.1354	7.3800e- 003	0.1428	0.0371	7.0600e- 003	0.0442		648.2825	648.2825	0.0346		649.1486
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e- 003	0.1232	8.0000e- 004	0.1240	0.0327	7.4000e- 004	0.0334		113.4098	113.4098	2.7700e- 003		113.4792
Total	0.1209	2.3134	0.8530	7.2000e- 003	0.2586	8.1800e- 003	0.2668	0.0698	7.8000e- 003	0.0776		761.6923	761.6923	0.0374		762.6277

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Fugitive Dust		1 1 1 1			6.6230	0.0000	6.6230	3.3754	0.0000	3.3754		1 1 1	0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	2.4288	26.3859	16.0530	0.0297	6.6230	1.2734	7.8965	3.3754	1.1716	4.5470	0.0000	2,872.485 1	2,872.485 1	0.9290		2,895.710 6

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 3.3 Grading - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	co	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0657	2.2744	0.4750	6.0600e- 003	0.1354	7.3800e- 003	0.1428	0.0371	7.0600e- 003	0.0442		648.2825	648.2825	0.0346		649.1486
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e- 003	0.1232	8.0000e- 004	0.1240	0.0327	7.4000e- 004	0.0334		113.4098	113.4098	2.7700e- 003		113.4792
Total	0.1209	2.3134	0.8530	7.2000e- 003	0.2586	8.1800e- 003	0.2668	0.0698	7.8000e- 003	0.0776		761.6923	761.6923	0.0374		762.6277

3.4 Paving - 2020

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.707 0	1,804.707 0	0.5670		1,818.883 0
Paving	0.0597					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2434	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005		1,804.707 0	1,804.707 0	0.5670		1,818.883 0

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 3.4 Paving - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		151.2131	151.2131	3.7000e- 003		151.3055
Total	0.0735	0.0520	0.5040	1.5200e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		151.2131	151.2131	3.7000e- 003		151.3055

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/d	day		
Off-Road	1.1837	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.707 0	1,804.707 0	0.5670		1,818.883 0
Paving	0.0597					0.0000	0.0000		0.0000	0.0000		 - - - -	0.0000			0.0000
Total	1.2434	11.8015	12.2823	0.0189		0.6509	0.6509		0.6005	0.6005	0.0000	1,804.707 0	1,804.707 0	0.5670		1,818.883 0

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 3.4 Paving - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0735	0.0520	0.5040	1.5200e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		151.2131	151.2131	3.7000e- 003		151.3055
Total	0.0735	0.0520	0.5040	1.5200e- 003	0.1643	1.0600e- 003	0.1654	0.0436	9.8000e- 004	0.0446		151.2131	151.2131	3.7000e- 003		151.3055

3.5 Building Construction - 2020

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	day		
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.5 Building Construction - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.3298	0.0895	7.4000e- 004	0.0184	1.5500e- 003	0.0199	5.2900e- 003	1.4900e- 003	6.7700e- 003		78.6244	78.6244	4.5000e- 003		78.7368
Worker	0.0331	0.0234	0.2268	6.8000e- 004	0.0739	4.8000e- 004	0.0744	0.0196	4.4000e- 004	0.0201		68.0459	68.0459	1.6600e- 003		68.0875
Total	0.0444	0.3532	0.3163	1.4200e- 003	0.0923	2.0300e- 003	0.0943	0.0249	1.9300e- 003	0.0268		146.6703	146.6703	6.1600e- 003		146.8243

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171	1	1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.5 Building Construction - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.3298	0.0895	7.4000e- 004	0.0184	1.5500e- 003	0.0199	5.2900e- 003	1.4900e- 003	6.7700e- 003		78.6244	78.6244	4.5000e- 003		78.7368
Worker	0.0331	0.0234	0.2268	6.8000e- 004	0.0739	4.8000e- 004	0.0744	0.0196	4.4000e- 004	0.0201		68.0459	68.0459	1.6600e- 003		68.0875
Total	0.0444	0.3532	0.3163	1.4200e- 003	0.0923	2.0300e- 003	0.0943	0.0249	1.9300e- 003	0.0268		146.6703	146.6703	6.1600e- 003		146.8243

3.5 Building Construction - 2021

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586	,	0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.5 Building Construction - 2021

## Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	9.3300e- 003	0.2994	0.0807	7.4000e- 004	0.0184	6.4000e- 004	0.0190	5.2900e- 003	6.1000e- 004	5.9000e- 003		77.8762	77.8762	4.2500e- 003		77.9823
Worker	0.0307	0.0209	0.2068	6.6000e- 004	0.0739	4.7000e- 004	0.0744	0.0196	4.3000e- 004	0.0200		65.6583	65.6583	1.4900e- 003		65.6954
Total	0.0400	0.3203	0.2875	1.4000e- 003	0.0923	1.1100e- 003	0.0934	0.0249	1.0400e- 003	0.0259		143.5345	143.5345	5.7400e- 003		143.6778

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/c	lay		
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.5 Building Construction - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	9.3300e- 003	0.2994	0.0807	7.4000e- 004	0.0184	6.4000e- 004	0.0190	5.2900e- 003	6.1000e- 004	5.9000e- 003		77.8762	77.8762	4.2500e- 003		77.9823
Worker	0.0307	0.0209	0.2068	6.6000e- 004	0.0739	4.7000e- 004	0.0744	0.0196	4.3000e- 004	0.0200		65.6583	65.6583	1.4900e- 003		65.6954
Total	0.0400	0.3203	0.2875	1.4000e- 003	0.0923	1.1100e- 003	0.0934	0.0249	1.0400e- 003	0.0259		143.5345	143.5345	5.7400e- 003		143.6778

3.6 Architectural Coating - 2020

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Archit. Coating	1.5015					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	1.7437	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.6 Architectural Coating - 2020

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/d	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.3500e- 003	5.2000e- 003	0.0504	1.5000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		15.1213	15.1213	3.7000e- 004		15.1306
Total	7.3500e- 003	5.2000e- 003	0.0504	1.5000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		15.1213	15.1213	3.7000e- 004		15.1306

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Archit. Coating	1.5015	1 1 1				0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.7437	1.6838	1.8314	2.9700e- 003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.6 Architectural Coating - 2020

#### Mitigated Construction Off-Site

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	lay							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.3500e- 003	5.2000e- 003	0.0504	1.5000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		15.1213	15.1213	3.7000e- 004		15.1306
Total	7.3500e- 003	5.2000e- 003	0.0504	1.5000e- 004	0.0164	1.1000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4600e- 003		15.1213	15.1213	3.7000e- 004		15.1306

3.6 Architectural Coating - 2021

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	lay		
Archit. Coating	1.5015					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	1.7204	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.6 Architectural Coating - 2021

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/o	day							lb/c	day		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.8100e- 003	4.6400e- 003	0.0460	1.5000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		14.5907	14.5907	3.3000e- 004		14.5990
Total	6.8100e- 003	4.6400e- 003	0.0460	1.5000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		14.5907	14.5907	3.3000e- 004		14.5990

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Archit. Coating	1.5015					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	1.7204	1.5268	1.8176	2.9700e- 003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 3.6 Architectural Coating - 2021

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.8100e- 003	4.6400e- 003	0.0460	1.5000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		14.5907	14.5907	3.3000e- 004		14.5990
Total	6.8100e- 003	4.6400e- 003	0.0460	1.5000e- 004	0.0164	1.0000e- 004	0.0165	4.3600e- 003	1.0000e- 004	4.4500e- 003		14.5907	14.5907	3.3000e- 004		14.5990

## 4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

#### Sabini Court - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/e	day							lb/c	lay		
Mitigated	0.0536	0.2706	0.6357	2.1500e- 003	0.1945	1.9700e- 003	0.1965	0.0520	1.8500e- 003	0.0539		217.1139	217.1139	8.3100e- 003		217.3217
Unmitigated	0.0536	0.2706	0.6357	2.1500e- 003	0.1945	1.9700e- 003	0.1965	0.0520	1.8500e- 003	0.0539		217.1139	217.1139	8.3100e- 003		217.3217

## 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	38.08	39.64	34.48	87,277	87,277
Total	38.08	39.64	34.48	87,277	87,277

## 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768
Single Family Housing	0.576985	0.039376	0.193723	0.112069	0.016317	0.005358	0.017943	0.025814	0.002614	0.002274	0.005874	0.000887	0.000768

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#### Sabini Court - Bay Area AQMD Air District, Winter

# 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/c	day							lb/d	Jay		
NaturalGas Mitigated	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
NaturalGas Unmitigated	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958

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#### Sabini Court - Bay Area AQMD Air District, Winter

## 5.2 Energy by Land Use - NaturalGas

#### <u>Unmitigated</u>

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/	day							lb/c	lay		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	1 1 1	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	318.522	3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958
Total		3.4400e- 003	0.0294	0.0125	1.9000e- 004		2.3700e- 003	2.3700e- 003		2.3700e- 003	2.3700e- 003		37.4731	37.4731	7.2000e- 004	6.9000e- 004	37.6958

#### Mitigated

	NaturalGa s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr					lb/e	day							lb/c	lay		
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	1 1 1	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.298645	3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435
Total		3.2200e- 003	0.0275	0.0117	1.8000e- 004		2.2300e- 003	2.2300e- 003		2.2300e- 003	2.2300e- 003		35.1347	35.1347	6.7000e- 004	6.4000e- 004	35.3435

## 6.0 Area Detail

6.1 Mitigation Measures Area

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#### Sabini Court - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/d	day							lb/c	lay		
Mitigated	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616
Unmitigated	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616

## 6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/c	day							lb/d	day		
Architectural Coating	0.0946					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.1453	0.0798	5.3612	0.0101		0.7581	0.7581		0.7581	0.7581	81.5134	24.7059	106.2192	0.1008	5.7500e- 003	110.4530
Landscaping	9.9800e- 003	3.8100e- 003	0.3304	2.0000e- 005		1.8300e- 003	1.8300e- 003		1.8300e- 003	1.8300e- 003		0.5943	0.5943	5.7000e- 004		0.6086
Total	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### 6.2 Area by SubCategory

#### **Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory					lb/e	day							lb/d	lay		
Architectural Coating	0.0946					0.0000	0.0000		0.0000	0.0000			0.0000		1	0.0000
Consumer Products	0.5199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4.1453	0.0798	5.3612	0.0101		0.7581	0.7581		0.7581	0.7581	81.5134	24.7059	106.2192	0.1008	5.7500e- 003	110.4530
Landscaping	9.9800e- 003	3.8100e- 003	0.3304	2.0000e- 005		1.8300e- 003	1.8300e- 003		1.8300e- 003	1.8300e- 003		0.5943	0.5943	5.7000e- 004		0.6086
Total	4.7698	0.0836	5.6916	0.0101		0.7599	0.7599		0.7599	0.7599	81.5134	25.3002	106.8135	0.1014	5.7500e- 003	111.0616

## 7.0 Water Detail

#### 7.1 Mitigation Measures Water

#### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### 9.0 Operational Offroad

Equipment Type Number Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## **10.0 Stationary Equipment**

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#### Sabini Court - Bay Area AQMD Air District, Winter

#### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
<u>Boilers</u>						
Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type	
User Defined Equipment						
Equipment Type	Number					
11.0 Vegetation						

#### Sabini Court

#### Bay Area AQMD Air District, Mitigation Report

## **Construction Mitigation Summary**

Phase	ROG	NOx	со	SO2 Percent	Exhaust PM10 Reduction	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**OFFROAD Equipment Mitigation** 

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	2	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	11	No Change	0.00
Excavators	Diesel	No Change	0	1	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

