

OAKLEY



CALIFORNIA

California Environmental Quality Act (CEQA)

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Project Title: Ranchettes at Neroly

Lead Agency Name and Address: City of Oakley
3231 Main Street
Oakley, CA 94561

Contact Person and Phone Number: Joshua McMurray, Planning Manager
(925) 625-7004

Project Location: Oakley Road and Neroly Road
Oakley, CA 94561
Assessor's Parcel Numbers (APNs): 041-080-001 and -002

Project Sponsor's Name and Address: Cyrus Land Investments, LLC
4021 Port Chicago Highway, Concord, CA 94520

Existing General Plan: Single-Family Residential, Very-Low Density (SV)

Proposed General Plan: Single-Family Residential, Low Density (SL)

Existing Zoning: Single-Family Residential, min 40,000 sf (R-40)

Proposed Zoning: Single-Family Residential, min. 20,000 sf (R-20)

Project Description Summary: The Ranchettes at Neroly Project (proposed project) would require approval of a Tentative Map (TM 01-18) to subdivide the 7.14-acre lot into 13 lots ranging from 20,003 square feet (sf) to 23,989 sf. Additionally, the proposed project would require the approval of a General Plan Amendment (GPA 01-18) to amend the site's land use designation from Single-Family Residential, Very-Low Density (SV) to Single-Family Residential, Low Density (SL), and a Rezone (RZ 04-18) from Single-Family Residential (R-40) to Single-Family Residential (R-20).

Declaration:

On July 6, 2018, the City of Oakley Planning Division determined that the above project will have no significant effect on the environment and is therefore exempt from the requirement of an Environmental Impact Report. The determination is based on the following findings:

- a) The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.
- b) It will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.
- c) It will not have significant impacts, which are individually limited, but cumulatively considerable.
- d) It will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.
- e) No substantial evidence exists that the project will have a significant negative adverse effect on the environment.
- f) The proposed project is not on any of the lists enumerated under Section 65962.5 of the Government Code as related to hazardous materials.

The Initial Study and Mitigated Negative Declaration are available for review between 8:00 a.m. and 6:00 p.m. Monday through Thursday, or Fridays between 8:00 a.m. and 5:00 p.m., at the City of Oakley Planning Division, located at 3231 Main Street in Oakley, California 94561. Written comments must be submitted **no later than 5:00 p.m. on August 8, 2018**. Appeal of this determination must be made during the 30-day posting period. Notice is further given that the City of Oakley will hold public hearings to discuss the project and provide an opportunity for public comment on the Mitigated Negative Declaration and project approvals. Subsequent notices will be published which will identify the date, time, and location of public hearings in accordance with California Environmental Quality Act guidelines.

Submit comments to:

City of Oakley
Attn: Joshua McMurray
3231 Main Street
Oakley, CA 94561

Posting period: July 10, 2018 – August 8, 2018

Initial Study Prepared By:


Joshua McMurray, Planning Manager

OAKLEY



CALIFORNIA

California Environmental Quality Act (CEQA)

Initial Study

for

**Ranchettes at Neroly
(GPA 01-18, RZ 04-18)**

July 2018

Prepared by

 **RANEY**
PLANNING & MANAGEMENT, INC.
1501 Sports Drive, Suite A, Sacramento, CA 95834

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

A. BACKGROUND

- 1. Project Title: Ranchettes at Neroly
- 2. Lead Agency Name and Address: City of Oakley
3231 Main Street
Oakley, CA 94561
- 3. Contact Person and Phone Number: Joshua McMurray
Planning Manager
(925) 625-7004
- 4. Project Location: Oakley Road and Neroly Road
Oakley, CA 94561
Assessor's Parcel Numbers (APNs): 041-080-001 and -002
- 5. Project Sponsor: Cyrus Land Investments, LLC
4021 Port Chicago Highway
Concord, CA 94520
- 6. Existing General Plan: Single-Family Residential, Very-Low Density (SV)
- 7. Proposed General Plan: Single-Family Residential, Low Density (SL)
- 8. Existing Zoning: Single-Family Residential, min. 40,000 sf (R-40)
- 9. Proposed Zoning: Single-Family Residential, min. 20,000 sf (R-20)
- 10. Project Description Summary:

The Ranchettes at Neroly Project (proposed project) would require the approval of a Tentative Map to subdivide the 7.14-acre lot into 13 lots ranging from 20,003 square feet (sf) to 23,989 sf. Additionally, the proposed project would require the approval of a General Plan Amendment to designate the site Single-Family Residential, Low Density, and a Rezone to Single-Family Residential (R-20).

B. SOURCES

All technical reports and modeling results prepared for the project analysis are available upon request at the City of Oakley City Hall, located at 3231 Main Street, Oakley, CA 94561. The following documents are referenced information sources utilized by this analysis:

1. Antioch Unified School District. *Developer Fees*. 2018. Available at <https://www.antiochschools.net/site/Default.aspx?PageID=284>. Accessed June 19, 2018. Bay Area Air Quality Management District. *CEQA Guidelines*. May 2017.
2. California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.
3. California Department of Toxic Substances Control. EnviroStor. Available at: <http://www.envirostor.dtsc.ca.gov>. Accessed June 2018.
4. Caltrans. *Transportation and Construction Vibration Guidance Manual*. September 2013.
5. City of Oakley. *City of Oakley 2020 General Plan*. Amended February 2, 2016.
6. City of Oakley. *Oakley 2020 General Plan Background Report*. September 2001.
7. Contra Costa Health Services. *Health Officer Regulations Chapter 420-6: Subdivisions & Individual Systems*. October 17, 2000.
8. Contra Costa Transportation Authority. *2015 Update of the Contra Costa Congestion Management Program*. Adopted December 16, 2015.
9. Diablo Water District. *Diablo water District Final 2015 Urban Water Management Plan*. June 2016.
10. East Contra Costa County Habitat Conservation Plan Association. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. October 2016.
11. East Contra Costa County Conservancy. Prepared by Jones & Stokes. *App. D-02c San Joaquin Kit Fox Modelled Habitat Distribution – East Contra Costa County HCP/NCCP*. Prepared on February 15, 2006.
12. East Contra Costa County Conservancy. *High Resolution Development Fee Zone Map*. Accessible at <http://www.co.contra-costa.ca.us/depart/cd/water/HCP/project-permitting.html>. Accessed on June 2018.
13. United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey*. Accessible at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed in June 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.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Greenhouse Gas Emissions |
| <input checked="" type="checkbox"/> Geology and Soils | <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Circulation | <input type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Mandatory Findings of 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

Joshua McMurray
Printed Name

Date

City of Oakley
For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) provides an environmental analysis pursuant to the California Environmental Quality Act (CEQA) for the proposed project. The applicant has submitted this application to the City of Oakley, which is the Lead Agency for the purposes of CEQA review. The IS/MND contains an analysis of the environmental effects of construction and operation of the proposed project.

In December 2002, the City of Oakley adopted the Oakley General Plan and the Oakley General Plan Environmental Impact Report (EIR). The General Plan EIR was a program-level 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 Oakley General Plan and identified measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan. Pursuant to CEQA Guidelines Section 15150(a), the City of Oakley General Plan and General Plan EIR are incorporated by reference. Both documents are available at the City of Oakley, 3231 Main Street, Oakley, CA 94561.

The impact discussions for each section of this IS/MND have been largely based on information in the *Oakley General Plan* and the *Oakley General Plan EIR*.

The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the project, as required by CEQA, and the mitigation measures would be incorporated into the project. In addition, findings and a project Mitigation Monitoring and Reporting Program (MMRP) would be adopted in conjunction with approval of the project.

F. PROJECT DESCRIPTION

The following Section includes a description of the project's location and surrounding land uses, as well as a discussion of the project components and discretionary actions requested of the City of Oakley by the applicant.

Project Location and Surrounding Land Uses

The project site is located in the City of Oakley at the southeast corner of Oakley Road and Neroly Road in the City of Oakley (APN: 041-080-001 and -002). The 7.14-acre project site contains an existing vineyard and single-story structure located on the eastern border of the site. Surrounding existing land uses include a single-family residential development bordering the site to the north, east, and south, and undeveloped land to the west. Further west is additional single-family residences and State Route (SR) 160 (see Figure 1).

**Figure 1
Project Vicinity Map**



Project Components

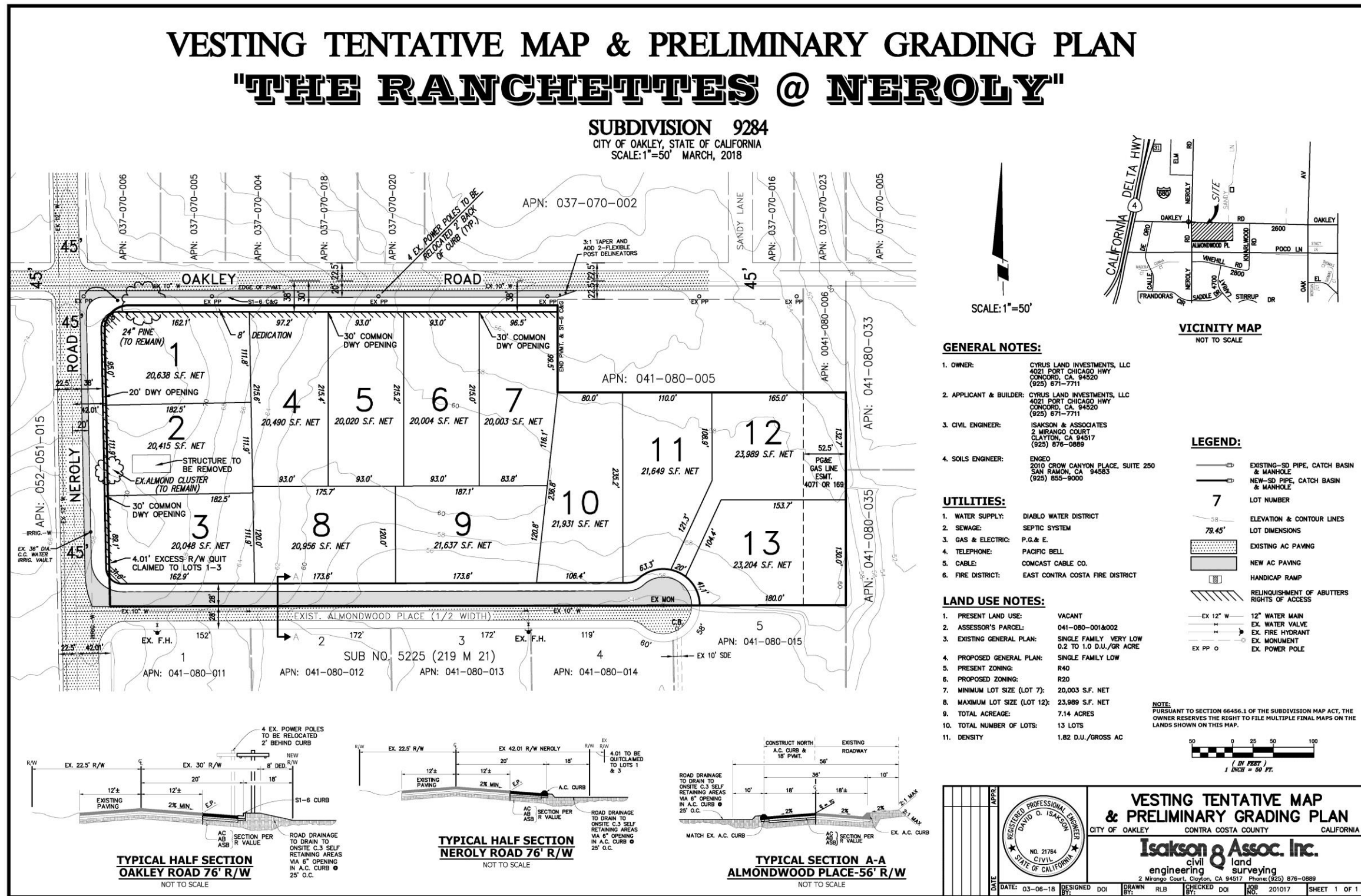
The proposed project includes the subdivision of the 7.14-acre site into 13 lots, to allow single-family residential development of 13 units. The proposed lot sizes range from 20,003 square feet (sf) to 23,989 sf, all arranged along the existing roadways: Oakley Road, Neroly Road, and Almondwood Place (see Figure 2). The proposed project will include demolition of the existing on-site structure, as well as the widening of Oakley and Neroly Roads to a 30-foot (ft) right-of-way and a 42-ft right-of-way, respectively. The existing Almondwood Place roadway is currently 28 ft wide and would be widened an additional 28 ft to accommodate future residential uses and provide easier access for future residences. Utility connections occur at the existing water lines on Oakley Road, Neroly Road, and Almondwood Place. For sewage, the proposed project would require a septic system.

Discretionary Actions

Implementation of the proposed project would require the following discretionary actions by the City of Oakley:

- Adoption of the Initial Study/Mitigated Negative Declaration;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of a General Plan Amendment (GPA 01-18) to amend the land use designation from Single-Family Residential, Very Low Density (SV) to Single-Family Residential, Low Density;
- Approval of a Rezone (RZ 04-18) from Single-Family Residential (R-40) to Single-Family Residential (R-20).
- Approval of a Tentative Map to subdivide the 7.14-acre lot into 13 lots ranging from 20,003 sf to 23,989 sf.

Figure 2
Tentative Map



201017-THE RANCHETTES @ NEROLY-VESTING TENTATIVE MAP & PRELIMINARY GRADING PLAN 03-06-2018

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 area identified in the checklist. Included in each discussion are project-specific mitigation measures required, where necessary, as part of the proposed project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which mitigation has not 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.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. AESTHETICS.				
<i>Would the project:</i>				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or night-time views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. Scenic resources in Oakley, as defined in the City’s General Plan, include predominant natural landscape features such as the Delta, Dutch Slough, Marsh Creek, the Contra Costa Canal, agricultural and other open space lands, as well as views of Mount Diablo to the west. The City of Oakley does not specifically identify scenic vistas within the City’s planning area, but the conclusion could be drawn that any development which would impact views of any of the aforementioned landscape features would result in an impact to scenic vistas. Views of the Delta, Dutch Slough, Contra Costa Canal, or Marsh Creek cannot be seen from the project site. Potential views of the aforementioned from the project site are blocked by the existing surrounding development, and topography of the intervening landscape. Mount Diablo is visible from portions of the project site along Oakley and Neroly Roads, and presumably from many of the existing single-family residences as well as to drivers along both road ways. Development of the site with single-family homes could potentially obstruct views of Mount Diablo from travelers along Oakley Road, and the adjacent residences to the north and east.