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Equipment Type	ROG	NOx	со	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	-	U	nmitigated tons/yr	•	-			·	Unmitiga	ited mt/yr	-	
Air Compressors	2.62300E-002	1.82730E-001	2.09650E-001	3.40000E-004	1.15900E-002	1.15900E-002	0.00000E+000	2.93624E+001	2.93624E+001	2.12000E-003	0.00000E+000	2.94154E+001
Cement and Mortar Mixers	7.90000E-004	4.97000E-003	4.16000E-003	1.00000E-005	1.90000E-004	1.90000E-004	0.00000E+000	6.18670E-001	6.18670E-001	6.00000E-005	0.00000E+000	6.20280E-001
Cranes	4.33400E-002	5.11920E-001	2.05380E-001	5.80000E-004	2.09300E-002	1.92600E-002	0.00000E+000	5.10068E+001	5.10068E+001	1.65000E-002	0.00000E+000	5.14192E+001
Excavators	9.80000E-004	9.65000E-003	1.30700E-002	2.00000E-005	4.70000E-004	4.30000E-004	0.00000E+000	1.81480E+000	1.81480E+000	5.90000E-004	0.00000E+000	1.82947E+000
Forklifts	4.68400E-002	4.24730E-001	4.04790E-001	5.30000E-004	3.08400E-002	2.83700E-002	0.00000E+000	4.63305E+001	4.63305E+001	1.49800E-002	0.00000E+000	4.67051E+001
Generator Sets	4.32000E-002	3.79890E-001	4.24790E-001	7.60000E-004	2.07300E-002	2.07300E-002	0.00000E+000	6.49989E+001	6.49989E+001	3.47000E-003	0.00000E+000	6.50856E+001
Graders	1.90000E-003	2.53000E-002	7.26000E-003	3.00000E-005	8.10000E-004	7.40000E-004	0.00000E+000	2.33226E+000	2.33226E+000	7.50000E-004	0.00000E+000	2.35112E+000
Pavers	2.36000E-003	2.52900E-002	2.60800E-002	4.00000E-005	1.23000E-003	1.13000E-003	0.00000E+000	3.71714E+000	3.71714E+000	1.20000E-003	0.00000E+000	3.74720E+000
Paving Equipment	2.80000E-003	2.89100E-002	3.42100E-002	6.00000E-005	1.45000E-003	1.33000E-003	0.00000E+000	4.83178E+000	4.83178E+000	1.56000E-003	0.00000E+000	4.87085E+000
Rollers	2.81000E-003	2.81000E-002	2.55600E-002	4.00000E-005	1.79000E-003	1.65000E-003	0.00000E+000	3.11155E+000	3.11155E+000	1.01000E-003	0.00000E+000	3.13671E+000
Rubber Tired Dozers	1.24100E-002	1.30320E-001	4.75100E-002	1.00000E-004	6.38000E-003	5.87000E-003	0.00000E+000	8.63135E+000	8.63135E+000	2.79000E-003	0.00000E+000	8.70114E+000
Tractors/Loaders/ Backhoes	6.59700E-002	6.65310E-001	7.55560E-001	1.03000E-003	4.07000E-002	3.74400E-002	0.00000E+000	9.08460E+001	9.08460E+001	2.93800E-002	0.00000E+000	9.15806E+001
Welders	3.68000E-002	1.76680E-001	2.00100E-001	2.90000E-004	9.17000E-003	9.17000E-003	0.00000E+000	2.16454E+001	2.16454E+001	2.99000E-003	0.00000E+000	2.17200E+001

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	POG	NOx		502	Exposet PM10	Exhaust PM2 5	Bio CO2		Total CO2	CH4	N2O	6020
Equipment type	ROG	NOX		302	Exhaust Fivito	Exhaust Fivi2.5	BI0- CO2	INBI0- CO2	Total CO2		N20	COZE
		IVI	itigated tons/yr	,					iviitigate	ea mt/yr		
Air Compressors	2.62300E-002	1.82730E-001	2.09650E-001	3.40000E-004	1.15900E-002	1.15900E-002	0.00000E+000	2.93624E+001	2.93624E+001	2.12000E-003	0.00000E+000	2.94153E+001
Cement and Mortar Mixers	7.90000E-004	4.97000E-003	4.16000E-003	1.00000E-005	1.90000E-004	1.90000E-004	0.00000E+000	6.18670E-001	6.18670E-001	6.00000E-005	0.00000E+000	6.20280E-001
Cranes	4.33400E-002	5.11920E-001	2.05380E-001	5.80000E-004	2.09300E-002	1.92600E-002	0.00000E+000	5.10067E+001	5.10067E+001	1.65000E-002	0.00000E+000	5.14191E+001
Excavators	9.80000E-004	9.65000E-003	1.30700E-002	2.00000E-005	4.70000E-004	4.30000E-004	0.00000E+000	1.81480E+000	1.81480E+000	5.90000E-004	0.00000E+000	1.82947E+000
Forklifts	4.68400E-002	4.24730E-001	4.04790E-001	5.30000E-004	3.08400E-002	2.83700E-002	0.00000E+000	4.63305E+001	4.63305E+001	1.49800E-002	0.00000E+000	4.67051E+001
Generator Sets	4.32000E-002	3.79890E-001	4.24790E-001	7.60000E-004	2.07300E-002	2.07300E-002	0.00000E+000	6.49988E+001	6.49988E+001	3.47000E-003	0.00000E+000	6.50855E+001
Graders	1.90000E-003	2.53000E-002	7.26000E-003	3.00000E-005	8.10000E-004	7.40000E-004	0.00000E+000	2.33226E+000	2.33226E+000	7.50000E-004	0.00000E+000	2.35111E+000
Pavers	2.36000E-003	2.52900E-002	2.60800E-002	4.00000E-005	1.23000E-003	1.13000E-003	0.00000E+000	3.71714E+000	3.71714E+000	1.20000E-003	0.00000E+000	3.74719E+000
Paving Equipment	2.80000E-003	2.89100E-002	3.42100E-002	6.00000E-005	1.45000E-003	1.33000E-003	0.00000E+000	4.83178E+000	4.83178E+000	1.56000E-003	0.00000E+000	4.87085E+000
Rollers	2.81000E-003	2.81000E-002	2.55600E-002	4.00000E-005	1.79000E-003	1.65000E-003	0.00000E+000	3.11155E+000	3.11155E+000	1.01000E-003	0.00000E+000	3.13670E+000
Rubber Tired Dozers	1.24100E-002	1.30320E-001	4.75100E-002	1.00000E-004	6.38000E-003	5.87000E-003	0.00000E+000	8.63134E+000	8.63134E+000	2.79000E-003	0.00000E+000	8.70113E+000
Tractors/Loaders/Ba ckhoes	6.59700E-002	6.65310E-001	7.55560E-001	1.03000E-003	4.07000E-002	3.74400E-002	0.00000E+000	9.08459E+001	9.08459E+001	2.93800E-002	0.00000E+000	9.15804E+001
Welders	3.68000E-002	1.76680E-001	2.00100E-001	2.90000E-004	9.17000E-003	9.17000E-003	0.00000E+000	2.16454E+001	2.16454E+001	2.99000E-003	0.00000E+000	2.17200E+001

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Equipment Type	ROG	NOx	со	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
					Pe	rcent Reduction						
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.36229E-006	1.36229E-006	0.00000E+000	0.00000E+000	1.35983E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17631E-006	1.17631E-006	0.00000E+000	0.00000E+000	1.16688E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.07920E-006	1.07920E-006	0.00000E+000	0.00000E+000	1.28466E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23079E-006	1.23079E-006	0.00000E+000	0.00000E+000	1.22915E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.25329E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.66866E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.18805E-006
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15857E-006	1.15857E-006	0.00000E+000	0.00000E+000	1.14927E-006
Tractors/Loaders/Ba ckhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21084E-006	1.21084E-006	0.00000E+000	0.00000E+000	1.20113E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.23985E-007	9.23985E-007	0.00000E+000	0.00000E+000	1.38121E-006

# Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	PM2.5 Reduction	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	PM2.5 Reduction	
No	Water Exposed Area	PM10 Reduction	PM2.5 Reduction	Frequency (per day)

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No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unm	itigated	Mitigated		Percent Reduction		
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00	
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	
Building Construction	Roads	0.01	0.00	0.01	0.00	0.00	0.00	
Grading	Fugitive Dust	0.03	0.01	0.03	0.01	0.00	0.00	
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00	
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00	
Site Preparation	Fugitive Dust	0.05	0.02	0.05	0.02	0.00	0.00	
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00	

**Operational Percent Reduction Summary** 

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Category	ROG	NOx	со	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
			Percent	Reduction								
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	6.35	6.34	6.14	0.00	4.65	4.65	0.00	6.24	6.24	8.33	0.00	6.24
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## **Operational Mobile Mitigation**

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.09	0.31		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

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Neighborhood Enhancements	Improve Pedestrian Network			
Neighborhood Enhancements	Provide Traffic Calming Measures			
Neighborhood Enhancements	Implement NEV Network	0.00		
Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
Parking Policy Pricing	Limit Parking Supply	0.00	· · · · · · · · · · · · · · · · · · ·	
Parking Policy Pricing	Unbundle Parking Costs	0.00		
Parking Policy Pricing	On-street Market Pricing	0.00		
Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
Transit Improvements	Provide BRT System	0.00		
Transit Improvements	Expand Transit Network	0.00		
Transit Improvements	Increase Transit Frequency	0.00		
Transit Improvements	Transit Improvements Subtotal	0.00		
	Land Use and Site Enhancement Subtotal	0.00		
Commute	Implement Trip Reduction Program			
Commute	Transit Subsidy			
Commute	Implement Employee Parking "Cash Out"			
Commute	Workplace Parking Charge			
Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
Commute	Market Commute Trip Reduction Option	0.00		
Commute	Employee Vanpool/Shuttle	0.00	2.00	
Commute	Provide Ride Sharing Program			
Commute	Commute Subtotal	0.00		
	/ersion: CalEEMod.2016.3.2 Neighborhood Enhancements Neighborhood Enhancements Neighborhood Enhancements Neighborhood Enhancements Parking Policy Pricing Parking Policy Pricing Parking Policy Pricing Transit Improvements Transit Improvements Transit Improvements Transit Improvements Transit Improvements Commute Commute Commute Commute Commute Commute Commute Commute Commute	/ersion: CalEEMod.2016.3.2Page 8 of 11Neighborhood EnhancementsImprove Pedestrian NetworkNeighborhood EnhancementsProvide Traffic Calming MeasuresNeighborhood EnhancementsImplement NEV NetworkNeighborhood EnhancementsImplement NEV NetworkNeighborhood EnhancementsNeighborhood Enhancements SubtotalParking Policy PricingLimit Parking SupplyParking Policy PricingUnbundle Parking CostsParking Policy PricingOn-street Market PricingParking Policy PricingOn-street Market PricingParking Policy PricingParking Policy Pricing SubtotalTransit ImprovementsProvide BRT SystemTransit ImprovementsIncrease Transit TrequencyTransit ImprovementsIncrease Transit FrequencyTransit ImprovementsTransit Improvements SubtotalCommuteImplement Trip Reduction ProgramCommuteWorkplace Parking ChargeCommuteEncourage Telecommuting and Alternative Work SchedulesCommuteMarket Commute Trip Reduction OptionCommuteProvide Ride Sharing ProgramCommuteProvide Ride Sharing ProgramCommuteProvide Ride Sharing ProgramCommuteProvide Ride Sharing ProgramCommuteCommute Subtotal	/ersion: CalEEMod.2016.3.2 Page 8 of 11   Neighborhood Enhancements Improve Pedestrian Network   Neighborhood Enhancements Provide Traffic Calming Measures   Neighborhood Enhancements Implement NEV Network   Neighborhood Enhancements Neighborhood Enhancements   Parking Policy Pricing Unbundle Parking Costs   0.00 Parking Policy Pricing 0.00   Transit Improvements Provide BRT System 0.00   Transit Improvements Increase Transit Frequency 0.00   Transit Improvements Transit Improvements Subtotal 0.00   Commute Implement Trip Reduction Program 0.00   Commute Encourage Telecommuting and Alternative	Version: CalEEMod.2016.3.2 Page 8 of 11 Date: 3/23/2020 2:58 PM   Neighborhood Enhancements Improve Pedestrian Network Improve Pedestrian Network Improve Pedestrian Network   Neighborhood Enhancements Provide Traffic Calming Measures Improve Pedestrian Network 0.00   Neighborhood Enhancements Implement NEV Network 0.00 Implement NEV Network 0.00   Parking Policy Pricing Limit Parking Supply 0.00 Implement Network 0.00   Parking Policy Pricing Unbundle Parking Costs 0.00 Implement Network 0.00   Parking Policy Pricing Parking Policy Pricing Parking Policy Pricing 0.00 Implement Network 0.00   Parking Policy Pricing Parking Policy Pricing Parking Policy Pricing 0.00 Implement Network 0.00   Transit Improvements Provide BRT System 0.00 Implement Transit Improvements 0.00 Implement Network 0.00   Transit Improvements Increase Transit Frequency 0.00 Implement Trip Reduction Program Implement Trip Reduction Program Implement Trip Reduction Program Implement Employee Parking 'Cash Out' Implement Employee Parking 'Cash Out' Implement Employee Parking 'Cash Ou