The project site is currently designated by the City of Oakley General Plan as Single-Family Residential, Very Low Density. Therefore, buildout of the project site with single-family residences was anticipated by the City and was determined to have a less-than-significant impact in the General Plan EIR. Such residences could have been one- or two-story buildings and would have similarly

impacted views of Mount Diablo from Oakley and Neroly Roads. Although the proposed project includes a General Plan Amendment, development of the site would remain residential and would not affect the previously anticipated impacts. Furthermore, the proposed project is not in an area designated as a scenic vista by the City of Oakley. Based on the above, the project would result in a **less-than-significant** impact in having a substantial adverse effect on the scenic vista.

- b. According to the California Scenic Highway Mapping System, administered by Caltrans, a portion of State Route (SR) 4, from the intersection of SR 4 with SR 160, west toward the Contra Costa County line is eligible for State Scenic Highway designation. The proposed project is located approximately one-half mile east of SR 4 within the section of the roadway eligible for state designation. However, a large barrier wall along SR 4 blocks all views of the project site from SR 4. Because the project site is not visible from SR 4, the proposed project would not damage scenic resources within a State Scenic Highway and consequently result in a **less-than-significant** impact.
- c. The project site is bordered by Oakley and Neroly Roads and Almondwood Place with single-family residences to the north, east, and south. The visual character of the site would be changed from the existing character; however, single-family development would be consistent with the type of use contemplated in the General Plan and General Plan EIR. In addition, the project site is already surrounded by existing single-family residential uses to the north, east, and south, and the vacant lot to the west has a zoning designation of Single Family Residential (R-40). Therefore, the proposed project would be compatible with the surrounding area and the visual quality would not be substantially degraded. As such, the impact would be considered **less than significant**.
- d. Currently, the proposed project site consists of a vineyard and a metal barn structure, all of which does not emit any light or glare. The development of single-family homes would add new sources light and glare to the site; however, as previously discussed, the project site is surrounded by similar existing land uses and would be compatible with the surrounding area. In addition, the City's Residential Design Guidelines include lighting standards that require the use of the City's standard for residential street lights and limits residential lighting for security purposes. Compliance with the City's standards would ensure that the proposed project would not result in light trespass onto adjacent properties or result in the addition of a substantial source of light or glare. Therefore, any creation of new sources of light and glare by the future project would be considered a **less-than-significant** impact.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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II. AGRICULTURE RESOURCES.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a,e. The proposed project site is designated as “Farmland of Statewide Importance” on the Contra Costa County Important Farmland Map 2014 published by the Department of Conservation. Farmland of Statewide Importance is similar to Prime Farmland but with minor shortcomings. Land must have been used for irrigated agricultural production during the four years prior to the mapping date. Therefore, any future development of the project site would convert Farmland of Statewide Importance to a non-agricultural use. Although the site is considered Farmland of Statewide Importance, the site has been designated for urban development in the General Plan and development of the site as single-family residential was contemplated and evaluated in the General Plan EIR. The General Plan EIR concluded that the Policies and Programs implemented by the General Plan would preserve a buffer between urban development and agricultural land and that the Oakley Planning Area falls within the 35 percent of Contra Costa County designated for development. Therefore, the project would not result in impacts beyond what was already anticipated by the General Plan EIR, and the proposed project would result in a **less-than-significant** impact, consistent with the General Plan EIR.
- b. The project site is currently zoned as R-40, 40,000 sf minimum lot size and designated Single Family Residential, Very Low Density; consequently, the project would not conflict with any agricultural zoning use for the project site. Additionally, the site is not under a Williamson Act contract. Thus, the proposed project would not conflict with existing zoning for agricultural use and would not conflict with 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.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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III. AIR QUALITY.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a.	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a-c. The City of Oakley 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 the State and federal ozone, State and federal fine particulate matter 2.5 microns in diameter (PM_{2.5}), and State respirable particulate matter 10 microns in diameter (PM₁₀) 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_{2.5} federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal PM_{2.5} 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_{2.5}.

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 PM₁₀ 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_x), as well as for PM₁₀, and PM_{2.5}, 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_x, or PM₁₀, a project would be considered to conflict with or obstruct implementation of the BAAQMD's air quality planning efforts.

Pollutant	Construction	Operational	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82	82	15
PM _{2.5}	54	54	10

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, trip generation rates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, vehicle mix, trip length, average speed, etc. In addition, the model assumes compliance with the most recent 2016 Title 24 Standards. However, where project-specific information is available, such information should be applied in the model. Accordingly, the proposed project's modeling assumed the following:

- Construction would begin in June of 2019;
- Construction would occur over an approximately one-year period;
- The existing metal shed to be demolished was assumed to total approximately 826 square feet;
- A total of approximately 7.14 acres of land would be disturbed during grading activities.

All CalEEMod results are included as an appendix to this IS/MND.

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 2. As shown in the table, the proposed project's operational emissions would be below the applicable thresholds of significance. Because the proposed project's operational emissions would be below the applicable thresholds of significance, the proposed project would result in a less-than-significant air quality impact during operations.

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	14.32	0.22	54	10	NO
NO _x	1.31	0.19	54	10	NO
PM ₁₀ (exhaust)	2.49	0.02	82	15	NO
PM ₁₀ (fugitive)	0.61	0.11	None	None	N/A
PM _{2.5} (exhaust)	2.49	0.02	54	10	NO
PM _{2.5} (fugitive)	0.16	0.03	None	None	N/A

Source: CalEEMod, June 2018 (see appendix).

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 3. As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for ROG, NO_x, PM₁₀, and PM_{2.5}.

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	5.19	54	NO
NO _x	45.63	54	NO
PM ₁₀ (exhaust)	2.39	82	NO
PM ₁₀ (fugitive)	18.21	None	N/A
PM _{2.5} (exhaust)	2.20	54	NO
PM _{2.5} (fugitive)	9.97	None	N/A

Source: CalEEMod, June 2018 (see appendix).

Although thresholds of significance for mass emissions of fugitive dust PM₁₀ and PM_{2.5} have not been identified by the City of Oakley 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 all of the BAAQMD's Basic Construction Mitigation Measures, which include the following:

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 manufacturer's 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 implementation of the BAAQMD's Basic Construction Mitigation Measures listed above would help to further minimize construction-related emissions. Because the proposed project would be below the applicable thresholds of significance for construction emissions, the proposed project would not be considered to result in a significant air quality impact during construction.

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 be below the BAAQMD's applicable criteria pollutant thresholds, the proposed project would not result in the generation of emissions that would exceed the BAAQMD's established thresholds of significance for operations, and 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*.

- d. 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 adjacent to the site's northern, eastern, and southern 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.).

According to the Contra Costa Transportation Authority (CCTA) Congestion Management Program (CMP), any land development application generating more than 100 peak hour trips is required to prepare a study of the project's traffic impacts on the CMP network.¹ As discussed in the Transportation/Traffic section of this IS/MND, development of the project site with 13 residences would result in 124 total daily trips, 10 AM peak hour trips, and 13 PM peak hour trips.

The main roadways in the project vicinity are Oakley and Neroly Roads and Almondwood Place. The proposed project's increase of a maximum of 13 new peak hour trips, would not increase traffic volumes at nearby intersections to more than the hourly traffic volumes set forth in the BAAQMD's localized CO screening criteria. Additionally, the CCTA CMP was drafted using demand projections based on General Plan land use designations for the area. Although the project includes a General Plan Amendment (GPA 01-18) to amend the site's current land use designation from SV to SL, the project would not be expected to significantly increase the traffic demand in the area. Unlike industrial land uses or heavy commercial uses, the proposed land uses would generate relatively few daily trips (as discussed in further depth in the Transportation/Traffic section of this IS/MND) and would be generally comparable to the previously anticipated residential uses. The change in density from SV to SL would result in only six additional residential units. As a result, the project would be generally consistent with the applicable CMP because the land use would not be significantly different than what was expected for the proposed project site. Therefore, 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.

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 proposed project would not involve any land uses or operations that would be considered major sources of TACs, including DPM. As such, the proposed

¹ Contra Costa Transportation Authority. 2015 Update of the Contra Costa Congestion Management Program [pg. v]. Adopted December 16, 2015.

project would not generate any substantial pollutant concentrations during operations. However, 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. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. The exposure period typically analyzed in health risk assessments is 30 years or greater, which is substantially longer than the construction period associated with the development of the project site.

All construction equipment and operation thereof would be regulated per the BAAQMD's In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. In addition, project construction would be required to comply with all other applicable BAAQMD rules and regulations, particularly associated with permitting of air pollutant sources. In addition, per the City of Oakley Municipal Code, construction activities would be limited to daytime hours only.

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. Health risks associated with TACs are a function of the concentration of emissions, the proximity of receptors to the emissions, and the duration of exposure, where the higher the concentration, closer the receptor is to the emission source², and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. 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.

Due to the varying distances from working construction areas and equipment usage, 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 and is reduced by 70 percent at a distance of approximately 500 feet. Thus, emissions at the project site would be dispersed at the nearest sensitive receptor.

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. In addition, the site has been previously planned for single-family residential development per the City's General Plan. For the aforementioned reasons,

² California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Conclusion

Based on the above considerations, the proposed project would not cause sensitive receptors to be exposed to substantial pollutant concentrations, including localized CO or TACs, and impacts related to such would be **less than significant**.

- e. 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, quantitative methodologies to determine the presence of a significant odor impact do not exist. 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 and is not located in the vicinity of any such existing or planned 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.

It should be noted that BAAQMD regulates objectionable odors through Regulation 7, Odorous Substances, which does not become applicable until the Air Pollution Control Officer (APCO) receives odor complaints from ten or more complainants within a 90-day period. Once effective, Regulation 7 places general limitation on odorous substances and specific emission limitations on certain odorous compounds, which remain effective until such time that citizen complaints have been received by the APCO for one year. The limits of Regulation 7 become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. Thus, although not anticipated, if odor complaints are made after the proposed project site is developed, the BAAQMD would ensure that such odors are addressed and any potential odor effects reduced to less than significant.

For the aforementioned reasons, implementation of the proposed project would not create objectionable odors, nor would the project site be affected by any existing sources of substantial objectionable odors, and a **less-than-significant** impact related to objectionable odors would result.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact	
IV. BIOLOGICAL RESOURCES.					
<i>Would the project:</i>					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	✘	<input type="checkbox"/>	<input type="checkbox"/>
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 Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a. Special-status species are plants and animals that are legally protected under the State and/or Federal Endangered Species Act (FESA) or other regulations. The FESA of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The presence of species with legal protection under the Endangered Species Act often represents a major constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species. The California Department of Fish and Wildlife Natural Diversity Database (CNDDDB) was used to determine what special-status species are known to have occurred within a five-mile radius of the project site. The CNDDDB query returned 123 total species that have the potential to occur in the project area, 65 of which are plants and 58 of which are animals. The habitat requirements of all the identified species were subsequently compared to the habitat on the project site to determine the likelihood of each special-status species occurring at the project site.

According to *Final East Contra Costa County Habitat Conservation Plan/ Natural Community Conservation Plan* (ECCC HCP/NCCP), the entire 7.13-acre project site is classified as Vineyard³, a sub-category of Irrigated Agriculture. The Physical and Biological Resources Chapter of the ECCC HCP/NCCP defines Irrigated Agriculture as all areas where the native vegetation has been cleared for agricultural use. This land cover type was classified into four subtypes: pasture, cropland, orchard, and vineyard. In some cases, it was not possible to distinguish between these categories. For example, newly planted orchards resemble row crops on aerial photographs. In such instances, the area was mapped as cropland. Vineyard was identified on the basis of its row production pattern and canopy characteristics. Vineyards appeared similar to orchards on the aerial photographs but were characterized by more closely spaced rows with a smaller, less dense vegetation canopy.

Generally, vineyards support a far higher abundance of nonnative predators such as red fox and feral cats than do adjacent natural habitats. Other common wildlife species found in most vineyards include California ground squirrel, European starling, and Brewer's blackbird. As in other forms of agriculture, site-specific production methods are directly correlated with wildlife use. Some vineyard

³ East Contra Costa County Habitat Conservation Plan Association. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. [Figure 3-3: Landcover in the Inventory Area]. October 2016.

practices may encourage habitat use by birds of prey such as American kestrel and great-horned owl. Wildlife use of vineyards may be related to the timing and intensity of pesticide application with great pesticide use decreasing wildlife use and reproductive success. Vineyards occupy 2,031 acres in scattered areas in and around Oakley and Brentwood, generally surrounded by cropland or orchard. Vineyards south of Byron are surrounded by cropland and rangeland.

Of the 65 special-status plant species which are known to have occurred within a nine-quadrant area surrounding the project site, all of the 65 species have been removed from further consideration due to the project site's lack of key habitat features for each of the 65 species. Habitat requirements for the 65 species removed from consideration included the presence of wetland habitats (see the discussion for questions b and c below for a further discussion of wetlands), aquatic areas, serpentine soils, interior dunes, slopes, valley and foothill grassland, cismontane woodland, and coastal salt marsh. The project site does not contain any of the aforementioned key habitat requirements, and therefore the project site was not considered to be potential habitat for any of the special-status plants. Heavy site disturbance caused by disking for existing vineyards makes the presence of the 65 special-status plants unlikely. Therefore, it is unlikely for any of the 65 special-status plants to survive on-site.

The proposed project site meets the habitat requirements for five of the 58 animal species identified by the CNDDDB. The project site's Irrigated Agricultural vegetation provides marginal foraging habitat for the State-threatened Swainson's hawk (*Buteo swainsoni*), California Department of Fish and Wildlife (CDFW) species of special concern the American badger (*Taxidea taxus*), Burrowing Owl (*Athene Cunicularia*), San Joaquin Kit Fox (*Vulpes Macrotis*), and the CDFW fully protected species, the white-tailed kite (*Elanus leucurus*). Although the project site does have tall nesting trees for both Swainson's hawks and white-tailed kites, disturbance activities, such as activities related to project construction, within 1,000 feet of an active nest could induce nest abandonment and impact the species.

The CDFW species of special concern, the American badger (*Taxidea taxus*), uses many habitat types, including Irrigated Agriculture, and their main requirement is that their habitat provide adequate amounts of food, typically in the form of ground squirrels. The project site may provide habitat to American badgers; however, the site's history of disking could have disturbed any existing mammal burrows and could have reduced the amount of food available to American badgers at the project site. Nonetheless, the project site could provide potential foraging and denning habitat for American badgers.

Additionally, the project site may provide habitat for burrowing owls. Similar to the American badger, a primary habitat requirement for burrowing owls is small mammal burrows, which burrowing owls use for nesting, but in urban areas burrowing owls have been known to use artificial burrows including pipes,

culverts and piles of concrete pieces. The nearest known occurrence of burrowing owls is 0.75-mile to the southwest. Although the site's small size and proximity to nearby residences and roadways reduce the quality of potential habitat provided by the project site, the potential remains for Swainson's hawks, American badgers, white-tailed kites, and burrowing owls to use the site for foraging, nesting and/ or denning if appropriate burrows exist. Therefore, the proposed project would result in a potential impact to the Swainson's hawk, American badger, white-tailed kite, and burrowing owl.

Another special-status species that could be present in the area is the federally endangered and state threatened San Joaquin kit fox. The CNDDDB recorded 21 recent occurrences in the five-mile radius of study; however, the *San Joaquin Kit Fox Modelled Habitat Distribution* map from the ECCC HCP/NCCP does not show the project site as being located within the designated Suitable Core Habitat nor the Suitable Low Use Habitat⁴ given that the project site does not contain valley and foothill grasslands. In addition, none of the mapped Occurrence Records indicated on the *San Joaquin Kit Fox Modelled Habitat Distribution* map are located near the project site.⁵ Because the project site does not include suitable habitat for the San Joaquin kit fox, it is unlikely for the San Joaquin kit fox to be present on-site.

The purpose of the ECCC HCP/NCCP is to preserve high quality habitat for species of concern throughout the plan area. The ECCC HCP/NCCP accomplishes habitat protection through the establishment of preserves and the collection of development fees. Fees are collected based on established fee zones and land cover types, with developments placed in higher quality habitat land cover types incurring higher development fee rates, and developments placed in low quality habitats or urban areas incurring lower development fees or no development fees. Fee zones and land cover types are presented in the *East Contra Costa County HCP/NCCP Development Fee Zones* figure.⁶ The fee zones figure designates the proposed project site as Zone 1, which indicates that the ECC HCP/NCCP requires a \$12,457 fee per acre.

At the time of development, if the necessary preconstruction surveys are not carried out, the project could result in a **potentially significant** adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the USFWS, or the California Department of Fish and Wildlife (CDFW), including Swainson's hawk, American badger, and burrowing owl.

⁴ East Contra Costa County Conservancy. Prepared by Jones & Stokes. *App. D-02c San Joaquin Kit Fox Modelled Habitat Distribution – East Contra Costa County HCP/NCCP*. Prepared on February 15, 2006.

⁵ Ibid.

⁶ East Contra Costa County Conservancy. *High Resolution Development Fee Zone Map*. Accessible at <http://www.co.contra-costa.ca.us/depart/cd/water/HCP/project-permitting.html>. Accessed on June 2018.

Mitigation Measure(s)

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

Swainson's hawk

IV-1. *Prior to any ground disturbance related to covered activities that occurs during the nesting season (March 15 – September 15), a qualified biologist shall conduct a preconstruction survey no more than one month prior to construction to establish whether Swainson's hawk nests within 1,000 feet of the project site are occupied. If nests are not found, further mitigation shall not be required. If potentially occupied nests within 1,000 feet are off the project site, then their occupancy shall be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the project site. If nests are occupied, minimization measures and construction monitoring are required (see below). A written summary of the survey results shall be submitted to the City of Oakley Planning Division.*

During the nesting season (March 15 – September 15), covered activities within 1,000 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the Implementing Entity shall coordinate with CDFW/USFWS to determine the appropriate buffer size.

If young fledge prior to September 15, covered activities can proceed normally. If the active nest site is shielded from view and noise from the project site by other development, topography, or other features, the project applicant can apply to the City of Oakley Planning Division for a waiver of this avoidance measure. Any waiver must also be approved by USFWS and CDFW. While the nest is occupied, activities outside the buffer can take place.

American badger

IV-2. *A qualified biologist shall conduct pre-construction surveys for American badger in the project area two weeks prior to initiation of ground disturbance activities. If American badgers or active burrows are not found, further mitigation shall not be required. If an American badger or active burrow, indicated by the presence of badger sign (i.e., suitable shape and burrow-size, scat) is found within the construction area during pre-construction surveys, the CDFW shall be consulted to obtain permission for animal relocation. A written summary of the survey results shall be submitted to the City of Oakley Planning Division.*

If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction.

If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for three to five days to discourage use of these dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three to five-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction.

Burrowing owl

- IV-3. Prior to any ground disturbance related to covered activities, a United States Fish and Wildlife Service (USFWS)/CDFW-approved biologist shall conduct a preconstruction survey of the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 1995).*

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Surveys shall take place no more than 30 days prior to construction. During the breeding season (February 1 – August 31), surveys will document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 – January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted. A written summary of the survey results shall be submitted to the City of Oakley Planning Division.

If burrowing owls and/or suitable burrows are not discovered, then further mitigation is not necessary.

If burrowing owls are found during the breeding season (February 1 – August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below).

Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone.

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow (nest site). Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing. If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for one week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

- b,c. Riparian habitats are described as the land and vegetation that is situated along the bank of a stream or river. Wetlands are areas where water covers the soil, or water is present either at or near the surface of the soil all year or for varying periods of time during the year. Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded). Vernal pools are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. Vernal pools range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.

The project site is highly disturbed, is well drained by on-site soils, and is relatively level. Cultivated land with vineyards currently dominates the project site, and drainage features, hydrophytic vegetation, or other wetland features are not known to occur on the project site. Additionally, the USWFS National Wetlands Inventory Wetlands Mapper does not identify any wetlands on the project site. Therefore, impacts to wetlands and riparian habitat would be considered **less than significant**.

- d. The project site is surrounded by urban and developed land and the project site is currently designated by the City of Oakley General Plan as Single-Family Residential, Very Low Density. Therefore, buildout of the project site with single-family residences was anticipated by the City. In addition, the site is surrounded by existing residential development to the north, east, and south. As a result, existing development would have already eliminated any wildlife corridors. Furthermore, the project site does not contain any watercourses that would support migratory fish. Therefore, the development of the project site would result in a ***less-than-significant*** impact.
- e. The site has a few trees on the perimeter, including a 24-ft pine tree and a cluster of almond trees, none of which will be removed for development. As such, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and ***no impact*** would occur.
- f. The ECCC HCP/NCCP was approved in August 2007 and the City of Oakley approved the implementing ordinance on November 13, 2007. The project is located within the City; therefore, the project is included in the ECCC HCP/NCCP. Mitigation Measures IV-1 through IV-3 would ensure that the proposed project has no direct impact on special status species. As discussed earlier in this document, the project site is concurrently classified as Vineyard in *Figure 3-3: Landcover in the Inventory Area* figure of the ECCC HCP/NCCP and Zone 1 in the *East Contra Costa County HCP/NCCP Development Fee Zones* figure (see the discussion for question a of this section for a further analysis of the two figures). Because the proposed project is designated as Zone 1 in the *East Contra Costa County HCP/NCCP Development Fee Zones* figure, the project would be subject to a development fees of \$12,457.00 per acre for a total of \$88,942.98. Additionally, the surveys required of the proposed project by Mitigation Measures IV-1 through IV-3 would meet the survey requirements of areas designated as Zone 1 in the *East Contra Costa County HCP/NCCP Development Fee Zones* figure while also reducing the possibility of special-status species impacts that could result from development in an area classified as Vineyard in *Figure 3-3: Landcover in the Inventory Area* figure of the ECCC HCP/NCCP. Therefore, the proposed project would not be in conflict with the provisions of an adopted Habitat Conservation Plan for the area and would result in a ***less-than-significant*** impact.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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V. CULTURAL RESOURCES.

Would the project:

a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. The Oakley General Plan EIR on page 3-149 states that “while there are no officially designated historic structures in Oakley, there are numerous buildings, primarily in the old town area, eligible for such designation or listing [...] Oakley’s historic resources are generally in need of official recognition.” Historical resources are features that are associated with the lives of historically-important persons and/or historically-significant events, or that embody the distinctive characteristics of a type, period, region, or method of construction. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

Per the results of the California Historical Resources Information System (CHRIS) records search conducted by the Northwest Information Center at Sonoma State University, both Oakley and Neroly Roads have been identified as established roadways since 1914. The Southern Pacific railway was also identified within the project vicinity, located approximately 0.5 miles south of the project site crossing Neroly Road. The Southern Pacific railway, previously known as the San Pablo and Tulare Railroad, operated within Contra Costa County since the late 19th century.

The proposed project site currently contains a metal barn structure. According to historical imagery from Google Earth the on-site barn structure was constructed prior to 1939. In order to determine whether the on-site structure constitutes as a historical resource, the on-site barn would need to be evaluated using the

California Register of Historic Resources (CRHR) and National Register of Historic Places (NRHP) eligibility criteria described below.

CRHR Criteria

The CRHR eligibility criteria include the following:

- (1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
- (2) It is associated with the lives of persons important to local, California, or national history;
- (3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- (4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

NRHP Criteria

The NRHP eligibility criteria include the following: “The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and

- (a) is associated with events that have made a significant contribution to the broad patterns of our history;
- (b) is associated with the lives of a person or persons significance in our past;
- (c) embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction; or
- (d) has yielded or may be likely to yield information important in prehistory or history.

In addition, the resource must be at least 50 years old, except in exceptional circumstances.

Conclusion

Although the metal barn structure is dated prior to 1939 and is thus eligible for inclusion on the NRHP, the structure does not have any known historical significance that would fully qualify the structure for listing on the NRHP. The structure is not associated with any significant historical events or narratives in the City of Oakley or California, and is not likely to yield information important to the prehistory or history of the local area, California, or the nation. The site has not been occupied or owned by any persons important to local, State, or national history. In addition, paint on the exterior of the metal barn structure is in poor condition and is visibly peeling. As a result, the integrity of the structure has been diminished due to a lack of proper upkeep.

Based on the above, the on-site structure is not eligible for consideration as historical resources per the CRHR or NRHP eligibility criteria, and, thus, would not be considered an historical resource. Therefore, the project would not cause a substantial adverse change in the significance of a historical resource, and a ***less-than-significant*** impact would occur.

- b-d. According to the Oakley General Plan EIR (p. 3-148), few archeological or paleontological finds have occurred in the City of Oakley. However, the City's General Plan EIR states that given the rich history of the Planning Area and region, the City will continue to require site evaluation prior to development of undeveloped areas, as well as required procedures if artifacts are unearthed during construction. The project site includes an existing vineyard, as well as a metal barn structure and, thus, is highly disturbed. In addition, adjoining areas to the north, east, and south consist of residential neighborhoods. Due to the disturbed nature of the site and the surrounding area, the discovery of archeological and paleontological resources is not expected. However, as previously discussed, the project site is located in the immediate vicinity of resources that may be of historical importance, such as the Southern Pacific Railway, which dates back to the late 19th century, and Oakley and Neroly roads, which date back prior to 1914. In addition, unknown archaeological resources, including human bone, have the potential to be uncovered during ground-disturbing construction activities if the proposed project site were to be developed as single-family development. As a result, a ***potentially significant*** impact would occur.

Mitigation Measure(s)

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

- V-1. *If buried historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the discovery and the developer shall immediately notify the Planning Division of the discovery. In such*

case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery, as appropriate. The archaeologist shall be required to submit to the City of Oakley Planning Division for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred.

- V-2. *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop within 100 feet of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission, who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. Additional work is not to take place within 100 feet of the find until the identified appropriate actions have been implemented.*

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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VI. GEOLOGY AND SOILS.

Would the project:

a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii.	Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii.	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv.	Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a,c. The site is located in an area of moderate to high seismicity. Known active faults are not mapped across the property and the site is not located within an Alquist-Priolo Earthquake Fault Zone; however, the Oakley 2020 General Plan Background Report states that the San Francisco Bay area is an area of high seismic risk. As shown in Figure 8-1 of the City's General Plan, *Faults and Seismic Stability*, three active faults are in the Oakley area, with the Brentwood Fault directly underlying the City, and the Davis and Antioch Faults to the west of the City.

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground rupture, ground shaking, liquefaction, and ground lurching.

Ground Rupture

Figure 8-1 of the City's General Plan shows fault traces for all known and inferred faults in the area. The proposed project is not underlain by any faults known to the City and as a result, ground rupture is unlikely at the project site.

Ground Shaking

An earthquake of moderate to high magnitude generated within the region could cause considerable ground shaking at the site, similar to that which has occurred in the past. To mitigate the shaking effects, structures should be designed using sound engineering judgment and the California Building Code (CBC) requirements, as a minimum. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to: (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. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, a well-designed and well-constructed structure can be reasonably expected to resist collapse thus reducing loss of life in a major earthquake.

Landslides

The project area is relatively flat; therefore, landslides do not represent a likely hazard.

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion can cause ground cracks to form in weaker soils. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. Figure 8-1 of the City's General Plan indicates the project site is designated as being comprised of Younger Alluvium. According to the Oakley 2020 General Plan EIR,

such soils are described as slowly to very slowly permeable, highly expansive and corrosive with slight erosion hazard. Therefore, the proposed project is located in an area with moderate damage susceptibility to potential ground lurching. As a result, foundation and pavement must be designed to reduce the potential for adverse impacts from possible lurch cracking.

Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded and fine-grained sands. Empirical evidence indicates that loose to medium-dense gravels, silty sands, and low- to moderate-plasticity silts and clays may be susceptible to liquefaction. In addition, sensitive high-plasticity soils may be susceptible to significant strength loss (cyclic softening) as a result of significant cyclic loading. As shown in Figure 8-2, of the City of Oakley General Plan 2020, *Estimated Liquefaction Potential*, most of the City's planning area is within an area of generally high liquefaction potential, which includes the project site. The City of Oakley General Plan (p. 8-3) Policy 8.1.9 requires all public and private development to conduct a geologic engineering study. The geologic engineering study must define and delineate potential hazardous geologic and/or soils conditions, recommend means of mitigating any adverse conditions, and provide implementation of the mitigation measures. Because the proposed project would be sited in an area of generally high liquefaction potential, the project would be subject to Policy 8.1.9, and would require a design-level geologic engineering study. Without completion of a design-level geotechnical report and implementation of relevant recommendations therein, the proposed project could expose people or structures to potential risk of loss, injury, or death by the project's location on an unstable geologic or soil unit.