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ſ	No	School Trip	Implement School Bus Program	0.00			
			Total VMT Reduction	0.00			

# Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	T I I I
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	r 
No	% Electric Chainsaw	

## Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	7.00	
No	Install High Efficiency Lighting		
Yes	On-site Renewable		100.00

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Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator	r	15.00

## Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

## **Solid Waste Mitigation**

Mitigation Measures	Input Value

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Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

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# Appendix **B**

**Biological Constraints Memorandum**


Wood Biological Consulting PO Box 1569 El Granada, CA 94018 (415) 254-4835 <u>chris@wood-biological.com</u> <u>www.wood-biological.com</u>

July 1, 2018

Mr. Fritz Geier Geier & Geier Consulting, Inc. P.O. Box 5054 Berkeley, CA 94705-5054 (510) 644-2535

## RE: Biological Constraints, Sabini Court, Morgan Hill

Dear Mr. Geier:

This memorandum presents my observations on June 20, 2018, and conclusions regarding the potential biological constraints to the development of a parcel located on Sabini Court in Morgan Hill, Santa Clara County, CA (Figure 1). The parcel is APN 773-32-013.

This analysis is based on the following:

- Review of databases maintained by the California Natural Diversity Database (CNDDB, 2018), California Native Plant Society (CNPS, 2018), and the U.S. Fish and Wildlife Service (USFWS, 2018);
- Performance of a single reconnaissance survey on June 20, 2018;
- Familiarity with the special-status plant and animal species known from the project region and their associated habitats.

This analysis is provided solely for the purpose of assisting the owner in understanding the potential biological constraints to the proposed development. It is not intended to provide a definitive statement as to the presence or absence of any special-status animal or plant species; such assessments are only possible after the performance of focused surveys following approved protocols.

#### SETTING

The study area focused on a single parcel of land situated adjacent northeast of Sabini Court. The parcel is approximately 1.96 ha (4.85 acres, according to the Santa Clara County Assessor's Parcel Map), with gently rolling topography between approximately 140-154 m

(460 to 505 ft) above sea level. A broad and shallow swale winds discontinuously across the western part of the property (see discussion of this feature under Jurisdictional Wetlands and Other Waters, below). Part of the property is a former orchard that supports several dozen untended walnut trees and several decadent stone fruit trees (Figure 2). At the time of the site visit, the majority of the parcel had been disked for weed control. There are no structures on the property with the exception of a well head near Sabini Court.

The site is situated in a low-density rural residential neighborhood and is surrounded by properties with similar features, including rural residential to the north and south, remnant orchards to the east, suburban development to the north and west, and undeveloped coast live oak woodland further to the south. Vegetation on the property consists of English walnut trees (*Juglans regia*) grafted onto native California walnut (*Juglans californica*) root stocks<sup>1</sup>, a few cherry and plum trees (*Prunus* sp.), and non-native annual grassland perpetuated by annual disking, and dominated by annual grasses (slender oats [*Avena barbata*], ripgut brome [*Bromus diandrus*], foxtail [*Hordeum murinum* ssp. *leporinum*], mustards (*Brassica nigra, Hirschfeldia incana*), and thistles (Italian thistle, [*Carduus pycnocephala*] and milk thistle [*Silybum marianum*]).

Few native plant species were detected, and include single or few individuals of coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*) and California sycamore (*Umbellularia californica*) trees, and two small patches of the native grass creeping wildrye (*Elymus triticoides*). Because of the former orchard, much the site does not conform readily to standard plant communities or vegetation classifications, *i.e.*, Sawyer et al (2009), and Holland (1986). However, the herbaceous vegetation, and in particular the northeastern portion of the property that lacks trees is consistent with the California annual grassland association (Sawyer et al, 2009).

Wildlife species or their sign<sup>2</sup> detected during the present site reconnaissance include acorn woodpecker (*Melanerpes formicivorus*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), California towhee (*Melozone crissalis*), mourning dove (*Zenaida macroura*), mule deer (*Odoicoileus hemionus*), northern mockingbird (*Mimus polyglottos*), and California scrub jay (*Aphelocoma californica*). Red tail hawk (*Buteo jamaicensis*) was observed soaring overhead, but no raptor nests were detected on the property or in the vicinity. A wide variety of common bird species are likely to breed or forage on site, and several species of reptiles and other small mammals are expected to be occasionally present.

<sup>&</sup>lt;sup>1</sup> In many cases, as a result of years of neglect, the English walnut grafts from which nuts were harvested have died and the California walnut rootstock has re-sprouted, giving the appearance of an orchard with both species.

<sup>&</sup>lt;sup>2</sup> Animal signs include tracks, vocalization, scat, white-wash, feathers, fur, shed skin, nests, burrows, prey remains, odor, and dead individuals.

#### SPECIAL-STATUS BIOLOGICAL RESOURCES

Certain natural plant communities, wildlife habitats landscape features are considered to have special status due to their restricted occurrence in the State, their tendency to support rare plant or animal species, or because impacts are restricted or otherwise regulated under federal, State, or local laws or ordinances. Certain plant and animal species are considered to have special status is they are listed or proposed for listing under the federal or State endangered species acts, meet the definition of Rare or Endangered under California Environmental Quality Act (CEQA), or are considered rare locally. Pursuant to the guidelines of CEQA, any project that could result in significant adverse effects on special-status biological resources must, in most cases, incorporate measures to reduce potential impacts to a less-than-significant level.

Based on a review of the databases listed above, a total of 58 special-status plant species and 50 special-status animal species are known to occur in the project region. In addition, a total of17 bird species of conservation concern and numerous migratory bird species are expected to occur in the project region. Complete data base print-outs are enclosed. The project site is not located within designated Critical Habitat for any federally listed plant or animal species.

Based on location information contained in the CNDDB, a total of five special-status plant species have been recorded within a one-mile radius of the study area (Figure 3). Of these, four are strongly associated with serpentine soils which are not present on the property (smooth lessingia [Lessingia micradenia var. glabrata], most beautiful jewelflower [Streptanthus albidus ssp. peramoenus], Santa Clara Valley dudleya [Dudleya abramsii ssp. setchellii], and Coyote ceanothus [Ceanothus ferrisae]). Likewise, the absence of serpentine soil precludes the occurrence on the property of the Serpentine Bunchgrass plant community, which is considered sensitive. The fifth species (arcuate bush mallow [Malacothamnus arcuatus]) is a perennial shrub that would have been identifiable if present on the property. No special-status plant species are considered to have any likelihood of occurring on site due to the absence of serpentine soil, historic and ongoing disking of the herbaceous layer, and the dominance of non-native and invasive plants on site. The performance of a focused floristic study in support of future analysis pursuant to CEQA is not warranted.

Based on the presence of suitable or marginally suitable grassland habitat, four additional special status plant species have low potential to occur in the study area. All are unlikely due to modification of the habitat through cultivation of orchard trees and annual disking of the herbaceous vegetation where these species would occur, or are known from populations a considerable distance from the study area (i.e., in the Mt Hamilton range 16 km (10 mi) north of the study area, or from hills east and west of Santa Clara Valley, more than 24 km (15 mi) west and north of the study area. They are bent-flowered fiddleneck (*Amsinckia lunaris*), Tracy's eriastrum (*Eriastrum tracyi*), San Benito pentachaeta (*Pentachaeta exilis* ssp. *aeolica*), and two-fork clover (*Trifolium amoenum*). In addition, several plant

species with CRPR Rank 4 also have low potential to occur in the study area, but are similarly unlikely due to modification of habitat and distance from known populations.

Based on location information contained in the CNDDB, a 6 special-status animal species have been recorded within a one-mile radius of the study area (Figure 4). These include three invertebrates that are endemic to serpentine soil habitats (Bay checkerspot butterfly [*Euphydryas editha bayensis*], Hom's micro-blind harvestman [*Microcina homi*], Opler's longhorn moth [*Adela oplerella*], which are not present in the study area. An additional invertebrate, western bumble bee (*Bombus occidentalis*), is presumed absent because it nests in burrow, which would be routinely disturbed by annual disking. A very old record from 1894 for coast horned lizard (*Phrynosoma blainvillii*) was documented in the general location of Morgan Hill, but suitable habitat is not present in the study area.

A non-specific record for California tiger salamander was documented in 1981 (Occurrence #42) approximately 3.3 km (2.0 mi) north of the study area in an area developed as residential housing since the observation. This record is considered extirpated (CNDDB, 2018). More recent observations occurred at Chesebro Reservoir, 2.4 km (1.5 mi) to the east-southeast, and on private land 2.5 km (1.6 mi) southeast of the study area, but separated from it by the topography of El Toro (432 m [1420 ft]).

Based on the presence of suitable or marginally suitable habitat, a total of 16 target specialstatus animals are considered to have a potential to occur in the study area. This includes nine birds (Allen's hummingbird [*Selasphorus sasin*], Cooper's hawk [*Accipiter cooperi*], Lawrence's goldfinch [*Carduelis lawrencei*], Nuttall's woodpecker [*Picoides nuttallii*], oak titmouse [*Baeopholus inornatus*], rufous hummingbird [*Selasphorus rufus*], song sparrow (*Melospiza melodia*), spotted towhee [*Pipilo maculatus clementae*]), and white-tailed kite [*Elanus leucurus*]), and five mammals (American badger [*Taxidea taxus*], and San Francisco dusky-footed woodrat [*Neotoma fuscipes annectens*], hoary bat [*Lasiurus cinereus*], pallid bat [*Antrozous pallidus*], and Townsend's big-eared bat [*Corynorhinus townsendii*]), and two amphibians (California red-legged frog [*Rana draytonii*] and Pacific pond turtle [*Emys marmorata*]) are recorded in the vicinity of the study area.

Five of these special status animal species have been documented within three miles of the study area. American badger has been documented relatively recently within 3.4 km (2.1 mi) of the study area, near the intersection of Cochrane Road and Route 101. Suitable habitat is present in the study area and in neighboring land, but no large burrows were observed. San Francisco dusky-footed woodrat and white-tailed kite (*Elanus leucurus*) have been recorded in riparian habitat associated with Coyote Creek, located approximately 4.3 km (2.7 mi) northeast of the study area, and separated from it by residential and commercial development, major roads and Route 101. No nests of dusky-footed wood rat are present within the study area, and no raptor nests were observed. California tiger salamander, California red-legged frog and Pacific pond turtle have been documented in Chesebro Reservoir, 2.4 km (1.5 mi) to the east-southeast. Although less-developed habitat

lies between the study area and the reservoir, it is highly unlikely that these species occur in the study area due to lack of suitable breeding, nesting, or aestivation habitat. In addition, although no special status bats were identified on the wildlife agency databases, several large and decadent orchard trees had fissured bark or cavities that could support bat roosts. However, no evidence of occupation was observed in and around these trees.

Two special-status plant communities have been recorded in the project region. Serpentine Bunchgrass and Sycamore Alluvial Woodland are both associated with specific habitat conditions (serpentine soil and riparian floodplain), which are absent from the study area. Therefore, no special status plant communities are present or have the potential to occur in the study area.

## JURISDICTIONAL WETLANDS AND OTHER WATERS

No jurisdictional wetlands or other waters of the U.S. or of the state<sup>3</sup> are present in the study area. This includes streams or other small drainages, riparian habitats or other aquatic features regulated by federal or state laws. An ephemeral swale is present on the site but does not exhibit hydrological, geomorphological, or biogeochemical indications of a regulated wetland or other waters. It follows a topographic depression from the southern corner of the property, meandering close to the western edge and flattening out near the northern boundary. At no point does the swale exhibit bed and bank morphology, indicating that it is an ephemeral drainage feature. Neighbors that live across Sabini Court confirm that water does flow during substantial rain events, but that it does not persist, and dissipates soon after. North of the study area, a small incised intermittent channel with some riparian vegetation (coast live oak and elderberry) crosses Sabini Court at Almond Orchard Drive, flowing north to join other tributaries of Little Llagas Creek, which flows south through Morgan Hill and eventually joins Llagas Creek south of San Martin.

The swale originates on the property at the southern corner from and 18-inch diameter concrete culvert that conveys storm flow from a rock lined drainage upslope, to the south. Discharges from the culvert have slightly scoured and deposited sediment over an area approximately 1.2 m wide by 13.7 m long (4 x 45 ft), which rapidly dissipates into a broad swale with no discernible bed and bank features or an Ordinary High Water Mark (OHWM)<sup>4</sup>. The depositional area immediately below the culvert supports a small patch of rabbitsfoot grass (*Polypogon monspeliensis*), a facultative wetland indicator species (Lichvar, et al, 2016), but this species is not dominant. The dominant species are perennial ryegrass (*Festuca*)

<sup>&</sup>lt;sup>3</sup> Waters of the U.S., including wetlands, are regulated by the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act, and by Regional Water Quality Control Boards under Section 401 of the Clean Water Act. Waters of the state, including wetlands, are more broadly defined than federal waters, and are regulated by the Regional Water Quality Control Board under California's Porter-Cologne Water Quality Control Act and bt he California Department of Fish and Wildlife under Section 1600 *et seq.* of the California Fish and Game Code.

<sup>&</sup>lt;sup>4</sup> The OHWM is the line on the shores established by the fluctuations of water and indicated by physical characteristics such as: a clear natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas (USACE, 2006).

*perennis*), a facultative indicator species, and rattail fescue (*Festuca myuros*), an upland indicator species. The soil in this location bore no indications of having formed under prolonged periods of inundation or soil saturation (i.e., a pale soil color of 10YR 4/3<sup>5</sup> with no evidence of reduction or oxidation during periodic or prolonged inundated or saturated conditions), and no hydrological indications of flooding, ponding, relatively persistent flow, or periodic high groundwater. These observations are consistent with the anecdotal descriptions of brief, ephemeral storm flows.

A second small patch of rabbitsfoot grass is situated near a well head, where it is the dominant vegetation in association with facultative and upland indicator species. A small patch of creeping wildrye and California sycamore, both facultative indicator species, also occurs nearby. At this location, somewhat elevated soil moisture regime would be expected as a result of the occasional discharges from the well, although the well does not appear to be in use anymore. However, similar to the culvert location, soil and hydrology indicators of periodic inundation or soil saturation also were absent.

The drainage feature was characterized in a geologic reconnaissance report as a "surface water drainage" that may convey sheet flow during intense or long-duration rainfall, but that the majority of rainwater infiltrates (Geo-Logic Associates, 2016). The report confirmed the absence of geomorphic features that would indicate ongoing or seasonal transport of alluvial sediment by flowing water within a channel. These independent observations corroborate those of the present survey.

## SANTA CLARA COUNTY HABITAT AGENCY

The Santa Clara Valley Habitat Plan, administered by the Santa Clara County Habitat Agency<sup>6</sup>, provides the cities of Gilroy, Morgan Hill, and San José, the County of Santa Clara, the Santa Clara Valley Transportation Authority, the Santa Clara Valley Water District and the Habitat Agency with permits for project-specific impacts to Habitat Plan species. The County and cities can extend their permits to activities on private property through a standardized and streamlined permitting process. The Plan removes the need to obtain wildlife agency approvals and reduces the number and scope of required biological studies. Fees are used to purchase lands for habitat conservation and carry out other Plan implementation tasks.

The Habitat Plan classifies the land as predominantly Orchard, and partially Rural Residential (see Figure 5), which was verified by during the present survey. The parcel is located in the Habitat Plan's Fee Zone B (Agricultural and Valley Floor Lands), which imposes development fees of \$13,982 per acre, assessed on the full extent of the parcel (i.e. for projects less than 10 acres, there is no pro-rated discount for an undeveloped portion or

<sup>&</sup>lt;sup>5</sup> Soil colors based on Munsell Color, 1994, Munsell Soil Color Charts, Kollmorgan Corporation, New York, NY.

<sup>&</sup>lt;sup>6</sup> http://scv-habitatagency.org/

temporary impacts). There are no additional fees, surveys or special habitat overlays mapped within the study area, as follows:

- No Burrowing Owl fee zone
- No wetland or serpentine fee zone
- No required plant and wildlife surveys
- Not within a stream buffer or setback
- Not within a mapped valley oak and blue oak woodland area
- Not within an Urban Reserve System Interface Zone
- Within the Urban Service Area and the within Limits of Urban Growth

## CONCLUSIONS

Because of the site's historic use as an orchard, alteration of natural vegetation by annual disking, and its rural residential neighborhood setting with a lack of continuity with other non-developed or natural habitats, there are no significant biological constraints to future development.

Development of the property would require removal trees, which could result in direct mortalities of special-status animal species listed above, primarily nesting birds and bats, if present at the time of construction. However, the standard impact avoidance and minimization measures outlined below can be incorporated into the project design to reduce such impacts to a less-than-significant level pursuant to the guidelines of CEQA as well as to comply with State laws. These measures are relatively standard and should not pose an unreasonable burden on project implementation.

## Implications of the Proposed Project: Special-Status and Migratory Birds

Within the study area, orchard trees, large oaks and one sycamore provide nesting habitat for **special-status bird species**, **as well as numerous other migratory bird species**. Site clearing activities (e.g., structure demolition, site clearing, grading, and tree removal or pruning) could result in direct or indirect impacts to nesting birds by causing the destruction or abandonment of occupied nests. To ensure compliance with the MBTA/MBTRA and the CFGC the measures outlined below shall be performed.

- 1. If demolition, site clearing, grading or tree removal or pruning are to be conducted outside of the breeding season (i.e., September 1 through January 31), no preconstruction surveys for nesting migratory birds is necessary.
- 2. If demolition, site clearing, grading or tree removal or pruning are to be conducted during the breeding season (i.e., February 1 through August 31), a preconstruction nesting bird survey shall be conducted. The survey shall be performed by a qualified biologist no more than two weeks prior to the initiation of work. If no nesting or breeding activity is observed, work may proceed without restrictions. To the extent allowed by access, all active nests identified within 92 m (300 ft) for raptors and 31 m (100 ft) for passerines shall be mapped.

3. For any active nests found near the construction limits (i.e., 92 m [300 ft for raptors and 31 m [100 ft] for passerines) the project biologist shall make a determination as to whether or not construction activities are likely to disrupt reproductive behavior. If it is determined that construction is unlikely to disrupt breeding behavior, construction may proceed. If it is determined that construction may disrupt breeding, the no-construction buffer zone shall be expanded; avoidance is the only mitigation available. The ultimate size of the no-construction buffer zone may be adjusted by the project biologist based on the species involved, topography, lines of site between the work area and the nest, physical barriers, and the ambient level of human activity.

If it is determined that construction activities are likely to disrupt raptor breeding, construction activities within the no-construction buffer zone may not proceed until the project biologist determines that the nest is long longer occupied.

4. If maintenance of a no-construction buffer zone is not feasible, the project biologist shall monitor the nest(s) to document breeding and rearing behavior of the adult birds. If it is determined that construction activities are likely to cause nest abandonment, work shall cease immediately and the CDFW and/or the USFWS Division of Migratory Bird Management shall be contacted for guidance.

With the incorporation of these measures, impacts to special-status and other migratory bird species would be reduced to a less-than-significant level pursuant to the guidelines of CEQA.

## Implications for Future Development: Impacts on Special-Status Bats

Structure demolition and the removal or pruning of large trees could result in the destruction of roosts or disruption of breeding of special-status bats such as the hoary bat, pallid bat, and Townsend's big-eared bat. In addition, disturbance during the maternity roosting season could result in potential roost abandonment and mortality of young. Prior to the removal or pruning of mature trees, or the commencement of construction activities within 33 m (100 ft) or mature trees, the following avoidance measures shall be performed.

- 1. <u>Bat Habitat Assessment</u>. If work is to take place during the bat breeding season (April 1 through August 31), a qualified biologist shall conduct a survey of the project site and vicinity to determine if active maternity roosts are present. This survey shall be conducted no more than 14 days prior to the initiation of work.
- 2. <u>Maternal Roosts</u>. If any trees or structures are determined to support or potentially support maternal bat roosts, work may not proceed if it would destroy or disrupt breeding. Maternal bat roosts may only be removed or demolished after coordination with the CDFW and/or the USFWS. Passive exclusion of roosting bats would be required and this may only be performed during the non-breeding season (i.e., between October 1 and March 30).

- 3. <u>Preconstruction Survey</u>. A preconstruction survey shall be conducted by a qualified biologist to identify suitable bat roosting sites. The survey should be performed no more than 48 hours prior to the initiation of work. The study area should include an area extending up to 33 m (100 ft) of the limits of work, access permitting.
- 4. <u>Protocol for Observations of Live Bats</u>. If live bats are detected in the work area, work may not proceed until CDFW has been consulted. Contractor or others may not attempt to disturb (e.g., shake, prod) roosting features to coax bats to leave. Such actions would constitute "harassment" under the California Code of Regulations (CCR).<sup>7</sup>
- 5. <u>Day or Night Roosts</u>. Any trees determined to provide suitable day or night roosting sites for bats shall be identified and marked on site plans. Such roosting sites include snags, rotten stumps, and decadent trees with broken limbs, exfoliating bark, cavities, and openings leading to interior portions of any structures. If no suitable roost sites or evidence of bat roosting are identified, impact minimization measures are not warranted. If suitable roosting sites or evidence of bat roosting sites or evidence of bat roosting measures shall be conducted in coordination with CDFW:
  - a. A qualified biologist shall survey suitable roost sites immediately prior to the removal or significant pruning of any of the larger trees, or demolition or significant renovation of any structures.
  - b. If the project biologist identifies suitable day or night roost sites or evidence of bat occupation, the following steps shall be followed to discourage use of the sites by bats and to ensure that any bats present are able to safely relocate.

For trees:

- Tree limbs smaller than 7.6 cm (3 in) in diameter shall be removed and any loose bark shall be peeled away.
- Any competing limbs that provide shelter around the potential roost site shall be removed to create as open of an area as possible.
- The tree shall then be alone to allow any bats using the tree/snag to find another roost during their nocturnal activity period.
- Trees shall be re-surveyed 48 hours after trimming.
- If no bats are present, work may proceed.
- If bats remain on site, additional measures would be prescribed by the biologist.