Conclusion

The project site is not within an Alquist-Priolo Special Studies Zone; however, the City of Oakley General Plan, General Plan Background Report, and General Plan EIR indicate that the Oakley area is located in a seismically active zone. Development of the proposed project in this seismically active zone could expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, ground lurching, liquefaction, or the location of the project on an unstable geologic unit or soil. Therefore, a **potentially significant** impact could result.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impacts related to liquefiable soils, and ground lurching to a *less-than-significant* level.

VI-1. *Prior to issuance of a grading permit, the applicant/developer shall incorporate the recommendations of a design-level geotechnical report into the Improvement Plans for approval by the City Engineer. The following measures include, but are not limited to, the options available to reduce site liquefaction potential and expansive soils, and/or adverse effects to structures located above potentially liquefiable soils and expansive and corrosive soils. Once final grading plans are designed, the project's geotechnical engineers shall determine the appropriate methods of mitigating the effects of liquefaction, such as:*

- *Remove and replace potentially liquefiable soils and/or expansive and corrosive soils;*
- *Strengthen foundations (e.g., post-tensioned slab, reinforced mat or grid foundation, or other similar system) to resist excessive differential settlement associated with seismically-induced liquefaction;*
- *Support the proposed structures on an engineered fill pad (minimum of 5 feet thick) in order to reduce differential settlement resulting from seismically-induced liquefaction and post-seismic pore pressure dissipation; and/or*
- *Densify potentially liquefiable soils with an in-situ ground improvement technique such as deep dynamic compaction, vibro-compaction, vibro-replacement, compaction grouting, or other similar methods.*

VI-2. *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report required by Mitigation Measure VI-1 are properly incorporated and utilized in the project design.*

- b. The City of Oakley General Plan Background Report (Section 9, p. 9-3) indicates that the project site is characterized by soils grouped within the lowland soil association. According to the General Plan EIR, such soils are described as slowly to very slowly permeable, highly expansive and corrosive with slight erosion hazard (3-160). Because the soils on the site possess little erosion hazard, the project site is not likely to suffer substantial soil erosion or loss of topsoil. However, any disturbance of the soil, such as surface grading, relocates topsoil and breaks the soil into easily transported particles, rendering earth surfaces susceptible to erosion from wind and water. Per the City of Oakley Municipal code Section 6.9.308 and 6.11.212, preparation of an Erosion Control Plan and Stormwater Pollution Prevention Plan (SWPPP) prior to construction activities and implementation of BMPs during construction is required (Section. The erosion control measures required for implementation on the proposed

project by both the SWPPP and the Erosion Control Plan would ensure that the proposed project would not result in substantial soil erosion or the loss of topsoil.

In addition, the highly expansive soils are also prone to shrink/swell activity, which could have adverse effects on structures constructed on such soils. Mitigation Measure VI-2 requires compliance with recommendations in a geotechnical report which would ensure that the foundations and pavements are designed in order to reduce the impact of the proposed project from expansive soils. Therefore, impacts from soil erosion resulting from grading of the project area would be considered ***less than significant***.

- d. The project site is within a region that is identified in the Oakley General Plan EIR as possessing soils that are very slowly permeable and highly expansive. Highly expansive soils are prone to shrink/swell activity, which could have adverse effects on structures constructed on such soils. Mitigation Measure VI-2 requires compliance with recommendations in a geotechnical report which would ensure that the foundations and pavements are designed in order to reduce the impact of the proposed project from expansive soils to a ***less-than-significant*** level.
- e. None of the existing roadways surrounding the project site contain a sewer system in the right-of-way. As such, in order to install an individual septic system for sewage disposal, the project applicant must explore sanitary sewer availability and obtain a written statement from a sewerage agency indicating either current refusal to annex the property, impossibility of a current connection, or that connection is currently not economically feasible. Chapter 420-6 of the Contra Costa County Municipal Code requires any project proposing the construction of a septic system to obtain a construction permit, to be approved by the County Health Officer. All applications of construction permits will require a site evaluation, including a soil profile investigation, soil percolation tests, and wet weather percolation testing, to determine if the project site meets the minimum site criteria set forth in Section 420-6.⁷ The septic system control measures required for implementation of the proposed project by the Contra Costa County Health Department would ensure that the soils on the proposed project site would be capable of adequately supporting the use of septic tanks or alternative waste water disposal systems; therefore, a ***less-than-significant*** impact would occur.

⁷ Contra Costa Health Services. *Health Officer Regulations Chapter 420-6: Subdivisions & Individual Systems*. October 17, 2000.

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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VII. GREENHOUSE GAS EMISSIONS.

Would the project:

- | | | | | | |
|----|--|--------------------------|--------------------------|----------|--------------------------|
| a. | Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |
| b. | Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |

Discussion

- a,b. Emissions of greenhouse gases (GHGs) contributing to global climate change are 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 (CO₂) and, to a lesser extent, other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO₂ equivalents (MTCO₂e/yr).

A number of regulations currently exist related to GHG emissions, predominantly Assembly Bill (AB 32), Executive Order S-3-05, and Senate Bill (32). AB 32 sets forth a statewide GHG emissions reduction target of 1990 levels by 2020. Executive Order S-3-05 sets forth a transitional reduction target of 2000 levels by 2010, the same target as AB 32 of 1990 levels by 2020, and further builds upon the AB 32 target by requiring a reduction to 80 percent below 1990 levels by 2050. SB 32 also builds upon AB 32 and sets forth a transitional reduction target of 40 percent below 1990 levels by 2030. In order to implement the statewide GHG emissions reduction targets, local jurisdictions are encouraged to prepare

and adopt area-specific GHG reduction plans and/or thresholds of significance for GHG emissions.

The proposed project is located within the jurisdictional boundaries of the BAAQMD. 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 estimated operational GHG emissions were quantified using CalEEMod, using the same assumptions as presented in the Air Quality section of this IS/MND. The proposed project’s required compliance with the current California Building Energy Efficiency Standards Code was assumed in the modeling. In addition, the CO₂ intensity factor within the model was adjusted to reflect the Pacific Gas & Electric Company’s anticipated progress towards statewide renewable portfolio standard goals. All CalEEMod results are included as an appendix to this IS/MND.

Based on the results of the modeling, the project would result in total construction emissions of approximately 216.19 MTCO₂e/yr. While neither the City nor BAAQMD has established GHG emissions thresholds for construction, construction emissions associated with the proposed project would be far below the BAAQMD’s adopted operational threshold of 1,100 MTCO₂e/yr. Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time. Furthermore, construction activity associated with the proposed project would occur over a short duration and be limited in scope.

The project’s estimated operational emissions are summarized in Table 4 below. As shown in the table, the proposed project would result in operational GHG emissions well below the 1,100 MTCO₂e/yr threshold. Therefore, the proposed project would not result in operational impacts related to GHG emissions.

Table 4 Project Operational GHG Emissions	
Emission Source	Annual GHG Emissions (MTCO₂e/yr)
Area	2.33
Energy	43.30
Mobile	116.26
Solid Waste	7.82
Water	2.01
TOTAL ANNUAL GHG EMISSIONS	171.72
<i>Source: CalEEMod, June 2018 (see appendix).</i>	

Conclusion

Based on the above, the estimated annual operational and construction GHG emissions would be below the applicable BAAQMD thresholds of significance. As such, 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. Therefore, impacts would be considered ***less than significant***.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact	
VIII. HAZARDS AND HAZARDOUS MATERIALS.					
<i>Would the project:</i>					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
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?	<input type="checkbox"/>	✘	<input type="checkbox"/>	<input type="checkbox"/>
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
h.	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?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a. The proposed project would allow for development of the project site with single-family homes. Such land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future operations on the project site could involve the 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, routine 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. Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) 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 ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Should an accidental release of hazardous materials occur during construction, the City (or City crews) and/or contractor, is required to notify the East Contra Costa Fire Protection District (ECCFPD), who would then monitor the conditions and recommend appropriate remediation measures.

Existing hazardous materials that could potentially occur on the proposed project site, including soil contaminants, asbestos-containing materials (ACM), and lead-based paint (LBP) are discussed below.

Soil Contamination

As discussed previously, the proposed project site has historically been used for agricultural purposes. As such, pesticides and herbicides have likely been used on the site, and the potential exists for on-site soils to be contaminated with organochloride pesticides. Prior to development of the project site, analysis of on-site soils would be required in order to ensure that any existing soil contaminant concentrations are below the direct exposure Environmental Screening Level (ESLs) for residential development, which measures potential hazards to human health.

Asbestos-Containing Materials and Lead-Based Paint

Asbestos is the name for a group of naturally occurring silicate minerals that are considered to be “fibrous” and, through processing, can be separated into smaller and smaller fibers. The fibers are strong, durable, chemical resistant, and resistant to heat and fire. They are also long, thin, and flexible, such that they can be woven into cloth. Because of the above qualities, asbestos was considered an ideal product and has been used in thousands of consumer, industrial, maritime, automotive, scientific, and building products. However, later discoveries found that, when inhaled, the material caused serious illness.

For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as “presumed asbestos-containing material (ACM)” unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. Because it is unknown if the existing structure was built prior to 1980, the potential exists that asbestos-containing materials was used in the construction of the existing on-site structure.

LBP is defined by federal guidelines as any paint, varnish, stain, or other applied coating that has one milligram of lead per square centimeter or greater. Lead is a highly toxic material that may cause a range of serious illnesses, and in some cases death. In buildings constructed after 1978, the presence of LBP is unlikely. Structures built prior to 1978, and especially prior to the 1960s, are expected to contain LBP. As previously mentioned, the existing on-site metal structure is estimated to be dated prior to 1939. As such, the existing metal barn structure may have been constructed before the phase-out of LBPs in the 1970s. Therefore, the potential exists that LBPs are present in the structure.

Given the estimated age of the existing structure, ACM and LBP are presumed to be present. Because the proposed project would include demolition of the on-site structure and potentially expose construction workers to LBP and ACM, the proposed project would be required to implement the appropriate safety measures during structure demolition could.

Conclusion

Based on the above, implementation of the proposed project 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, particularly associated with contaminated soils, ACM, and LBP. Therefore, a **potentially significant** impact would occur.

Mitigation Measure(s)

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

VIII-1. *Prior to initiation of future demolition or construction activities on the proposed project site, the project applicant shall complete an analysis of on-site soils to determine whether substantial concentrations of organochloride pesticides or other soil contaminants are present above the applicable direct exposure Environmental Screening Levels (ESLs) set by the Regional Water Quality Control Board. If contaminants are not detected above applicable ESLs, then further mitigation is not required. If contaminants are detected above the applicable ESLs, then the soils shall be remediated by off-hauling to a licensed landfill facility. Such remediation activities shall be performed by a licensed hazardous waste contractor (Class A) and contractor personnel that have completed 40-hour OSHA hazardous training. The results of soil sampling and analysis, as well as verification of proper remediation and disposal, shall be submitted to the Planning Division for review and approval.*

VIII-2. *Prior to issuance of a demolition permit for the on-site structure, the project applicant shall consult with certified Asbestos and Lead Risk Assessors to complete and submit for review to the Planning Division an asbestos and lead survey. If asbestos-containing materials or lead-containing materials are not discovered during the survey, further mitigation related to asbestos-containing materials or lead containing materials shall not be required. If asbestos-containing materials and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site asbestos-containing materials and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA) Administration regulations and disposed of in accordance with all CalEPA regulations, prior to the demolition and/or removal of the on-site structures. The plan shall include the requirement that work shall be conducted by a Cal-OSHA registered asbestos and lead abatement contractor in accordance with Title 8 CCR 1529 and Title 8 CCR 1532.1 regarding asbestos and lead training, engineering controls, and certifications. The applicant shall submit the work plan to the Planning Division for review and approval. Materials containing more than one (1) percent asbestos that is friable are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent friable asbestos shall be completed in accordance with BAAQMD Section 11-2-303.*

- c. The proposed project would not be located within one-quarter mile of a school. Therefore, the project would have **no impact** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- d. The proposed project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5,⁸ and would not create a significant hazard to the public or the environment. Therefore, **no impact** would occur.
- e,f. The proposed project is not located in the vicinity of a private airstrip or within an airport land use plan. The closest airport to the project site is the Buchanan Field and Byron Airport, located 16 miles and 13 miles from the project site, respectively. As such, the proposed project site is not located within two miles of any public airports or private airstrips and does not fall within an airport land use plan area. Therefore, **no impact** related to a safety hazard for people residing or working in the project area would occur related to such.
- g. The proposed project site was planned for residential development under the current General Plan designation and the project plans do not include any modifications to the surrounding roadways or circulation networks. Therefore, the project would not construct barriers that would impede the implementation of an emergency response plan. As a result, the proposed project would not impair or physically interfere with an adopted emergency response plan and **no impact** would occur.
- h. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the proposed project site is not located within a Very High Fire Hazard Severity Zone.⁹ In addition, the site is surrounded by existing development to the north, east, and south, and is not located adjacent to wildlands. Therefore, 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.

⁸ California Department of Toxic Substances Control. EnviroStor. Available at: <http://www.envirostor.dtsc.ca.gov>. Accessed June 2018.

⁹ California Department of Forestry and Fire Protection. *Contra Costa County, Very High Fire Hazard Severity Zones in LRA*. June 12, 2018.

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

Discussion

- a-f. During project construction, topsoil would be exposed due to grading of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality. Therefore, the proposed project would require compliance with the San Francisco Bay Regional Water Quality Control Board in order to not result in a construction related degradation of water quality.

The City's National Pollutant Discharge Elimination System (NPDES) permit requires that any projects that would create or replace 10,000 square feet or more of impervious surfaces must submit a Stormwater Control Plan (SWCP) with their development permit. The City of Oakley's Municipal Code Section 6.11, Stormwater Management and Discharge Control, requires that the SWCP include appropriate design measures to treat runoff from all proposed impervious surfaces.