<sup>&</sup>lt;sup>7</sup> 14 CCR § 251.1 states: Except as otherwise authorized in these regulations or in the Fish and Game Code, no person shall harass, herd or drive any game or nongame bird or mammal or furbearing mammal. For the purposes of this section, harass is defined as an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering.

With the incorporation of the measures outlined above, potential impacts to special-status bats would be reduced to a less-than-significant level pursuant to the guidelines of CEQA.

#### **Implications for Future Development: Impacts on Protected Trees**

The City of Morgan Hill Municipal Code section 18.44.110 requires a permit for removal or pruning of "Significant trees", which are defined as indigenous species with a trunk circumference of 18 inches measured 4.5 feet above the ground (an approximately 6-inch diameter trunk). Indigenous trees include two large oaks located along the northeast property boundary, and a large sycamore located along the southwest boundary.

If you have any questions, please don't hesitate to call me at (415) 254-4835.

Sincerely,

Chris Rogers

Enclosures: References Figure 1 – Study Area Location Figure 2 – Limits of Study Area Figure 3 – Special Status Plants Figure 4 – Special Status Animals Figure 5 – Santa Clara Valley Habitat Authority Land Cover Database print-outs from the CNDDB, CNPS and USFWS

#### REFERENCES

- California Native Plant Society (CNPS). 2018. *Inventory of Rare and Endangered Plants* (online edition, v8-03. 0.39). Query for the Morgan Hill, Lick Observatory, Isabel Valley, Santa Teresa Hills, Loma Prieta, San Jose East, Mt. Sizer, Mt. Madonna, and Gilroy 7.5-minute USGS quadrangles (Santa Clara County). California Native Plant Society, Sacramento, CA. Accessed June 18 at <a href="http://www.rareplants.cnps.org/">www.rareplants.cnps.org/</a>
- California Natural Diversity Database (CNDDB). 2018. Query for the Morgan Hill, Lick Observatory, Isabel Valley, Santa Teresa Hills, Loma Prieta, San Jose East, Mt. Sizer, Mt. Madonna, and Gilroy 7.5-minute USGS quadrangles (Santa Clara County). RareFind 5.0. California Department of Fish and Wildlife, Biogeographic Data Branch. Sacramento, California. Information dated June 18.
- Geo-Logic Associates. 2016. Geologic *Reconnaissance of Surface Water Drainage, Lands of Silvas,* 1100 Llagas Drive, Morgan Hill. Letter report to Yancey and Lorinda Silvas. Sept. 14.
- Holland, R. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California.* California Department of Fish and Game, The Resources Agency. 156 pp. Available on line at <a href="http://www.cal-ipc.org/ip/inventory/pdf/HollandReport.pdf">http://www.cal-ipc.org/ip/inventory/pdf/HollandReport.pdf</a>
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X <u>http://wetland-plants.usace.army.mil/</u>
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation* (2<sup>nd</sup> edition). California Native Plant Socety, Sacramento. 1300 pp. Available online at <u>http://vegetation.cnps.org/</u>
- United States Fish and Wildlife Service (USFWS). 2018. *IPaC Trust Resource Report for the Sabini Court Property, Morgan Hill*. Information for Planning and Conservation. Version 3.0.2. Report generated June 18 at <u>https://ecos.fws.gov/ipac/</u>

## Figure 1. Study Area Location



County of Santa Clara | City of San Jose, County of Santa Clara, County of Santa Cruz, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



## FISH and WILDLIFE BIOS

## Figure 3. Special-Status Plant Records from the Project Vicinity



Wood Biological Consulting

#### FISH and WILDLIFE BIOS Figure 4. Special-Status Animal Records from the Project Vicinity anyon 4.Pd 740 Hall Rd 101 ╋ California tiger salamander American badger Madrone oc hran Plaza Live Oak High School MoinAve Jarvis Dr Willow CochraneiR South Jalley Faily SUMER Springs Noneley Pd Canyon Blvd Del Nonie Belletto Dr Christe,o Bay checkerspot butterfly onterey st 0 Opler's longhorn moth Bulleren Bist 101 burrowing owl Hom's micro-blind harvestman Wroth Ave 2 RY EDUM Diara Ave 10 Historic Galvan **PROJECT SITE** Park Morgan Hill Oslly W DUNNE AVE apilling Church St coast horned lizard Spring Ave Ches western bumble bee Oak Glen EI Toro Lake DI Tennant Ave Shibeld Di Llagas Creek California tiger salamander the reithe 0.2 0 burrowing owl

Wood Biological Consulting

## SANTA CLARA VALLEY Habitat Agency Geobrowser

## Figure 5 - HCP Land Cover



#### RareFind FISH and WILDLIFE

Query Summary: Quad IS (Morgan Hill (3712126) OR Gilroy (3712115) OR Lick Observatory (3712136) OR Santa Teresa Hills (3712127) OR Mt. Sizer (3712125) OR Mt. Madonna (3712116) OR San Jose East (3712137) OR Loma Prieta (3712117) OR Isabel Valley (3712135))



CNDDB Element Query Results												
Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Adela oplerella	Opler's longhorn moth	Insects	IILEE0G040	14	8	None	None	G2	S2	null	null	Ultramafic, Valley & foothill grassland
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	951	5	None	Candidate Endangered	G2G3	S1S2	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_EN- Endangered, NABCI_RWL- Red Watch List, USFWS_BCC- Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Ambystoma californiense	California tiger salamander	Amphibians	AAAAA01180	1178	100	Threatened	Threatened	G2G3	S2S3	null	CDFW_WL- Watch List, IUCN_VU- Vulnerable	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland
Ammodramus savannarum	grasshopper sparrow	Birds	ABPBXA0020	25	1	None	None	G5	S3	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern	Valley & foothill grassland
Amsinckia Iunaris	bent-flowered fiddleneck	Dicots	PDBOR01070	86	1	None	None	G3	S3	1B.2	BLM_S- Sensitive	Cismontane woodland, Coastal bluff scrub, Valley & foothill grassland
Aneides niger	Santa Cruz black salamander	Amphibians	AAAAD01070	78	12	None	None	G3	S3	null	CDFW_SSC- Species of Special Concern	null
Anniella pulchra	northern California legless lizard	Reptiles	ARACC01020	333	1	None	None	G3	S3	null	CDFW_SSC- Species of Special Concern, USFS_S- Sensitive	Chaparral, Coastal dunes, Coastal scrub
Anodonta californiensis	California floater	Mollusks	IMBIV04020	6	1	None	None	G3Q	S2?	null	USFS_S- Sensitive	Aquatic
Antrozous pallidus	pallid bat	Mammals	AMACC10010	415	7	None	None	G5	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, USFS_S- Sensitive, WBWG_H- High Priority	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Aquila	golden eagle	Birds	ABNKC22010	320	7	None	None	G5	S3	null	BLM_S-	Broadleaved

Dicots	PDPOR09052 PDCAM020A0	11 32	5	None	None	G3G4T2 G2	S2 S2	1B.1 1B.2	BLM_S- Sensitive, SB_RSABG- Rancho Santa Ana Botanic Garden	Cismontane woodland Chaparral, Ultramafic
Dicots	PDPOR09052	11	2	None	None	G3G4T2	S2	1B.1	Sensitive	Cismontane woodland
			1		1	1			BIM S.	Chaparral,
Birds	ABNKC19070	2460	1	None	Threatened	G5	S3	null	BLM_S- Sensitive, IUCN_LC- Least Concern, USFWS_BCC- Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
e Insects	IIHYM24250	282	4	None	None	G2G3	S1	null	USFS_S- Sensitive, XERCES_IM- Imperiled	null
e Insects	IIHYM24480	234	3	None	None	G3G4	S1S2	null	null	null
Insects	IIHYM24380	181	3	None	None	G4?	S1S2	null	IUCN_VU-	null
Dicots	PDAST11061	50	6	None	None	G2	S2	1B.2	BLM_S- Sensitive, USFS_S- Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
owl Birds	ABNSB10010	1971	25	None	None	G4	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, USFWS_BCC- Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
ke Reptiles	ARADB01017	260	1	None	None	G5T2	S2	null	CDFW_SSC- Species of Special Concern	null
Birds	ABNGA04010	154	4	None	None	G5	S4	null	CDF_S- Sensitive, IUCN_LC- Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Birds	ABNGA04040	43	1	None	None	G5	S4	null	CDF_S- Sensitive, IUCN_LC- Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Dicots	PDERI04030	58	13	None	None	G2	S2	1B.2	SB_RSABG- Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Chaparral, North coast coniferous forest
									CDF_S- Sensitive, CDFW_FP- Fully Protected, CDFW_WL- Watch List, IUCN_LC- Least Concern, USFWS_BCC- Birds of Conservation Concern	Cismontane woodland, Coastal prairie, Great Basin grassland, Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland
	S Dicots t Birds Birds ake Reptiles	SDicotsPDERI04030tBirdsABNGA04040lBirdsABNGA04010lkeReptilesARADB01017	SDicotsPDERI0403058tBirdsABNGA0404043keReptilesARADB01017260	SDicotsPDERI040305813tBirdsABNGA04040431keReptilesARADE010172601	SDicotsPDERI040305813NonetBirdsABNGA04040431NoneakeReptilesARADB010172601None	SDicotsPDERI040305813NoneNonetBirdsABNGA04040431NoneNoneukeReptilesARADB010172601NoneNone	SDicotsPDERI040305813NoneNoneG2tBirdsABNGA04040431NoneNoneG5ukeReptilesARADB010172601NoneNoneG5T2	Image: Second stateImage: Second	Image: Second	SDicotsPDERI040305813NoneNoneG2S218.2Sensitive, CDF S-Sensitive, CDFW_MLSDicotsPDERI040305813NoneNoneG2S218.2SB_RSABG-Rancho Sensitive, Concern, USFWS_BCC-Birds of ConcerntBirdsABNGA04040431NoneNoneG5S4nullCDF_S-Sensitive, Concern, ConcerntBirdsABNGA040101544NoneNoneG5S4nullCDF_S-Sensitive, UCN LC-Least ConcernikeReptilesARADB010172601NoneNoneG5T2S2nullCDF_Sensitive, UCN LC-Least ConcernikeReptilesARADB010172601NoneNoneG5T2S2nullCDF_Sensitive, UCN LC-Least ConcernikeReptilesARADB010172601NoneNoneG5T2S2nullCDF_Sepcies of Species of Species of Species of Concern

											Botanical Garden	
Castilleja rubicundula var. rubicundula	pink creamsacs	Dicots	PDSCR0D482	30	1	None	None	G5T2	S2	1B.2	BLM_S- Sensitive	Chaparral, Cismontane woodland, Meadow & seep, Ultramafic, Valley & foothill grassland
Ceanothus ferrisiae	Coyote ceanothus	Dicots	PDRHA041N0	4	4	Endangered	None	G1	S1	1B.1	SB_RSABG- Rancho Santa Ana Botanic Garden	Chaparral, Coastal scrub, Ultramafic, Valley & foothill grassland
Centromadia parryi ssp. congdonii	Congdon's tarplant	Dicots	PDAST4R0P1	93	1	None	None	G3T2	S2	1B.1	BLM_S- Sensitive, SB_RSABG- Rancho Santa Ana Botanic Garden	Valley & foothill grassland
Chlorogalum pomeridianum var. minus	dwarf soaproot	Monocots	PMLIL0G042	31	1	None	None	G5T3	S3	1B.2	BLM_S- Sensitive, SB_SBBG- Santa Barbara Botanic Garden, USFS_S- Sensitive	Chaparral, Ultramafic
Chorizanthe pungens var. pungens	Monterey spineflower	Dicots	PDPGN040M2	51	2	Threatened	None	G2T2	S2	1B.2	SB_UCBBG- UC Berkeley Botanical Garden	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub, Valley & foothill grassland
Chorizanthe robusta var. robusta	robust spineflower	Dicots	PDPGN040Q2	20	1	Endangered	None	G2T1	S1	1B.1	BLM_S- Sensitive	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal dunes
Cirsium fontinale var. campylon	Mt. Hamilton fountain thistle	Dicots	PDAST2E163	36	24	None	None	G2T2	S2	1B.2	BLM_S- Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Clarkia concinna ssp. automixa	Santa Clara red ribbons	Dicots	PDONA050A1	20	7	None	None	G5?T3	S3	4.3	null	Chaparral, Cismontane woodland
Collinsia multicolor	San Francisco collinsia	Dicots	PDSCR0H0B0	36	3	None	None	G2	S2	1B.2	SB_RSABG- Rancho Santa Ana Botanic Garden	Closed-cone coniferous forest, Coastal scrub, Ultramafic
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	626	5	None	None	G3G4	S2	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, USFS_S- Sensitive, WBWG_H- High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Coturnicops noveboracensis	yellow rail	Birds	ABNME01010	45	1	None	None	G4	S1S2	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern,	Freshwater marsh, Meadow & seep