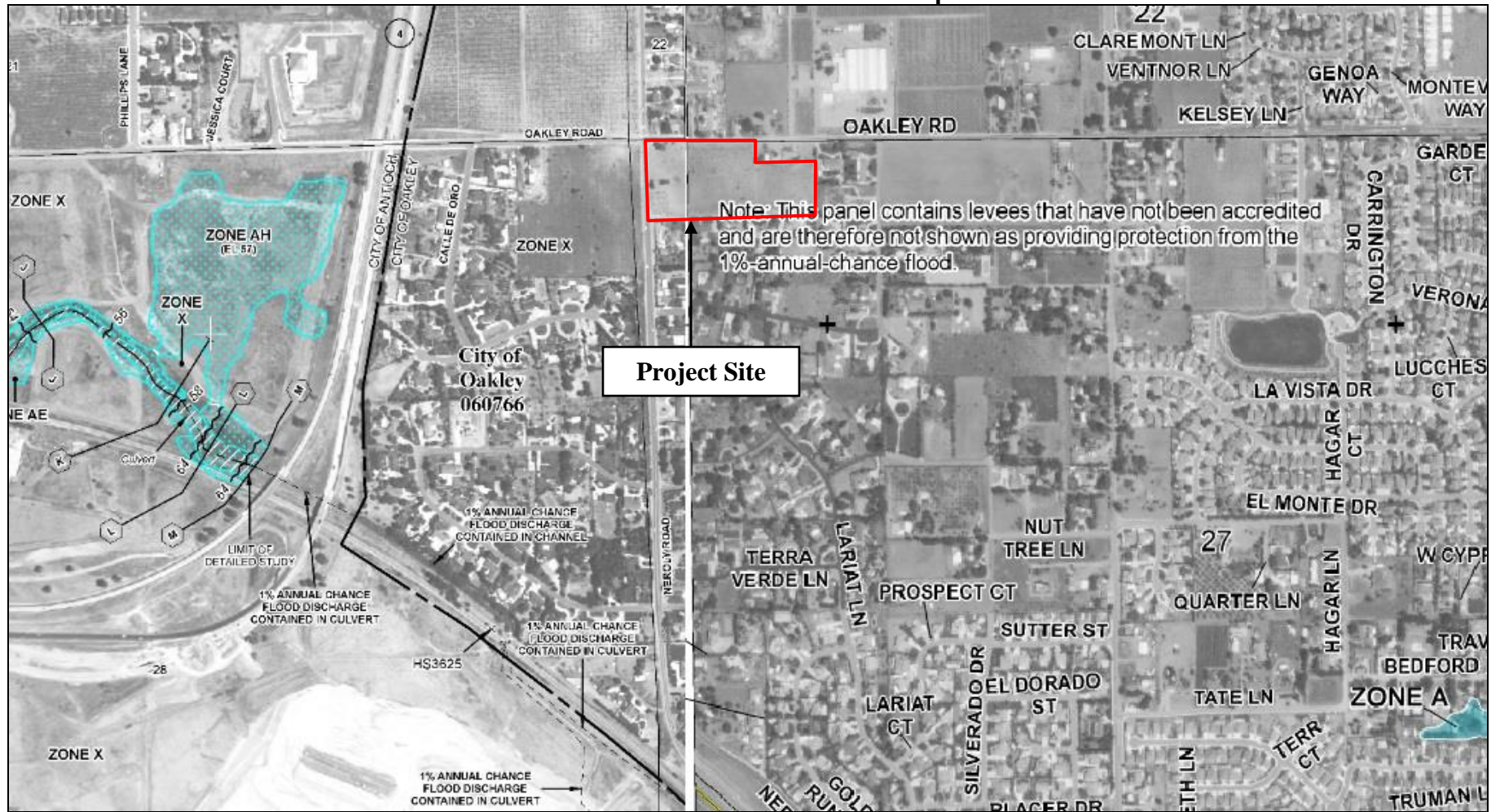
In addition, according to the Oakley 2020 General Plan EIR, increased development may lead to an increase in impervious surfaces being created where permeable soils currently exist. With approval and implementation of the proposed project as a single-family subdivision, new streets, sidewalks, driveways, and rooftops would convert the project site's undeveloped, primarily pervious surfaces to impervious surfaces. Whereas open space allows precipitation to infiltrate into the ground, impervious surfaces cause water to pond or runoff. Stormwater runoff from impervious areas may concentrate and cause increases in runoff volume for the area. Discharge of the concentrated runoff may cause localized flooding at storm drain connections or downstream of the discharge location. Therefore, the future residential development would be subject to the requirements included in the C.3 Standards to ensure that development would not result in changes to stream stability and geomorphology. As a result, the future development of up to 13 single-family units would require a SWCP that conforms with the most recent Contra Costa Clean Water Program Stormwater C.3 Guidebook.

In addition, the project site is within the CCCFCWCD. The CCCFCWCD requires a drainage fee in accordance with Flood Control Ordinance Numbers 2007-07 and 2007-06. Pursuant to the fee collection agreement between the Contra Costa County Board of Supervisors and the City of Oakley, the applicant is required to pay the fee at the time of building permit issuance or as otherwise determined by the Contra Costa County Board of Supervisors. Therefore, project compliance with the City of Oakley's NPDES and C.3 regulations, and payment of drainage fees would ensure that the project would not substantially violate water quality standards, degrade water quality, directly alter or lead to the alteration of existing drainage features leading to erosion, flooding or siltation, nor would the project contribute runoff water which would exceed the capacity of

existing or planned stormwater drainage systems. In addition, the project site was already anticipated for residential development in the General Plan EIR. As a result, a ***less-than-significant*** impact would occur.

- g-i. The project site is located on two FEMA Flood Insurance Rate Maps (FIRMs). Based on the FEMA FIRMs (Map Number IDs 06013C0332F/06013C0355G), the project site is within Zone X, which is described by FEMA as an area determined to be outside the 0.2 percent annual chance floodplain (see Figure 3). Thus, development of the proposed project would not place structures within a 100-year floodplain or expose people or structures to a risk of loss, injury, or death involving flooding. Additionally, Figure 8-6 of the City of Oakley General Plan 2020 outlines all areas that could be flooded due to dam failures. The proposed project site is not identified as being within an area of possible inundation as a result of a failure of a levee or dam. Accordingly, restrictions on development or special requirements associated with flooding are not required for the project. Therefore, the proposed project would result in a ***less-than-significant*** impact related to flooding.
- j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when a tsunami reaches the shoreline, a high swell of water breaks and washes inland with great force. Waves may reach 50 feet in height on unprotected coasts. Historic records of the Bay Area used by one study indicate that nineteen tsunamis were recorded in San Francisco Bay during the period of 1868-1968. Maximum wave height recorded at the Golden Gate tide gauge (where wave heights peak) was 7.4 feet. The available data indicate a standard decrease of original wave height from the Golden Gate to about half original wave height on the shoreline near Richmond, and to nil at the head of the Carquinez Strait. As the project site is approximately 20 miles east of the Carquinez straight and approximately 1.5-miles away from the nearest body of water, the project site is not exposed to flooding risks from tsunamis and adverse impacts would not result. A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, whose destructive capacity is not as great as that of tsunamis. Seiches are known to have occurred during earthquakes, but none have been recorded in the Bay Area. In addition, the project is not located near a closed body of water. Therefore, risks from seiches and adverse impacts would not result. Mudflows typically occur in mountainous or hilly terrain. Given the existing and proposed flat topography of the project site, risks from mudflows and adverse impacts would not result. Therefore, potential impacts resulting from tsunamis, seiches, or mudslides would be ***less than significant***.

**Figure 3
FEMA Flood Insurance Rate Map**



Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X. LAND USE AND PLANNING.				
<i>Would the project:</i>				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. The proposed project includes a request for a General Plan Amendment (GPA 01-18) to amend to amend the land use designation from SV (0.2 to 1.0 dwelling units per acre) to SL (0.8 to 2.3 dwelling units per acre) and a Rezone (RZ 04-18) from R-40 with a 40,000 sf minimum lot size to R-20 with a 20,000 sf minimum lot size, which would allow for development of up to 13 single-family units. The approximately 7.14-acre project site is located at the southeast corner of Oakley Road and Neroly Road. The proposed project would not include any improvements that would alter circulation or create a barrier between parts of the community. A vineyard and metal structure currently exist on the project site, but the site has been planned for single-family development in the Oakley 2020 General Plan. Therefore, the proposed project would not be located between communities in such a way as to create a barrier or divide established communities. As a result, the proposed project would have a **less-than-significant** impact.
- b. The proposed project includes a request for a General Plan Amendment (GPA 01-18) to amend to amend the land use designation from SV to SL and a Rezone (RZ 04-18) from R-40 to R-20. While the proposed project is requesting a General Plan Land Use amendment the project site has been previously anticipated for development in the Oakley 2020 General Plan. Should the City Council amend the land use designation to SL, the proposed project would not conflict with any applicable land use plans, policies, or regulations nor would be adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the project would result in a **less-than-significant** impact.
- c. The ECC HCP/NCCP was approved in August 2007 and the City of Oakley approved the implementing ordinance on November 13, 2007. The project is within the City and, therefore, is included in the HCP. In compliance with the

implementing ordinance, the proposed project would be required to comply with the HCP conservation strategies. Mitigation Measures IV-1 through IV-3 would ensure that the proposed project fulfills all requirements of the ECCC HCP/NCCP. Therefore, the proposed project would not conflict with the adopted HCP and a ***less-than-significant*** impact would occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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XI. MINERAL RESOURCES.

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|----------|
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ✘ |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ✘ |

Discussion

a,b. The City of Oakley General Plan Background Report states that the only mineral resource currently mined in the City of Oakley is sand. Currently mining of sand does not occur at the project site and much of the adjacent land is developed for residential uses, which would be incompatible with mining activities. Thus, proposed project would not result in the loss of availability of a known mineral resource or a locally important mineral recovery site; therefore, the proposed project would have **no impact** to mineral resources.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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XII. NOISE.

Would the project result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a,c. The proposed project consists of a General Plan Amendment and Rezone of the project site to allow for future development of up to 13 residential units. Development of the site with 13 residential units would involve sources of noise that would be similar to the surrounding neighborhoods, such as resident vehicle usage, operation of mechanical equipment, and other limited sources of noise.

The City of Oakley General Plan Policy 9.1.5 states that noise levels resulting from transportation noise sources shall be maintained at or below 65 dBA L_{dn} at residential outdoor use areas and noise levels between 50 and 60 dBA L_{dn} are considered normally acceptable with noise levels from 55 to 70 dBA L_{dn} considered conditionally acceptable. Table 9-6 of the City's General Plan demonstrates that noise levels along Oakley Road, east of Neroly Road, vary

from a maximum of 70 dB at 20 feet from the roadway, diminishing to 65 dB at 43 feet away from Oakley Road, and 60 dB at 92 feet away from Oakley Road.¹⁰

As is shown on the tentative map for the proposed project, the residential lots will be situated along the three surrounding roadways, including Oakley Road. By situating the homes facing the surrounding roadways, the single-family homes would shield the majority of new sensitive receptors' private outdoor areas from transportation noise levels generated by Oakley Road in excess of the normally acceptable level of 65 dB L_{dn} for residential outdoor use areas.

Thus, while operations of potential future residential development on the project site are not anticipated to generate significant amounts of noise, nor would such developments result in an increase in ambient noise levels, future residents of the project site could be exposed to noise levels in excess of the City's standard, resulting in a **potentially significant** impact.

Mitigation Measure(s)

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

XII-1. Prior to the approval of Improvement Plans, the project applicant shall hire an acoustical engineering consultant once sufficient civil and architectural plans for the project are available to verify that the location of the proposed homes is sufficient to reduce exterior noise levels to 65 dB or below. Proof of verification shall be submitted to the City Building Division and City Engineer. If necessary, additional mitigation measures to protect outdoor living areas of the project shall be developed to the satisfaction of the City Engineer, which may include but not be limited to reorientation of the homes or installation of a sound barrier. The project plans shall also show that the ventilation system chosen complies with the 2013 California Building and Mechanical Code as well as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The ventilation system selected shall not compromise the outdoor-to-indoor noise attenuation of the structure.

- b. Groundborne vibration would be generated during potential future construction of residences. Residential land uses surrounding the project site would be sensitive to excessive vibrations caused by construction. For structural damage, the California Department of Transportation (Caltrans) uses a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV), for buildings structurally sound and designed to modern engineering standards; 0.2 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern; and a conservative limit of 0.08 in/sec PPV for historic buildings or buildings that are documented to be structurally weakened. All surrounding structures are assumed to be structurally sound, but damage would be a concern so the 0.2 in/sec PPV will be used as a threshold of significance for structural

¹⁰ City of Oakley. *City of Oakley 2020 General Plan* [Table 9-6]. Amended February 2, 2016.

damage. The threshold of 0.2 in/sec PPV is also used by Caltrans as the threshold for human annoyance caused by vibration. Therefore, activities creating vibrations exceeding 0.2 in/sec PPV would impact sensitive receptors in nearby residences.¹¹ Table 5 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet.

Potential future construction activities, such as drilling, the use of jackhammers, and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), may generate groundborne vibration in the immediate vicinity. As shown in Table 5, jackhammers typically generate vibration levels of 0.035 in/sec PPV, while drilling typically generates vibration levels of 0.09 in/sec PPV, and the strongest source of vibrations, vibratory rollers, generates vibration levels of 0.21 in/sec PPV all at a distance of 25 feet.

Equipment	PPV at 25 ft (in/sec)
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

Source: Caltrans, Transportation and Construction Vibration: Guidance Manual. September 2013.

Vibration levels would vary depending on soil conditions, construction methods, and equipment used. It is important to note that groundborne vibrations dissipate with distance. The closest accessory structure to the project site is approximately 20 feet away while the closest residential structure is approximately 35 feet away. Although the closest accessory structure is approximately 20 feet from the nearest point of the project site, an accessory structure would not be considered a sensitive receptor as the structure is not used as a residence and is anticipated to have been constructed to modern standards; thus, only the nearby residences are considered sensitive to groundborne vibrations from potential future development of the site. Because the closest residence is at least 35 feet away, the PPV experienced at the nearest residences would be reduced from the PPV's reported in Table 5. The Caltrans *Transportation and Construction Vibration Guidance Manual* provides a formula for estimating vibration dissipation with distance.¹² Calculations were completed to determine the maximum vibration caused by the construction activities using the Caltrans formula. Because the Vibratory Roller would be the most intense possible source of vibrations, the reference PPV of 0.210 in/sec was used for the calculations. At a distance of 35

¹¹ Caltrans. *Transportation and Construction Vibration Guidance Manual*. September 2013.

¹² $PPV_{Equipment} = PPV_{Reference} (25/D)^{1.1}$

Where: D = distance from equipment to the receiver in feet (assumed to be 35 feet)

PPV_{Ref} = reference PPV at 25 feet (from Table 5)

Source: Caltrans. *Transportation and Construction Vibration Guidance Manual*. [pg. 37]. September 2013.

from the project site any sensitive receptors would receive 0.015 in/sec PPV from the use of a Vibratory Roller, which is well below the 0.2 in/sec PPV significance threshold used for this analysis. Consequently, vibration generated by construction activities associated with the proposed project are not expected to be perceptible at nearby residences, and the construction-generated vibrations would not be expected to result in structural damage to such residences. Furthermore, construction is temporary and construction equipment would operate intermittently throughout the course of a day, would be restricted to daytime hours per the City of Oakley Municipal Code Section 4.2.208, and would likely only occur over portions of the improvement area at a time.

Therefore, the project would not involve the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels resulting in a ***less-than-significant*** impact.

- d. Potential future construction within the project site would result in temporarily increased noise levels from grading, and other construction activities on the project site. Construction noise from potential future site development would include mechanical equipment such as earthmovers, dump trucks, and similar equipment during grading, the delivery of construction materials, construction of foundations, framing, roofing, and similar operations. Construction activity would likely only occur over portions of the improvement area at a time. Because noise levels dissipate with distance from the source, noise levels received by the surrounding sensitive receptors would fluctuate depending on the distance of the noise source on the project site from the fixed location of the receptor. Although construction activities would only occur for a limited duration, project construction activities could generate noise that would result in temporary increases in noise levels in the project vicinity. Potential future construction activity within the project site would be subject to the City of Oakley Municipal Code's Noise Control Chapter. Specifically, construction near residential areas is limited to between 7:30 AM and 7:00 PM Monday through Friday, and between 9:00 AM and 7:00 PM on Saturdays, Sundays, and holidays. Because the proposed project would adhere to the City of Oakley Municipal Code Noise Control Chapter, noise generated by the project would be allowable under the Municipal Code and the project would not result in a substantial increase in the ambient noise levels existing without the project. Therefore, the proposed project would result in a ***less-than-significant*** impact.
- e,f. The project site is not located near an existing airport or private airstrip and is not within an area covered by an existing airport land use plan. Therefore, the proposed project would have ***no impact***.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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XIII. POPULATION AND HOUSING.

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|----------|--------------------------|
| a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |
| b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |
| c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |

Discussion

- a. The proposed project includes a request for a General Plan Amendment (GPA 01-18) to amend to amend the land use designation from SV (0.2 to 1.0 dwelling units per acre) to SL (0.8 to 2.3 dwelling units per acre) and a Rezone (RZ 04-18) from R-40 with a 40,000 sf minimum lot size to R-20 with a 20,000 sf minimum lot size, which would allow for development of up to 13 single-family units. According to the General Plan, there are 3.26 persons per household for the City of Oakley. As a result, the proposed project could add a maximum of 42 persons. Although an increase of 42 persons would not be considered a substantial increase in population growth for the area, the impacts of such an increase have been analyzed throughout this initial study. Therefore, impacts would be considered **less than significant**.
- b,c. The future single-family development project would require the demolition of the existing metal structure located on the western side of the property. The removal of one metal structure on-site, would not be considered displacement of a substantial number of existing housing units or people. In addition, the project could include development of up to 13 single-family units, allowing for additional home ownership in the City of Oakley. Therefore, the approval and implementations of the proposed project would not require the construction of replacement housing. As a result, the project would have a **less-than-significant** impact regarding the displacement of substantial numbers of housing or people.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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XIV. 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:

a. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. Fire protection is currently provided to the City of Oakley by the ECCCFPD. A new fire station was built to accommodate increased demand, staffing and equipment in 2010. With the completion of the new fire station the City of Oakley General Plan anticipates fire service to be adequate for buildout of the City. The proposed project would be subject to the fire facilities impact fees established by the City of Oakley Municipal Code Section 9.2.502. Payment of the required impact fee would mitigate any potential impacts caused by increased demands on fire services that may result from the proposed project, as well as ensure that the project conforms with the City of Oakley’s General Plan Policy 4.4.2. Additionally, the proposed project does not include any alterations to the circulation system of the surrounding area, which could conflict with the City of Oakley’s General Plan Policy 4.4.4, or lead to a degradation in response times. Given the payment of fees in accordance with City of Oakley Municipal Code guidelines the proposed project is not expected to cause significant degradation to response times or service ratios, which would induce the need for physically altered or expanded governmental facilities and the project would, therefore, result in a **less-than-significant** impact.
- b. Police protection is currently provided to the City of Oakley by the Oakley Police Department and the Contra Costa County Sheriff’s Office. The Oakley Police Department currently employs 43 persons, including the Chief of Police, the Lieutenant, six Sergeants, five Detectives, 21 Police Officers, and nine Police Services Assistants.¹³ As previously discussed, the proposed project could

¹³ City of Oakley Police Department. 2017 Annual Report. 2017. Available at <http://www.ci.oakley.ca.us/wp-content/uploads/2018/04/Annual-Report-2017-2-2.pdf>. Accessed June 19, 2018.

potentially involve the construction and operation of up to 13 single-family residential units. With the development of the project site with single-family residential uses, an increase in demand for police services would occur, because residences typically generate a higher demand for police. Nevertheless, police service demand from residential development at the project site would have been included in City of Oakley's demand predictions based on anticipated General Plan buildout. In addition, development fees would be applied to the proposed project, as well as a Police Services levy. Based on the above, the proposed project would create a demand equal to or less than that anticipated for the site and would not induce the need for physically altered or expanded governmental facilities. Therefore, the proposed project would result in a **less-than-significant** impact.

- c. The Oakley Union School District and the Antioch Unified School District (AUSD) provide public educational services to the City of Oakley. The project site is within the limits of the Antioch Unified School District, and as a result, any required development fees would be paid to the Antioch Unified School District, pursuant to Government Code Section 65995 et. seq. and Education Code Section 17620 et. seq.¹⁴ The AUSD serves approximately 19,000 students across both Antioch and parts of Oakley. AUSD includes 14 elementary schools, four middle schools, and six high schools. The nearest schools are Orchard Park Elementary school located approximately 0.35-mile northeast of the project site and Mno Grant Elementary located approximately 1.21 miles southwest of the project site. Elementary students are estimated to increase by 0.67 students per new residential unit in the AUSD. As such, the proposed project would add approximately 8.71 students to AUSD schools. While the proposed project would be required to pay school impact fees, which would sufficiently mitigate any potential impacts on public schools in the area, given the small number of students from the project, the need for school improvements or expansions is not anticipated. Therefore, the proposed project would result in a **less-than-significant** impact regarding an increase in demand for schools.
- d. The proposed project includes the development of 13 single-family residential units. The increase in residents would lead to a slight increase in park use in the area. The City of Oakley identifies the population rate of 3.26 residents per single-family dwelling unit. Using the population generation rate, maximum buildout of the proposed project site would be increased by 42 new residents to the City. The City of Oakley Municipal Code Section 9.2.2.08 requires five acres of parkland per 1,000 residents. As a result, 0.21-acre of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay in-lieu fees to fund improvements to and expansion of park facilities. Nevertheless, because the proposed project does not include the development of any parkland, development fees would be applied to the proposed project in accordance with the City of Oakley Municipal Code Section

¹⁴ Antioch Unified School District. *Developer Fees*. 2018. Available at: <https://www.antiochschools.net/site/Default.aspx?PageID=284>. Accessed June 19, 2018.

9.2.2.08. Dedication of parkland or payment of required in-lieu fees would ensure that the proposed project would not reduce performance objectives requiring new or expanded park facilities resulting in a ***less-than-significant*** impact on public parks.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
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XV. RECREATION.

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|----------|--------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | ✘ | <input type="checkbox"/> |

Discussion

a-b. The proposed project would allow for the construction of 13 single-family residences. The development of residences would create an increase in population and therefore, an increase in demand on recreational facilities would occur. The City of Oakley Municipal Code 9.2.2.08 requires five acres of parkland per 1,000 residents. The City of Oakley identifies the population rate of 3.26 residents per single-family dwelling unit. Using the population generation rate, maximum buildout of the proposed project site would result in an increase of 42 new residents to the City. As a result, 0.21-acre of parkland would be required. Oakley resolution 19-03 requires subdividers of land within the City to dedicate land and/or pay fees in lieu of the dedication for the neighborhood and community parks and recreation programs. Therefore, given that the proposed project does not include dedicated parkland and would be required to pay the City’s in-lieu fee, the proposed project would result in a **less-than-significant** impact on recreation.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC.				
<i>Would the project:</i>				
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b. Under existing General Plan land use and zoning designations for the project site, the site could be redeveloped with up to seven residential housing units. The proposed project would include a Rezone and a General Plan Amendment of the site for the development of 13 residential units. According to the Contra Costa Transportation Authority (CCTA) Congestion Management Plan (CMP), any land development application generating more than 100 peak hour trips is required to prepare a study of the project’s traffic impacts on the CMP network. The CCTA does not require projects generating fewer than 100 peak hour trips to prepare a traffic study because the CCTA has concluded that projects generating fewer than 100 peak hour trips are unlikely to result in impacts to circulation networks.

The Institute of Traffic Engineer’s (ITE) Trip Generation Handbook was used to estimate the potential number of vehicle trips that would result from development of the site. Development and operation of 13 residential units would be anticipated to result in 10 vehicle trips in the AM peak hour and 13 vehicle trips during the PM peak hour from the project site. As discussed above, the proposed

project is anticipated to generate a maximum of 13 peak hour trips, which would be well below CCTA's 100 peak hour trip threshold for preparing a traffic study. Consequently, the proposed project would not be anticipated to result in impacts to the circulation network of the project area.

In addition, development of the project site would be required to comply with all relevant goals and policies within the City's General Plan. For instance, Policy 3.2.2, and 3.2.5 are designed to promote the incorporation of bicycle and pedestrian facilities into new developments. Furthermore, General Plan Program 3.2.A requires site plan reviews for new developments to encourage the incorporation of bicycle and pedestrian facilities such as bicycle racks, continuous sidewalks and internal pedestrian circulation plans.

Development of the project site for residential uses would not be anticipated to result in impacts to the City's circulation system. Furthermore, future development of the project site would be required to comply with the City's General Plan goals and policies related to alternative transportation and vehicle transportation. Therefore, the proposed project would result in a **less-than-significant** impact.

- c. The project site is not located near an airport; therefore, the proposed project would not require any changes to existing regional air traffic activity and **no impact** would occur.
- d,e. The proposed project would not alter emergency access to the site, which is currently provided by all three surrounding roadways. However, the proposed project will include the widening of all three roadways, Oakley Road, Neroly Road, and Almondwood Place, which will provide increased access to the proposed residential lots situated facing the roadways. Despite roadway widening improvements, development of the site would not be anticipated to include any significant changes to the existing circulation network in the project area that would introduce hazards. Furthermore, development of the site has already been planned for residential use and, thus, would not include incompatible uses that could increase hazards. Therefore, the project would result in a **less-than-significant** impact.
- f. The proposed project would have access to the Tri Delta Transit system. Lines 300, 383, 391, and 393 provide the closest service to the project site, with multiple stops within the City of Oakley, and major regional access would be provided by the Antioch Park & Ride (Hillcrest). The proposed project would not include alterations to the surrounding circulation system of the area, nor would the project interfere with current transit options available for the area. Additionally, the proposed project would not interfere with existing bicycle infrastructure. As discussed in responses to question "a,b." above, potential future development of the project site would be required to comply with the City's General Plan goals and policies related to the use of alternative modes of

transportation. Therefore, the proposed project would not conflict with alternative transportation routes or policies resulting in a ***less-than-significant*** impact.

XVII. 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:

	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b. As discussed in Section V, Cultural Resources, of this IS/MND, the proposed project site contains a metal barn structure estimated to have been constructed prior to 1939; however, it was determined that the structure in question would not be eligible for listing in the CRHR, NRHP, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

The potential for unrecorded Native American resources to exist within the project site is relatively low based on the highly-disturbed nature of the site. Implementation of Mitigation Measure V-2., described in detail in Section V. (Cultural Resources), would reduce any potential impacts related to unknown resources to less-than-significant levels. Based on a record search of the Native American Heritage Commission (NAHC) Sacred Land files, known tribal resources do not exist for the project area or adjacent lands. Because the proposed project includes a request for a General Plan Amendment, in compliance with Senate Bill (SB) 18, the City of Oakley initiated consultation with the pertinent Native American Tribes. Additionally, in compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), a project notification letter was distributed by the City to those Native American tribes who have previously requested notification under AB 52 of projects within the City subject to CEQA. The letters were distributed on May 15, 2018, explaining the nature of the project and soliciting comments and any additional information the individuals might have regarding tribal resources in the project area. The City did not receive any responses within the mandatory 30-day response period for consultation under AB 52/Public Resources Code Section 21080.3.1(b). Therefore, because

known tribal resources were not identified by the Sacred Lands File Search nor any tribe and because the project would be required to comply with the City's standard conditions of approval regarding cultural resources, as well as mitigation measures in Section V. (Cultural Resources), construction of the proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource, and a ***less-than-significant*** impact to tribal cultural resources could occur.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS.				
<i>Would the project:</i>				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a,b,e. As previously discussed, the proposed project will use a septic system for treatment of wastewater from future residential uses. Therefore, the proposed project would have **no impact** to wastewater treatment facilities.

c. According to the Oakley 2020 General Plan EIR, increased development may lead to an increase in impervious surfaces being created where permeable soils currently exist. With approval and implementation of the proposed project, new residential development, streets, and sidewalks would convert the project site's undeveloped, primarily pervious surfaces to impervious surfaces. Whereas open space allows precipitation to infiltrate into the ground, impervious surfaces cause water to pond or runoff. Stormwater runoff from impervious areas may

concentrate and cause increases in runoff volume for the area. Discharge of the concentrated runoff may cause localized flooding at storm drain connections or downstream of the discharge location. Storm drainage from the project site will flow into the existing City stormwater drainage system; however, the proposed project is subject to the requirements included in the C.3 Standards to ensure that development does not result in changes to stream stability and geomorphology. The applicant is required to develop a stormwater control plan SWCP in compliance with C.3 standards.

In addition, the project site is within the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD). The CCCFCWCD requires a drainage fee in accordance with Flood Control Ordinance Numbers 2007-07 and 2007-06. Pursuant to the fee collection agreement between the Contra Costa County Board of Supervisors and the City of Oakley, the applicant is required to pay the fee at the time of building permit issuance or as otherwise determined by the Contra Costa County Board of Supervisors. Therefore, project compliance with the City of Oakley's C.3 regulations and payment of drainage fees would ensure that the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, would not be required. As a result, impacts would be ***less than significant***.