											NABCI_RWL- Red Watch List, USFS_S- Sensitive, USFWS_BCC- Birds of Conservation Concern	
Cypseloides niger	black swift	Birds	ABNUA01010	46	1	None	None	G4	S2	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, NABCI_YWL- Yellow Watch List, USFWS_BCC- Birds of Conservation Concern	null
Delphinium californicum ssp. interius	Hospital Canyon larkspur	Dicots	PDRAN0B0A2	28	4	None	None	G3T3	S3	1B.2	null	Chaparral, Cismontane woodland, Coastal scrub, Meadow & seep
Dicamptodon ensatus	California giant salamander	Amphibians	AAAAH01020	232	10	None	None	G3	S2S3	null	CDFW_SSC- Species of Special Concern, IUCN_NT- Near Threatened	Aquatic, Meadow & seep, North coast coniferous forest, Riparian forest
Dipodomys venustus venustus	Santa Cruz kangaroo rat	Mammals	AMAFD03042	14	1	None	None	G4T1	S1	null	null	Chaparral
Dudleya abramsii ssp. setchellii	Santa Clara Valley dudleya	Dicots	PDCRA040Z0	58	52	Endangered	None	G4T2	S2	1B.1	SB_RSABG- Rancho Santa Ana Botanic Garden	Cismontane woodland, Ultramafic, Valley & foothill grassland
Egretta thula	snowy egret	Birds	ABNGA06030	20	1	None	None	G5	S4	null	IUCN_LC- Least Concern	Marsh & swamp, Meadow & seep, Riparian forest, Riparian woodland, Wetland
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	175	9	None	None	G5	S3S4	null	BLM_S- Sensitive, CDFW_FP- Fully Protected, IUCN_LC- Least Concern	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1344	50	None	None	G3G4	S3	null	BLM_S- Sensitive, CDFW_SSC- Species of Special Concern, IUCN_VU- Vulnerable, USFS_S- Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Eriastrum tracyi	Tracy's eriastrum	Dicots	PDPLM030C0	119	3	None	Rare	G3Q	S3	3.2	USFS_S- Sensitive	Chaparral, Cismontane woodland, Valley & foothill grassland
Eryngium aristulatum var. hooveri	Hoover's button-celery	Dicots	PDAPI0Z043	16	1	None	None	G5T1	S1	1B.1	SB_RSABG- Rancho Santa Ana Botanic Garden	Vernal pool, Wetland
Euphilotes enoptes smithi	Smith's blue butterfly	Insects	IILEPG2026	68	1	Endangered	None	G5T1T2	S1S2	null	XERCES_CI- Critically	Coastal dunes, Coastal scrub

											Imperiled	
Euphydryas editha bayensis	Bay checkerspot butterfly	Insects	IILEPK4055	30	17	Threatened	None	G5T1	S1	null	XERCES_CI- Critically Imperiled	Coastal dunes, Ultramafic, Valley & foothill grassland
Fritillaria liliacea	fragrant fritillary	Monocots	PMLIL0V0C0	82	10	None	None	G2	S2	1B.2	USFS_S- Sensitive	Cismontane woodland, Coastal prairie, Coastal scrub, Ultramafic, Valley & foothill grassland
Hoita strobilina	Loma Prieta hoita	Dicots	PDFAB5Z030	34	22	None	None	G2	S2	1B.1	null	Chaparral, Cismontane woodland, Riparian woodland, Ultramafic
Icteria virens	yellow- breasted chat	Birds	ABPBX24010	97	1	None	None	G5	S3	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern	Riparian forest, Riparian scrub, Riparian woodland
Lanius Iudovicianus	loggerhead shrike	Birds	ABPBR01030	109	1	None	None	G4	S4	null	CDFW_SSC- Specias of Special Concern, IUCN_LC- Least Concern, USFWS_BCC- Birds of Conservation Concern	Broadleaved upland forest, Desert wash, Joshua tree woodland, Mojavean desert scrub, Pinon & juniper woodlands, Riparian woodland, Sonoran desert scrub
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	236	3	None	None	G5	S4	null	IUCN_LC- Least Concern, WBWG_M- Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Lasthenia conjugens	Contra Costa goldfields	Dicots	PDAST5L040	33	1	Endangered	None	G1	S1	1B.1	SB_UCBBG- UC Berkeley Botanical Garden	Alkali playa, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
Lavinia symmetricus subditus	Monterey roach	Fish	AFCJB19026	6	1	None	None	G4T2T3	S2S3	null	CDFW_SSC- Species of Special Concern	Aquatic, Sacramento/San Joaquin flowing waters, South coast flowing waters
Legenere limosa	legenere	Dicots	PDCAM0C010	83	1	None	None	G2	S2	1B.1	BLM_S- Sensitive	Vernal pool, Wetland
Leptosyne hamiltonii	Mt. Hamilton coreopsis	Dicots	PDAST2L0C0	21	10	None	None	G2	S2	1B.2	BLM_S- Sensitive	Cismontane woodland
Lessingia micradenia var. glabrata	smooth lessingia	Dicots	PDAST5S062	41	37	None	None	G2T2	S2	1B.2	null	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Lomatium observatorium	Mt. Hamilton Iomatium	Dicots	PDAPI1B2J0	4	2	None	None	G1	S1	1B.2	null	Cismontane woodland
Malacothamnus arcuatus	arcuate bush- mallow	Dicots	PDMAL0Q0E0	30	10	None	None	G2Q	S2	1B.2	null	Chaparral, Cismontane woodland
Malacothamnus hallii	Hall's bush- mallow	Dicots	PDMAL0Q0F0	36	16	None	None	G2	S2	1B.2	BLM_S- Sensitive	Chaparral, Coastal scrub, Ultramafic
Meconella oregana	Oregon meconella	Dicots	PDPAP0G030	9	1	None	None	G2G3	S2	1B.1	null	Coastal prairie, Coastal scrub
Microcina homi	Hom's micro- blind harvestman	Arachnids	ILARA47020	5	5	None	None	G1	S1	null	null	Ultramafic, Valley & foothill grassland
Microcina jungi	Jung's micro- blind	Arachnids	ILARA47030	1	1	None	None	G1	S1	null	null	Ultramafic, Valley & foothill

	harvestman											grassland
Monolopia gracilens	woodland woollythreads	Dicots	PDAST6G010	57	15	None	None	G3	S3	1B.2	null	Broadleaved upland forest, Chaparral, Cismontane woodland, North coast coniferous forest, Ultramafic, Valley & foothill grassland
Myotis evotis	long-eared myotis	Mammals	AMACC01070	139	1	None	None	G5	S3	null	BLM_S- Sensitive, IUCN_LC- Least Concern, WBWG_M- Medium Priority	null
Myotis yumanensis	Yuma myotis	Mammals	AMACC01020	263	1	None	None	G5	S4	null	BLM_S- Sensitive, IUCN_LC- Least Concern, WBWG_LM- Low-Medium Priority	Lower montane coniferous forest, Riparian forest, Riparian woodland, Upper montane coniferous forest
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	Mammals	AMAFF08082	34	15	None	None	G5T2T3	S2S3	null	CDFW_SSC- Species of Special Concern	Chaparral, Redwood
Nycticorax nycticorax	black- crowned night heron	Birds	ABNGA11010	37	1	None	None	G5	S4	null	IUCN_LC- Least Concern	Marsh & swamp, Riparian forest, Riparian woodland, Wetland
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Fish	AFCHA0209G	44	2	Threatened	None	G5T2T3Q	S2S3	null	AFS_TH- Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	Fish	AFCHA0209H	32	3	Threatened	None	G5T2Q	S2	null	AFS_TH- Threatened	Aquatic, Sacramento/San Joaquin flowing waters, South coast flowing waters
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	Dicots	PDSCR1L5B1	6	3	None	None	G4T2	S2	1B.2	null	Chaparral, Lower montane coniferous forest, North coast coniferous forest
Pentachaeta exilis ssp. aeolica	San Benito pentachaeta	Dicots	PDAST6X041	16	2	None	None	G5T2	S2	1B.2	BLM_S- Sensitive, SB_SBBG- Santa Barbara Botanic Garden, USFS_S- Sensitive	Cismontane woodland, Valley & foothill grassland
Phacelia phacelioides	Mt. Diablo phacelia	Dicots	PDHYD0C3Q0	16	4	None	None	G2	S2	1B.2	BLM_S- Sensitive	Chaparral, Cismontane woodland, Ultramafic
Phrynosoma blainvillii	coast horned lizard	Reptiles	ARACF12100	774	7	None	None	G3G4	S3S4	null	BLM_S- Sensitive, CDFW_SSC- Special Concern, IUCN_LC- Least Concern	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland
Plagiobothrys glaber	hairless popcornflower	Dicots	PDBOR0V0B0	9	1	None	None	GH	ѕн	1A	null	Marsh & swamp, Salt marsh, Vernal pool, Wetland
Plagiobothrys verrucosus	warty popcornflower	Dicots	PDBOR0V1D0	4	3	None	None	G4G5	S1	2B.1	null	Chaparral
Rana boylii	foothill yellow- legged frog	Amphibians	AAABH01050	1885	15	None	Candidate Threatened	G3	S3	null	BLM_S- Sensitive,	Aquatic, Chaparral,

											CDFW_SSC- Species of Special Concern, IUCN_NT- Near Threatened, USFS_S- Sensitive	Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
Rana draytonii	California red- legged frog	Amphibians	AAABH01022	1497	71	Threatened	None	G2G3	S2S3	null	CDFW_SSC- Species of Special Concern, IUCN_VU- Vulnerable	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Sanicula saxatilis	rock sanicle	Dicots	PDAPI1Z0H0	7	4	None	Rare	G2	S2	1B.2	BLM_S- Sensitive	Broadleaved upland forest, Chaparral, Valley & foothill grassland
Senecio aphanactis	chaparral ragwort	Dicots	PDAST8H060	82	1	None	None	G3	S2	2B.2	null	Chaparral, Cismontane woodland, Coastal scrub
Serpentine Bunchgrass	Serpentine Bunchgrass	Herbaceous	CTT42130CA	22	4	None	None	G2	S2.2	null	null	Valley & foothill grassland
Streptanthus albidus ssp. albidus	Metcalf Canyon jewelflower	Dicots	PDBRA2G011	13	13	Endangered	None	G2T1	S1	1B.1	BLM_S- Sensitive, SB_RSABG- Rancho Santa Ana Botanic Garden	Ultramafic, Valley & foothill grassland
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Dicots	PDBRA2G012	103	40	None	None	G2T2	S2	1B.2	SB_RSABG- Rancho Santa Ana Botanic Garden, USFS_S- Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Streptanthus callistus	Mt. Hamilton jewelflower	Dicots	PDBRA2G0A0	4	4	None	None	G1G2	S1S2	1B.3	BLM_S- Sensitive	Chaparral, Cismontane woodland
Alluvial Woodland	Alluvial Woodland	Riparian	CTT62100CA	17	1	None	None	G1	S1.1	null	null	Riparian woodland
Taxidea taxus	American badger	Mammals	AMAJF04010	559	16	None	None	G5	S3	null	CDFW_SSC- Special Concern, IUCN_LC- Least Concern	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater

												marsh, Great Basin grassland, Great Basin scrub, Interior dunes, Ione formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Ulper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland
Trifolium buckwestiorum	Santa Cruz clover	Dicots	PDFAB402W0	50	3	None	None	G2	S2	1B.1	BLM_S- Sensitive, SB_USDA-US Dept of Agriculture	Broadleaved upland forest, Cismontane woodland, Coastal prairie
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	483	1	Endangered	Endangered	G5T2	S2	null	IUCN_NT- Near Threatened, NABCI_YWL- Yellow Watch List	Riparian forest, Riparian scrub, Riparian woodland
Vulpes macrotis mutica	San Joaquin kit fox	Mammals	AMAJA03041	1017	1	Endangered	Threatened	G4T2	S2	null	null	Chenopod scrub, Valley & foothill grassland