- d. Water is provided to the project site by the Diablo Water District (DWD). According to the DWD Final 2015 Urban Water Management Plan (2015 UWMP), water demand and connection projections for DWD are based on buildout land uses in current adopted general plans. Over the period from 2015 to 2040, DWD's demand is estimated to increase from 1,492 MG per year to 5,349 MG per year. DWD estimates that residential water usage comprises about 82 percent of the total use and non-residential usage comprises about 18 percent. DWD's primary water supply for its distribution system is treated surface water from the Bureau of Reclamation's Central Valley Project (CVP) purchased from the Contra Costa Water District (CCWD). CVP water is conveyed through the Contra Costa Canal and treated at the Randall-Bold Water Treatment Plant in Oakley, which is jointly owned by DWD and CCWD. DWD has developed a groundwater supply system that provides additional supply reliability. The first groundwater well came online in 2006. When fully implemented, groundwater may comprise up to 20 percent of DWD's total supply. As indicated in the Urban Water Management Plan, DWD has adequate supply sources to meet future needs under normal year, single year and multi-year drought conditions.¹⁵

The proposed project would tie into the water main in the existing surrounding roadways. Although, the project includes a General Plan Amendment from Single Family Residential, Very Low Density to Single Family Residential, Low Density, thus increasing the single-family development potential by six units, the increased demand would be minimal in comparison to the overall demand. Actual

¹⁵ Diablo Water District. *Diablo water District Final 2015 Urban Water Management Plan*. June 2016.

per capita water demand for DWD was determined for each calendar year from 1995 through 2010 as the total water demand divided by the population. According to Table 3-4 from the 2015 UWMP, the City's population in 2010 was 32,670 persons with an Annual Demand of 1,816 million gallons (MG), resulting in an Annual Per Capita Demand of 152.291 gallons per capita per day (gpcd). Given that the proposed project would result in an increase of the City's population by approximately 42 persons, the proposed project would increase the City's water demand by approximately 7,296 gallons per day, which is 0.007296 MG.

As previously discussed, DWD determined adequate supply sources exist to meet future needs under normal year, single year, and multi-year drought conditions. Given that the proposed project would have a minimal effect on the City's total water demand, the City would have sufficient water supply to meet future demands created by the project. In addition, the project would be required to pay the necessary water connection and capacity fees. Therefore, the proposed project would result in a **less-than-significant** impact.

- f,g. Solid waste collected by Oakley Disposal in the City limits of Oakley is hauled to the recycling Center and Transfer Station in Pittsburg, which is operated by Contra Costa Waste Service. Residential, commercial, and industrial waste is processed at this transfer facility and the residual material is hauled to Potrero Hills Landfill (PHLF) outside Suisun City. PHLF is permitted to accept waste through 2048 and currently has a remaining capacity of 13,872 cubic yards available out of a maximum permitted capacity of 83,100 cubic yards.¹⁶ Oakley Disposal Service provides weekly curbside recycling service whereby each residential customer is provided two 12-gallon crates for discarding recyclables. Green waste service is provided on a bi-weekly basis. The curbside material is transported to the Concord Facility (Mt. Diablo Recycling) where the recyclables are sorted and moved to the appropriate markets for processing, composting, etc.

Given that the proposed project would only add 13 new single-family units, an increase of only six residential units from allowable buildout under the current General Plan and zoning designations, the proposed project would not be expected to generate solid waste in excess of what was previously anticipated by the General Plan. As such, development would be able to be accommodated within the existing solid waste facilities and would comply with all the required local and State regulations; therefore, a **less-than-significant** impact would result.

¹⁶ California Department of Resources Recycling and Recovery. *Facility/Site Summary Details: Potrero Hills Landfill (48-AA-0075)*. 2018. Available at <http://www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0075/Detail/>. Accessed June 19, 2018.

Issues	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

Discussion

- a. Although relatively unlikely, based upon the current land cover types found on-site, special-status wildlife species and/or federally- or state-protected birds not covered under the ECCCHCP could be occupying the site. In addition, although unlikely, the possibility exists for subsurface excavation of the site during grading and other construction activities to unearth deposits of cultural significance. However, this IS/MND includes mitigation measures that would reduce any potential impacts to less-than-significant levels. Therefore, the proposed project would have **less-than-significant** impacts related to degradation of the quality of the environment, reduction of habitat, threatened species, and/or California’s history or prehistory.

- b. The proposed project in conjunction with other development within the City of Oakley could incrementally contribute to cumulative impacts in the area. However, mitigation measures for all potentially significant project-level impacts identified for the proposed project in this IS/MND have been included that would reduce impacts to less-than-significant levels. As such, the project’s incremental contribution towards cumulative impacts would not be considered significant. In addition, all future discretionary development projects in the area would be required to undergo the same environmental analysis and mitigate any potential impacts, as necessary. In addition, the site has been anticipated by the City for residential development. Thus, buildout of the site with residential uses was

considered in the cumulative analysis of buildout of the General Plan. Therefore, the proposed project would not have any impacts that would be cumulatively considerable, and impacts would be ***less than significant***.

- c. The potential impacts identified in this study are minor and would be mitigated to a less-than-significant level with implementation of required mitigation measures. The proposed project would not result in a substantial adverse effect on human beings, either directly or indirectly. Therefore, impacts related to environmental effects that could cause adverse effects on human beings would be ***less than significant***.

APPENDIX A

Air Quality and Greenhouse Gas Modeling Results

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

**Ranchettes at Neroly Project
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	13.00	Dwelling Unit	7.14	23,400.00	37

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity Factors for CO2 adjusted based on PG&E RPS reductions

Land Use - Applicant provided

Construction Phase - Applicant provided

Demolition -

Grading - Applicant provided

Vehicle Trips - Based on ITE trip generation rates for single family homes (210)

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	PhaseEndDate	8/9/2019	10/11/2019
tblConstructionPhase	PhaseEndDate	7/24/2020	11/1/2019
tblConstructionPhase	PhaseEndDate	6/26/2020	5/1/2020
tblConstructionPhase	PhaseEndDate	8/21/2020	5/15/2020
tblConstructionPhase	PhaseStartDate	6/27/2020	10/14/2019
tblConstructionPhase	PhaseStartDate	8/10/2019	11/4/2019
tblConstructionPhase	PhaseStartDate	7/25/2020	11/18/2019
tblGrading	AcresOfGrading	32.50	7.14
tblLandUse	LotAcreage	4.22	7.14
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	9.91	9.52
tblVehicleTrips	SU_TR	8.62	9.52

2.0 Emissions Summary

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	1.1925	1.1925
2	9-3-2019	12-2-2019	0.8155	0.8155
3	12-3-2019	3-2-2020	0.8666	0.8666
4	3-3-2020	6-2-2020	0.5778	0.5778
		Highest	1.1925	1.1925

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1874	2.8000e-003	0.2082	2.3000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259
Energy	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	43.0116	43.0116	1.9300e-003	8.2000e-004	43.3044
Mobile	0.0331	0.1597	0.3730	1.2700e-003	0.1064	1.1800e-003	0.1076	0.0286	1.1100e-003	0.0297	0.0000	116.1532	116.1532	4.4200e-003	0.0000	116.2637
Waste						0.0000	0.0000		0.0000	0.0000	3.1545	0.0000	3.1545	0.1864	0.0000	7.8151
Water						0.0000	0.0000		0.0000	0.0000	0.2687	0.8487	1.1174	0.0277	6.7000e-004	2.0090
Total	0.2234	0.1879	0.5920	1.6600e-003	0.1064	0.0198	0.1262	0.0286	0.0198	0.0483	5.0756	160.5769	165.6526	0.2237	1.5800e-003	171.7181

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.1874	2.8000e-003	0.2082	2.3000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259
Energy	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	43.0116	43.0116	1.9300e-003	8.2000e-004	43.3044
Mobile	0.0331	0.1597	0.3730	1.2700e-003	0.1064	1.1800e-003	0.1076	0.0286	1.1100e-003	0.0297	0.0000	116.1532	116.1532	4.4200e-003	0.0000	116.2637
Waste						0.0000	0.0000		0.0000	0.0000	3.1545	0.0000	3.1545	0.1864	0.0000	7.8151
Water						0.0000	0.0000		0.0000	0.0000	0.2687	0.8487	1.1174	0.0277	6.7000e-004	2.0090
Total	0.2234	0.1879	0.5920	1.6600e-003	0.1064	0.0198	0.1262	0.0286	0.0198	0.0483	5.0756	160.5769	165.6526	0.2237	1.5800e-003	171.7181

	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
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

3.0 Construction Detail

Construction Phase

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/3/2019	6/28/2019	5	20	
2	Site Preparation	Site Preparation	6/29/2019	7/12/2019	5	10	
3	Grading	Grading	7/13/2019	10/11/2019	5	65	
4	Building Construction	Building Construction	11/4/2019	5/1/2020	5	130	
5	Paving	Paving	10/14/2019	11/1/2019	5	15	
6	Architectural Coating	Architectural Coating	11/18/2019	5/15/2020	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.14

Acres of Paving: 0

Residential Indoor: 47,385; Residential Outdoor: 15,795; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.1000e-004	0.0000	4.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	0.0351	0.3578	0.2206	3.9000e-004	4.1000e-004	0.0180	0.0184	6.0000e-005	0.0167	0.0168	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672

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3.2 Demolition - 2019

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	tons/yr										MT/yr					
Hauling	2.0000e-005	6.3000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1549	0.1549	1.0000e-005	0.0000	0.1551
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.0000e-004	4.1100e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0722	1.0722	3.0000e-005	0.0000	1.0729
Total	5.6000e-004	1.0300e-003	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2271	1.2271	4.0000e-005	0.0000	1.2280

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	tons/yr										MT/yr					
Fugitive Dust					4.1000e-004	0.0000	4.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671
Total	0.0351	0.3578	0.2206	3.9000e-004	4.1000e-004	0.0180	0.0184	6.0000e-005	0.0167	0.0168	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671

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3.2 Demolition - 2019

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	tons/yr										MT/yr					
Hauling	2.0000e-005	6.3000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1549	0.1549	1.0000e-005	0.0000	0.1551
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.0000e-004	4.1100e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0722	1.0722	3.0000e-005	0.0000	1.0729
Total	5.6000e-004	1.0300e-003	4.2300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.2271	1.2271	4.0000e-005	0.0000	1.2280

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.3 Site Preparation - 2019

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	tons/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	3.3000e-004	2.4000e-004	2.4600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6433	0.6433	2.0000e-005	0.0000	0.6437
Total	3.3000e-004	2.4000e-004	2.4600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6433	0.6433	2.0000e-005	0.0000	0.6437

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	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.3 Site Preparation - 2019

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	tons/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	3.3000e-004	2.4000e-004	2.4600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6433	0.6433	2.0000e-005	0.0000	0.6437
Total	3.3000e-004	2.4000e-004	2.4600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6433	0.6433	2.0000e-005	0.0000	0.6437

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1995	0.0000	0.1995	0.1080	0.0000	0.1080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0839	0.9213	0.5295	9.6000e-004		0.0454	0.0454		0.0418	0.0418	0.0000	86.5874	86.5874	0.0274	0.0000	87.2722
Total	0.0839	0.9213	0.5295	9.6000e-004	0.1995	0.0454	0.2449	0.1080	0.0418	0.1498	0.0000	86.5874	86.5874	0.0274	0.0000	87.2722

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3.4 Grading - 2019

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.3100e-003	0.0134	4.0000e-005	3.8500e-003	3.0000e-005	3.8800e-003	1.0200e-003	2.0000e-005	1.0500e-003	0.0000	3.4845	3.4845	9.0000e-005	0.0000	3.4868
Total	1.7700e-003	1.3100e-003	0.0134	4.0000e-005	3.8500e-003	3.0000e-005	3.8800e-003	1.0200e-003	2.0000e-005	1.0500e-003	0.0000	3.4845	3.4845	9.0000e-005	0.0000	3.4868

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	tons/yr										MT/yr					
Fugitive Dust					0.1995	0.0000	0.1995	0.1080	0.0000	0.1080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0839	0.9213	0.5295	9.6000e-004		0.0454	0.0454		0.0418	0.0418	0.0000	86.5873	86.5873	0.0274	0.0000	87.2721
Total	0.0839	0.9213	0.5295	9.6000e-004	0.1995	0.0454	0.2449	0.1080	0.0418	0.1498	0.0000	86.5873	86.5873	0.0274	0.0000	87.2721

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3.4 Grading - 2019

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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.3100e-003	0.0134	4.0000e-005	3.8500e-003	3.0000e-005	3.8800e-003	1.0200e-003	2.0000e-005	1.0500e-003	0.0000	3.4845	3.4845	9.0000e-005	0.0000	3.4868
Total	1.7700e-003	1.3100e-003	0.0134	4.0000e-005	3.8500e-003	3.0000e-005	3.8800e-003	1.0200e-003	2.0000e-005	1.0500e-003	0.0000	3.4845	3.4845	9.0000e-005	0.0000	3.4868

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0496	0.4427	0.3604	5.7000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	49.3719	49.3719	0.0120	0.0000	49.6726
Total	0.0496	0.4427	0.3604	5.7000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	49.3719	49.3719	0.0120	0.0000	49.6726

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3.5 Building Construction - 2019

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	tons/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	1.0000e-004	2.6600e-003	6.8000e-004	1.0000e-005	1.4000e-004	2.0000e-005	1.6000e-004	4.0000e-005	2.0000e-005	6.0000e-005	0.0000	0.5534	0.5534	3.0000e-005	0.0000	0.5542
Worker	3.8000e-004	2.8000e-004	2.8800e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7505	0.7505	2.0000e-005	0.0000	0.7510
Total	4.8000e-004	2.9400e-003	3.5600e-003	2.0000e-005	9.7000e-004	3.0000e-005	1.0000e-003	2.6000e-004	3.0000e-005	2.9000e-004	0.0000	1.3039	1.3039	5.0000e-005	0.0000	1.3052

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	tons/yr										MT/yr					
Off-Road	0.0496	0.4427	0.3604	5.7000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	49.3718	49.3718	0.0120	0.0000	49.6725
Total	0.0496	0.4427	0.3604	5.7000e-004		0.0271	0.0271		0.0255	0.0255	0.0000	49.3718	49.3718	0.0120	0.0000	49.6725

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3.5 Building Construction - 2019

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	tons/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	1.0000e-004	2.6600e-003	6.8000e-004	1.0000e-005	1.4000e-004	2.0000e-005	1.6000e-004	4.0000e-005	2.0000e-005	6.0000e-005	0.0000	0.5534	0.5534	3.0000e-005	0.0000	0.5542
Worker	3.8000e-004	2.8000e-004	2.8800e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7505	0.7505	2.0000e-005	0.0000	0.7510
Total	4.8000e-004	2.9400e-003	3.5600e-003	2.0000e-005	9.7000e-004	3.0000e-005	1.0000e-003	2.6000e-004	3.0000e-005	2.9000e-004	0.0000	1.3039	1.3039	5.0000e-005	0.0000	1.3052