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Santa Clara County, California

## Local office

Sacramento Fish And Wildlife Office

**└** (916) 414-6600**i** (916) 414-6713

Federal Building 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846

# Endangered species

# This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME

San Joaquin Kit Fox Vulpes macrotis mutica No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/2873</u>

## Birds

NAME	STATUS
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/8104</u>	Endangered
Amphibians NAME	STATUS
California Red-legged Frog Rana draytonii There is final critical habitat for this species. Your location is outside the critical habitat. <u>https://ecos.fws.gov/ecp/species/2891</u>	Threatened
California Tiger Salamander Ambystoma californiense There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Fishes	
NAME	STATUS
Delta Smelt Hypomesus transpacificus There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Insects	
NAME	STATUS
Bay Checkerspot Butterfly Euphydryas editha bayensis There is final critical habitat for this species. Your location is outside the critical habitat. <u>https://ecos.fws.gov/ecp/species/2320</u>	Threatened

## **Flowering Plants**

NAME

<b>Coyote Ceanothus</b> Ceanothus ferrisae No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/8440</u>	Endangered
Metcalf Canyon Jewelflower Streptanthus albidus ssp. albidus No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/4186</u>	Endangered
Santa Clara Valley Dudleya Dudleya setchellii No critical habitat has been designated for this species. <u>https://ecos.fws.gov/ecp/species/3207</u>	Endangered

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Tiburon Paintbrush Castilleja affinis ssp. neglecta

https://ecos.fws.gov/ecp/species/2687

No critical habitat has been designated for this species.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty  $Act^{1}$  and the Bald and Golden Eagle Protection  $Act^{2}$ .

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The <u>Migratory Birds Treaty Act</u> of 1918.
- 2. The <u>Bald and Golden Eagle Protection Act</u> of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <u>http://www.fws.gov/birds/management/managed-species/</u> <u>birds-of-conservation-concern.php</u>
- Measures for avoiding and minimizing impacts to birds <u>http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/</u> <u>conservation-measures.php</u>
- Nationwide conservation measures for birds <u>http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf</u>

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds</u> of <u>Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

CON

NAME

Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1626

Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <u>https://ecos.fws.gov/ecp/species/9737</u> BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Breeds Feb 1 to Jul 15

Breeds Jan 1 to Aug 31

Breeds Mar 15 to Aug 31

Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds
<b>Common Yellowthroat</b> Geothlypis trichas sinuosa This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <u>https://ecos.fws.gov/ecp/species/2084</u>	Breeds
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <u>https://ecos.fws.gov/ecp/species/1680</u>	Breeds
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9464</u>	Breeds
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds
Long-billed Curlew Numenius americanus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/5511</u>	Breeds
Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <u>https://ecos.fws.gov/ecp/species/9410</u>	Breeds
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/9656</u>	Breeds
Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <u>https://ecos.fws.gov/ecp/species/8002</u>	Breeds

Breeds Jan 1 to Dec 31

Breeds May 20 to Jul 31

Breeds Jan 1 to Aug 31

Breeds Mar 20 to Sep 20

Breeds Apr 20 to Sep 30

Breeds elsewhere

Breeds Apr 1 to Jul 20

Breeds Mar 15 to Jul 15

Breeds elsewhere

<b>Song Sparrow</b> Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <u>https://ecos.fws.gov/ecp/species/4243</u>	Breeds Apr 15 to Jul 20
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 1
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 1
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31

5 to Aug 10

https://ecos.fws.gov/ecp/species/9726

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

## Probability of Presence (=)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any

week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

## Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

## Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

## No Data (--)

A week is marked as having no data if there were no survey events for that week.

## Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	<del> </del> #++	++++	++++	++1+	++-+	+ + + -	****	-++-	+ + + +	++++	++++	+-++
Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	+#+#	∎#+∎	++∎+	11+1	+1+1	1-1-	+++		++++		+##	+-++
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)	1111					+-+		1	117 17		0	
Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	+++++	+++!	0	ç				1 T P+	++++	++++	+-++
Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	TIBE	affer a	NUR+	<b>I</b> II++	+ + + +	4 - + -			+ • • •	+####	<b>]</b> +]]	I-II
Long-billed Curlew BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	+TTT	++++	++++	++++	+++	+	****	-++-	++++	++++	++++	++1
Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	<b>₩₩</b> + <b>₩</b>	₩₩₩+	1111	111	+ 1 + 1	+ I ·	1+1+	-	1++1		1111	1.+1

Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	1111	111	1111	1111	11-1	1-1-	++ 11	-11-	11+1	1111	1111	<b>-</b> -+ <b>1</b>
Rufous Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	+++1	++++	+++	++	****	-++-	++++	++++	++++	+++
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	IIII	11	1111	11-1	10-1	1-1-	<b>H</b> • <b>H</b> •		•••• < [	5	Ċ	th-y
Spotted Towhee BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	+115	*111	IIII	III	- C	2	S	<u>3</u> k		<b>#</b> ++ <b>#</b>	IIII	<b>1</b> • <b>1</b> +
Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)		-0		+11)	*1 ++	4 * * *			1+11		HERE	A A A A A A A A A A A A A A A A A A A
Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	<b>₩+Ⅲ</b> +	<b>†</b> ∎∎+	<b>II</b> ++ <u>I</u>	<u>[</u> ]+[]	44.04	t t-	<b>1</b> • + •		++++	++++	<b>II</b> ++	+-++
Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	1111	1111	1111	1111	11+1	1 • 1 •	1 + + +	-	111	1111	1111	1.1

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

<u>Nationwide Conservation Measures</u> describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. <u>Additional measures</u> and/or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

#### What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey, banding, and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>E-bird Explore Data Tool</u>.

## What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian</u> <u>Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey, banding, and citizen science</u> <u>datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: <u>The Cornell Lab of Ornithology All About Birds Bird Guide</u>, or (if you are unsuccessful in locating the bird of interest there), the <u>Cornell Lab of Ornithology Neotropical Birds</u> guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).
Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS</u> <u>Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf</u> project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam</u> <u>Loring</u>.

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures to migratory birds" at the bottom of your migratory bird trust resources page.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of</u> Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

TEORCONSULTATIO

# CNPS California Native Plant Society

### **Plant List**

### Inventory of Rare and Endangered Plants

58 matches found. Click on scientific name for details

### Search Criteria

Found in Quads 3712137, 3712136, 3712135, 3712127, 3712126, 3712125, 3712117 3712116 and 3712115;

### 

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<u>Acanthomintha</u> lanceolata	Santa Clara thorn-mint	Lamiaceae	annual herb	Mar-Jun	4.2	S4	G4
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S2S3	G2G3
<u>Androsace elongata</u> <u>ssp. acuta</u>	California androsace	Primulaceae	annual herb	Mar-Jun	4.2	S3S4	G5?T3T4
<u>Arctostaphylos</u> <u>andersonii</u>	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	1B.2	S2	G2
<u>Balsamorhiza</u> <u>macrolepis</u>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Calochortus umbellatus	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	4.2	S3?	G3?
<u>Calyptridium parryi var.</u> <u>hesseae</u>	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	1B.1	S2	G3G4T2
<u>Calystegia collina ssp.</u> <u>venusta</u>	South Coast Range morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	4.3	S4	G4T4
<u>Campanula exigua</u>	chaparral harebell	Campanulaceae	annual herb	May-Jun	1B.2	S2	G2
<u>Castilleja affinis var.</u> <u>neglecta</u>	Tiburon paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Jun	1B.2	S1S2	G4G5T1T2
<u>Castilleja rubicundula</u> var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Ceanothus ferrisiae	Coyote ceanothus	Rhamnaceae	perennial evergreen shrub	Jan-May	1B.1	S1	G1
<u>Centromadia parryi ssp.</u> <u>congdonii</u>	Congdon's tarplant	Asteraceae	annual herb	May- Oct(Nov)	1B.1	S2	G3T2
<u>Chlorogalum</u> <u>pomeridianum var.</u> <u>minus</u>	dwarf soaproot	Agavaceae	perennial bulbiferous herb	May-Aug	1B.2	S3	G5T3
<u>Chorizanthe douglasii</u>	Douglas' spineflower	Polygonaceae	annual herb	Apr-Jul	4.3	S4	G4
<u>Chorizanthe pungens</u> <u>var. pungens</u>	Monterey spineflower	Polygonaceae	annual herb	Apr-Jun(Jul- Aug)	1B.2	S2	G2T2
<u>Cirsium fontinale var.</u> <u>campylon</u>	Mt. Hamilton fountain thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	1B.2	S2	G2T2
<u>Clarkia breweri</u>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	4.2	S4	G4

<u>Clarkia concinna ssp.</u> <u>automixa</u>	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May- Jun(Jul)	4.3	S3	G5?T3
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar- May	1B.2	S2	G2
Cryptantha rattanii	Rattan's cryptantha	Boraginaceae	annual herb	Apr-Jul	4.3	S4	G4
<u>Cypripedium</u> <u>fasciculatum</u>	clustered lady's- slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Delphinium californicum ssp. interius	Hospital Canyon Iarkspur	Ranunculaceae	perennial herb	Apr-Jun	1B.2	S3	G3T3
<u>Dudleya abramsii ssp.</u> <u>setchellii</u>	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	1B.1	S2	G4T2
Elymus californicus	California bottle-brush grass	Poaceae	perennial herb	May- Aug(Nov)	4.3	S4	G4
<u>Eriastrum tracyi</u>	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2	S3	G3Q
<u>Eryngium aristulatum</u> <u>var. hooveri</u>	Hoover's button-celery	Apiaceae	annual / perennial herb	(Jun)Jul(Aug)	1B.1	S1	G5T1
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
<u>Galium andrewsii ssp.</u> g <u>atense</u>	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	Apr-Jul	4.2	S3	G5T3
Hoita strobilina	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug- Oct)	1B.1	S2	G2
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May	4.2	S3	G3
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
<u>Legenere limosa</u>	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S4?	G4?
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	4.2	S4	G4
<u>Leptosiphon</u> g <u>randiflorus</u>	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	4.2	S3S4	G3G4
<u>Leptosyne hamiltonii</u>	Mt. Hamilton coreopsis	Asteraceae	annual herb	Mar-May	1B.2	S2	G2
<u>Lessingia hololeuca</u>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S3?	G3?
<u>Lessingia micradenia</u> <u>var. glabrata</u>	smooth lessingia	Asteraceae	annual herb	(Apr-Jun)Jul- Nov	1B.2	S2	G2T2
<u>Lessingia tenuis</u>	spring lessingia	Asteraceae	annual herb	May-Jul	4.3	S4	G4
<u>Lomatium</u> observatorium	Mt. Hamilton lomatium	Apiaceae	perennial herb	Mar-May	1B.2	S1	G1
<u>Malacothamnus</u> <u>arcuatus</u>	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May- Sep(Oct)	1B.2	S2	G2
<u>Meconella oregana</u>	Oregon meconella	Papaveraceae	annual herb	Mar-Apr	1B.1	S2	G2G3
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
	Santa Cruz Mountains	Plantaginaceae	perennial herb	May-Jun	1B.2	S2	G4T2

<u>Penstemon rattanii var.</u> <u>kleei</u>	beardtongue						
<u>Pentachaeta exilis ssp.</u> <u>aeolica</u>	San Benito pentachaeta	Asteraceae	annual herb	Mar-May	1B.2	S2	G5T2
Phacelia phacelioides	Mt. Diablo phacelia	Hydrophyllaceae	annual herb	Apr-May	1B.2	S2	G2
<u>Plagiobothrys glaber</u>	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH
<u>Plagiobothrys</u> <u>verrucosus</u>	warty popcornflower	Boraginaceae	annual herb	Apr-May	2B.1	S1	G4G5
<u>Sanicula saxatilis</u>	rock sanicle	Apiaceae	perennial herb	Apr-May	1B.2	S2	G2
<u>Senecio aphanactis</u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
<u>Streptanthus albidus</u> <u>ssp. albidus</u>	Metcalf Canyon jewelflower	Brassicaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
<u>Streptanthus albidus</u> <u>ssp. peramoenus</u>	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr- Sep(Oct)	1B.2	S2	G2T2
Streptanthus callistus	Mt. Hamilton jewelflower	Brassicaceae	annual herb	Apr-May	1B.3	S1S2	G1G2
<u>Trifolium amoenum</u>	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	1B.1	S2	G2

#### **Suggested Citation**

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#### Contributors

<u>The California Database</u> <u>The California Lichen Society</u> <u>California Natural Diversity Database</u> <u>The Jepson Flora Project</u> <u>The Consortium of California Herbaria</u> <u>CalPhotos</u>

### Questions and Comments rareplants@cnps.org

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# Appendix C

**Arborist Report** 





License #678321 ~ Arborist #WE-6620A ~ Insured PL/PD ~ Workers Compensation ~ 408-722-8942 ~ arborist@garlic.com ~ moki@smithtreespecialists.com

August 12, 2018

Fritz Geier Geier & Geier Consulting, Inc 12 Chancellor Place Berkeley, CA 94705 510-644-2535 office 510-717-5155 cell fgeier@geierconsulting.com

Property at: 1100 Llagas Rd X Sabini Ct Morgan Hill APN #773-32-013

As per your request we visited the site shown above in order to make observations and recommendations regarding the condition and preservation of trees located there.

All trees to be retained should have the individual considerations provided within the report as well as the Construction Site Tree Preservation measures which are delineated on page 5 and followed throughout the remaining planning and construction process as conditions for approval by the City of Morgan Hill including fencing and cultural care.

Tree tagged #11990 is an Oak tree located near the proposed bioretention basin on Lot 2. There is a conflict between the location of the basin and the Oak tree there. We recommend relocation of the basin on Lot 2 and / or the use of a buried rain tank or infiltration piping that will perform similarly to the bioretention basin for this lot. An option may be the use of sub-grade detention and infiltration piping in the access road.

Trees tagged #11988 and 11989 are 2 Oaks adjoining the site to the north where an on-site access road will be and there is a conflict between the road on the site and the trees. We recommend moving the upper section of the access road to avoid these two trees as indicated on map.

In the event that the relocation/re-alignment is not feasible, and the Oaks must be removed, the City of Morgan Hill will require a permit for removal which will include a minimum charge of \$115 per tree and will require replacement planting of trees on site. Landscape installation may include trees sufficient for compliance but planting/replacement will require city approval. Minimum of three 24" box Quercus species per tree removed and replacement overseen and verified with an ISA certified arborist and the city of Morgan Hill should be included as conditions for approval for removal of trees.

The parcel adjoining the project site to the north/northeast is in the county and will be proposed for annexation at some point in the future. The provision of Emergency Vehicle Access is proposed to be provided by the site's access road as shown on noted site map on the north end of the proposed access roadway. However, the City has an agreement for an easement to the adjoining property on the northeast side of this project site. Since that adjoining property is served by a driveway from Teresa Ln. / Llagas Rd. an EVA easement could be designated along the northern property line to connect to the neighboring driveway for emergency access. This adjustment to the plan could serve to avoid the upper 2 Oak trees #11988 and 11989.

All other trees on site with the exception of trees #11979, 11980 and 11981 are not identified as significant and can be removed to facilitate construction. Protected and indigenous trees should be replaced with a tree of at least 24" box and replacement overseen and verified with an ISA certified arborist and the city of Morgan Hill as conditions of approval.

Please feel free to request any additional information or clarification.

Respectfully submitted,

Moki Smith Smith Tree Specialists, Inc Arborist #WE-6620

<u>11979.</u>	Common Nam	e Species	D.B.H.	Height	Canopy Spread	Condition
	Valley oak	Quercus lobata	8"	23'	14'	Good

### Observations:

Recommendations:

Remove to facilitate construction.

Replace with a tree of at least 24" box and replacement to be overseen and verified with an ISA certified arborist and the city of Morgan Hill as conditions of approval.

<u>11980.</u>	Common Name	e Species	D.B.H.	Height	Canopy Spread	Condition
	Valley oak	Quercus lobata	17"	30'	37'	Good

### Observations:

Recommendations:

Remove to facilitate construction.

Replace with a tree of at least 24" box and replacement to be overseen and verified with an ISA certified arborist and the city of Morgan Hill as conditions of approval.

<u>11981.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	Condition
	Sycamore	Platanus occidentalis	88''	32'	60'	Fair

### **Observations:**

This tree has a multi leader main stem with 5 main uprights.

It appears that this tree is actually growth from epicormic shoots subsequent to a removal in the past. Epicormic shoot growth is not stable, and is susceptible to included bark, pest and fungus infestation often resulting in failure at the base.

### **Recommendations:**

Remove

<u>11982.</u>	Common Name	e Species	D.B.H.	Height	Canopy Spread	<b>Condition</b>
	Olive	Oleo europaea	2"	18'	23'	Fair
Observa This tree <u>Recomn</u> Remove	<b>itions:</b> is not significant <b>nendations:</b> e	within the city code.				
<u>11983.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	Condition
	Olive	Oleo europaea	4"	12'	15'	Good
Observo This tree Recomn	<u>itions:</u> is not significant <sup>,</sup>	within the city code.				

<u>11984.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	<b>Condition</b>
	Olive	Olea europaea	2"	10'	8'	Good
Observ	ations					
This tree	<u>afions:</u> > is not significant w	ithin the city code				
Recom	mendations:					
Remove	Э					
<u>11985.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	<u>Condition</u>
	Persimmon	Diospyros kaki	9"	18'	20'	Good
<u>Observe</u>	ations:					
This tree	e is not significant w	ithin the city code.				
Recom	<u>mendations:</u>					
Remove	Ð					
<u>11986.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	Condition
	Persimmon	Diospyros kaki	11"	18'	22'	Good
Observo	ations:					
This tree	e is not significant w	ithin the city code.				
Recom	mendations:					
Remove	e					
<u>11987.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	<b>Condition</b>
	Persimmon	Diospyros kaki	11"	20'	25'	Good
<u>Observe</u>	ations:					
This tree	e is not significant w	ithin the city code.				
Recom	<u>mendations:</u>					
Remove	Э					
<u>11988.</u>	Common Name	Species	<u>D.B.H.</u>	<u>Height</u>	Canopy Spread	Condition
C	alitornia live oak	Quercus agritolia	31"	60'	50'	Good

### **Observations:**

This tree is in the path of road construction.

### **Recommendations:**

Perform all construction site tree preservation measures at outlined on page 5 to be overseen and verified by an ISA certified arborist and reported to the City for clarification throughout project as a condition of approval.

Trees tagged #11988 and 11989 are 2 Oaks adjoining the site to the north where an on-site access road will be and there is a conflict between the road on the site and the trees.

We recommend moving the upper section of the access road to avoid these two trees as indicated on map.

<u>11989.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	Condition
		0	4.411	501	5.51	- ·

Valley oak	Quercus lobata	44"	50'	55'	Fair

### Observations:

This tree is in the path of road construction.

### **Recommendations:**

Perform all construction site tree preservation measures at outlined on page 5 to be overseen and verified by an ISA certified arborist and reported to the City for clarification throughout project as a condition of approval.

Trees tagged #11988 and 11989 are 2 Oaks adjoining the site to the north where an on-site access road will be and there is a conflict between the road on the site and the trees.

We recommend moving the upper section of the access road to avoid these two trees as indicated on map.

<u>11990.</u>	Common Name	Species	D.B.H.	Height	Canopy Spread	<b>Condition</b>
	Valley oak	Quercus lobata	17"	32'	31'	Fair

### **Observations:**

This tree is in conflict with bioretention basin.

### Recommendations:

Perform all construction site tree preservation measures at outlined on page 5 to be overseen and verified by an ISA certified arborist and reported to the City for clarification throughout project as a condition of approval.

Tree tagged #11990 is an Oak tree located near the proposed bioretention basin on Lot 2. There is a conflict between the location of the basin and the Oak tree there. We recommend relocation of the basin on Lot 2 and / or the use of a buried rain tank or infiltration piping that will perform similarly to the bioretention basin for this lot. An option may be the use of sub-grade detention and infiltration piping in the access road.

<u>11991.</u>	Common Name	Species	D.B.H.	Height	<b>Canopy Spread</b>	Condition
68 trees	Walnut	Juglans nigra/regia	6 - 22''	3' – 20	' 0'-8'	Poor-Dead

### **Observations:**

There are 68 trees on site remaining from a previous Walnut orchard.

Black walnut root stock with English walnut grafts that have reached their life span.

These trees are in poor condition or dead

### **Recommendations:**

Remove

### Construction Site - Tree Preservation Measures

• Locate structures, grade changes, etc. as far as feasible from the `dripline' area of the tree.

• Avoid root damage through grading, trenching, compaction, etc., at least within an area 1.5 times the `dripline' area of trees. Where root damage cannot be avoided, roots encountered (over 1" diameter) should be exposed approximately 12" beyond the area to be disturbed (towards tree stem), by hand excavation, or with specialized hydraulic or pneumatic

equipment, cut cleanly with hand pruners or power saw, and immediately back-filled with soil. Avoid tearing, or otherwise disturbing that portion of the root(s) to remain.

• Construct a temporary fence as far from the tree stem (trunk) as possible, completely surrounding the tree, and 6-8 feet in height. Post no parking or storage signs outside / on fencing. Do not attach posting to the mainstem of the tree.

# • Do not allow vehicles, equipment, pedestrian traffic; building materials or debris storage; or disposal of toxic <u>or other</u> materials inside of the fenced off area.

• Avoid pruning immediately before, during, or immediately after construction impact. Perform only that pruning which is unavoidable due to conflicts with proposed development. Aesthetic pruning should not be performed for at least 1-2 years following completion of construction.

• Trees that will be impacted by construction may benefit from fertilization, ideally performed in the fall, and preferably prior to any construction activities, with not more than 6 lbs. of actual nitrogen per 1,000 square feet of accessible `drip line' area or beyond.

• Mulch `rooting' area with an acidic, organic compost or mulch.

• Arrange for periodic (Biannual/Quarterly) inspection of tree's condition, and treatment of damaging conditions (insects, diseases, nutrient deficiencies, etc.) as they occur, or as appropriate.

• Individual trees likely to suffer significant impacts may require specific, more extensive efforts and/or a more detailed specification than those contained within these general guidelines.



Tree #11979

Tree #11980



Tree #11981





Tree #11981

Tree #11981





Tree #11982

Tree #11983



Tree #11984

Tree #11985



Tree #11986



Tree #11987



Tree #11988



Tree #11990



Tree #11989





Trees #11991



Trees #11991