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0933	0.8442	0.7413	1.1800e-003		0.0492	0.0492		0.0462	0.0462	0.0000	101.9084	101.9084	0.0249	0.0000	102.5299
Total	0.0933	0.8442	0.7413	1.1800e-003		0.0492	0.0492		0.0462	0.0462	0.0000	101.9084	101.9084	0.0249	0.0000	102.5299

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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	tons/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	1.7000e-004	5.0800e-003	1.2800e-003	1.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.1520	1.1520	6.0000e-005	0.0000	1.1535
Worker	7.3000e-004	5.2000e-004	5.4000e-003	2.0000e-005	1.7400e-003	1.0000e-005	1.7500e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.5230	1.5230	4.0000e-005	0.0000	1.5239
Total	9.0000e-004	5.6000e-003	6.6800e-003	3.0000e-005	2.0300e-003	3.0000e-005	2.0600e-003	5.4000e-004	3.0000e-005	5.8000e-004	0.0000	2.6750	2.6750	1.0000e-004	0.0000	2.6774

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	tons/yr										MT/yr					
Off-Road	0.0933	0.8442	0.7413	1.1800e-003		0.0492	0.0492		0.0462	0.0462	0.0000	101.9083	101.9083	0.0249	0.0000	102.5298
Total	0.0933	0.8442	0.7413	1.1800e-003		0.0492	0.0492		0.0462	0.0462	0.0000	101.9083	101.9083	0.0249	0.0000	102.5298

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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	tons/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	1.7000e-004	5.0800e-003	1.2800e-003	1.0000e-005	2.9000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.1520	1.1520	6.0000e-005	0.0000	1.1535
Worker	7.3000e-004	5.2000e-004	5.4000e-003	2.0000e-005	1.7400e-003	1.0000e-005	1.7500e-003	4.6000e-004	1.0000e-005	4.7000e-004	0.0000	1.5230	1.5230	4.0000e-005	0.0000	1.5239
Total	9.0000e-004	5.6000e-003	6.6800e-003	3.0000e-005	2.0300e-003	3.0000e-005	2.0600e-003	5.4000e-004	3.0000e-005	5.8000e-004	0.0000	2.6750	2.6750	1.0000e-004	0.0000	2.6774

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1143	0.1100	1.7000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	15.3564	15.3564	4.8600e-003	0.0000	15.4779
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1143	0.1100	1.7000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	15.3564	15.3564	4.8600e-003	0.0000	15.4779

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3.6 Paving - 2019

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	tons/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	4.1000e-004	3.0000e-004	3.0800e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8041	0.8041	2.0000e-005	0.0000	0.8047
Total	4.1000e-004	3.0000e-004	3.0800e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8041	0.8041	2.0000e-005	0.0000	0.8047

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	tons/yr										MT/yr					
Off-Road	0.0109	0.1143	0.1100	1.7000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	15.3564	15.3564	4.8600e-003	0.0000	15.4778
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1143	0.1100	1.7000e-004		6.1800e-003	6.1800e-003		5.6900e-003	5.6900e-003	0.0000	15.3564	15.3564	4.8600e-003	0.0000	15.4778

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3.6 Paving - 2019

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	tons/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	4.1000e-004	3.0000e-004	3.0800e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8041	0.8041	2.0000e-005	0.0000	0.8047
Total	4.1000e-004	3.0000e-004	3.0800e-003	1.0000e-005	8.9000e-004	1.0000e-005	9.0000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.8041	0.8041	2.0000e-005	0.0000	0.8047

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0294	0.0295	5.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	4.0852	4.0852	3.5000e-004	0.0000	4.0938
Total	0.0448	0.0294	0.0295	5.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	4.0852	4.0852	3.5000e-004	0.0000	4.0938

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3.7 Architectural Coating - 2019

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	tons/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-005	4.0000e-005	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1144	0.1144	0.0000	0.0000	0.1144
Total	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1144	0.1144	0.0000	0.0000	0.1144

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	tons/yr										MT/yr					
Archit. Coating	0.0406					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2600e-003	0.0294	0.0295	5.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	4.0852	4.0852	3.5000e-004	0.0000	4.0938
Total	0.0448	0.0294	0.0295	5.0000e-005		2.0600e-003	2.0600e-003		2.0600e-003	2.0600e-003	0.0000	4.0852	4.0852	3.5000e-004	0.0000	4.0938

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3.7 Architectural Coating - 2019

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	tons/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-005	4.0000e-005	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1144	0.1144	0.0000	0.0000	0.1144
Total	6.0000e-005	4.0000e-005	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1144	0.1144	0.0000	0.0000	0.1144

3.7 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.1242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0825	0.0897	1.5000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	12.5109	12.5109	9.7000e-004	0.0000	12.5352
Total	0.1361	0.0825	0.0897	1.5000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	12.5109	12.5109	9.7000e-004	0.0000	12.5352

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3.7 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.2000e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	1.6000e-004	1.2000e-004	1.2000e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394

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	tons/yr										MT/yr					
Archit. Coating	0.1242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.0825	0.0897	1.5000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	12.5109	12.5109	9.7000e-004	0.0000	12.5351
Total	0.1361	0.0825	0.0897	1.5000e-004		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	12.5109	12.5109	9.7000e-004	0.0000	12.5351

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3.7 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	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.2000e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394
Total	1.6000e-004	1.2000e-004	1.2000e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3392	0.3392	1.0000e-005	0.0000	0.3394

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0331	0.1597	0.3730	1.2700e-003	0.1064	1.1800e-003	0.1076	0.0286	1.1100e-003	0.0297	0.0000	116.1532	116.1532	4.4200e-003	0.0000	116.2637
Unmitigated	0.0331	0.1597	0.3730	1.2700e-003	0.1064	1.1800e-003	0.1076	0.0286	1.1100e-003	0.0297	0.0000	116.1532	116.1532	4.4200e-003	0.0000	116.2637

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	123.76	123.76	123.76	285,837	285,837
Total	123.76	123.76	123.76	285,837	285,837

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
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
Single Family Housing	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.6504	13.6504	1.3700e-003	2.8000e-004	13.7687
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.6504	13.6504	1.3700e-003	2.8000e-004	13.7687
NaturalGas Mitigated	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357
NaturalGas Unmitigated	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas 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	tons/yr										MT/yr					
Single Family Housing	550209	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357
Total		2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas 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	tons/yr										MT/yr					
Single Family Housing	550209	2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357
Total		2.9700e-003	0.0254	0.0108	1.6000e-004		2.0500e-003	2.0500e-003		2.0500e-003	2.0500e-003	0.0000	29.3612	29.3612	5.6000e-004	5.4000e-004	29.5357

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	103772	13.6504	1.3700e-003	2.8000e-004	13.7687
Total		13.6504	1.3700e-003	2.8000e-004	13.7687

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	103772	13.6504	1.3700e-003	2.8000e-004	13.7687
Total		13.6504	1.3700e-003	2.8000e-004	13.7687

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1874	2.8000e-003	0.2082	2.3000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259
Unmitigated	0.1874	2.8000e-003	0.2082	2.3000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259

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6.2 Area by SubCategory

Unmitigated

	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	tons/yr										MT/yr					
Architectural Coating	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0914					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0766	1.6800e-003	0.1114	2.3000e-004		0.0161	0.0161		0.0161	0.0161	1.6524	0.4057	2.0582	3.1200e-003	9.0000e-005	2.1644
Landscaping	2.9300e-003	1.1200e-003	0.0967	1.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	0.1577	0.1577	1.5000e-004	0.0000	0.1615
Total	0.1874	2.8000e-003	0.2082	2.4000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259

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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	tons/yr										MT/yr					
Architectural Coating	0.0165					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0914					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0766	1.6800e-003	0.1114	2.3000e-004		0.0161	0.0161		0.0161	0.0161	1.6524	0.4057	2.0582	3.1200e-003	9.0000e-005	2.1644
Landscaping	2.9300e-003	1.1200e-003	0.0967	1.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	0.1577	0.1577	1.5000e-004	0.0000	0.1615
Total	0.1874	2.8000e-003	0.2082	2.4000e-004		0.0166	0.0166		0.0166	0.0166	1.6524	0.5634	2.2158	3.2700e-003	9.0000e-005	2.3259

7.0 Water Detail

7.1 Mitigation Measures Water

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.1174	0.0277	6.7000e-004	2.0090
Unmitigated	1.1174	0.0277	6.7000e-004	2.0090

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.847002 / 0.53398	1.1174	0.0277	6.7000e-004	2.0090
Total		1.1174	0.0277	6.7000e-004	2.0090

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.847002 / 0.53398	1.1174	0.0277	6.7000e-004	2.0090
Total		1.1174	0.0277	6.7000e-004	2.0090

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.1545	0.1864	0.0000	7.8151
Unmitigated	3.1545	0.1864	0.0000	7.8151

Ranchettes at Neroly Project - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	15.54	3.1545	0.1864	0.0000	7.8151
Total		3.1545	0.1864	0.0000	7.8151

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	15.54	3.1545	0.1864	0.0000	7.8151
Total		3.1545	0.1864	0.0000	7.8151

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Ranchettes at Neroly Project - 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
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Boilers

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

Equipment Type	Number
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11.0 Vegetation

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

Ranchettes at Neroly Project
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	13.00	Dwelling Unit	7.14	23,400.00	37

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity Factors for CO2 adjusted based on PG&E RPS reductions

Land Use - Applicant provided

Construction Phase - Applicant provided

Demolition -

Grading - Applicant provided

Vehicle Trips - Based on ITE trip generation rates for single family homes (210)

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	PhaseEndDate	8/9/2019	10/11/2019
tblConstructionPhase	PhaseEndDate	7/24/2020	11/1/2019
tblConstructionPhase	PhaseEndDate	6/26/2020	5/1/2020
tblConstructionPhase	PhaseEndDate	8/21/2020	5/15/2020
tblConstructionPhase	PhaseStartDate	6/27/2020	10/14/2019
tblConstructionPhase	PhaseStartDate	8/10/2019	11/4/2019
tblConstructionPhase	PhaseStartDate	7/25/2020	11/18/2019
tblGrading	AcresOfGrading	32.50	7.14
tblLandUse	LotAcreage	4.22	7.14
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	9.91	9.52
tblVehicleTrips	SU_TR	8.62	9.52

2.0 Emissions Summary

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Energy	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Mobile	0.2078	0.8501	2.1254	7.3700e-003	0.6073	6.4800e-003	0.6138	0.1625	6.0700e-003	0.1686		744.7176	744.7176	0.0269		745.3912
Total	14.3198	1.2609	20.6831	0.0411	0.6073	2.4874	3.0947	0.1625	2.4870	2.6495	264.9184	1,004.2867	1,269.2051	0.3598	0.0219	1,284.7390

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/day					
Area	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Energy	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Mobile	0.2078	0.8501	2.1254	7.3700e-003	0.6073	6.4800e-003	0.6138	0.1625	6.0700e-003	0.1686		744.7176	744.7176	0.0269		745.3912
Total	14.3198	1.2609	20.6831	0.0411	0.6073	2.4874	3.0947	0.1625	2.4870	2.6495	264.9184	1,004.2867	1,269.2051	0.3598	0.0219	1,284.7390

Ranchettes at Neroly Project - 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
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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/3/2019	6/28/2019	5	20	
2	Site Preparation	Site Preparation	6/29/2019	7/12/2019	5	10	
3	Grading	Grading	7/13/2019	10/11/2019	5	65	
4	Building Construction	Building Construction	11/4/2019	5/1/2020	5	130	
5	Paving	Paving	10/14/2019	11/1/2019	5	15	
6	Architectural Coating	Architectural Coating	11/18/2019	5/15/2020	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.14

Acres of Paving: 0

Residential Indoor: 47,385; Residential Outdoor: 15,795; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0407	0.0000	0.0407	6.1600e-003	0.0000	6.1600e-003			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	3.5134	35.7830	22.0600	0.0388	0.0407	1.7949	1.8356	6.1600e-003	1.6697	1.6758		3,816.8994	3,816.8994	1.0618		3,843.4451

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.2 Demolition - 2019

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/day										lb/day					
Hauling	1.8000e-003	0.0613	0.0118	1.6000e-004	3.4900e-003	2.4000e-004	3.7300e-003	9.6000e-004	2.3000e-004	1.1800e-003		17.1944	17.1944	8.8000e-004		17.2164
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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0588	0.0971	0.4591	1.4400e-003	0.1267	1.0600e-003	0.1278	0.0336	9.8000e-004	0.0346		144.3070	144.3070	4.2600e-003		144.4135

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/day										lb/day					
Fugitive Dust					0.0407	0.0000	0.0407	6.1600e-003	0.0000	6.1600e-003			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	3.5134	35.7830	22.0600	0.0388	0.0407	1.7949	1.8356	6.1600e-003	1.6697	1.6758	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.2 Demolition - 2019

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/day										lb/day					
Hauling	1.8000e-003	0.0613	0.0118	1.6000e-004	3.4900e-003	2.4000e-004	3.7300e-003	9.6000e-004	2.3000e-004	1.1800e-003		17.1944	17.1944	8.8000e-004		17.2164
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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0588	0.0971	0.4591	1.4400e-003	0.1267	1.0600e-003	0.1278	0.0336	9.8000e-004	0.0346		144.3070	144.3070	4.2600e-003		144.4135

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.3 Site Preparation - 2019

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/day										lb/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	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366

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/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.3 Site Preparation - 2019

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/day										lb/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	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1386	0.0000	6.1386	3.3228	0.0000	3.3228			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	2.5805	28.3480	16.2934	0.0297	6.1386	1.3974	7.5359	3.3228	1.2856	4.6084		2,936.8068	2,936.8068	0.9292		2,960.0361

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.4 Grading - 2019

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/day										lb/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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

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/day										lb/day					
Fugitive Dust					6.1386	0.0000	6.1386	3.3228	0.0000	3.3228			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	2.5805	28.3480	16.2934	0.0297	6.1386	1.3974	7.5359	3.3228	1.2856	4.6084	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.4 Grading - 2019

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/day										lb/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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.5 Building Construction - 2019

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/day										lb/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	4.6400e-003	0.1249	0.0305	2.8000e-004	6.7700e-003	8.6000e-004	7.6300e-003	1.9500e-003	8.3000e-004	2.7800e-003		29.3555	29.3555	1.5500e-003		29.3943
Worker	0.0190	0.0119	0.1491	4.3000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		42.3709	42.3709	1.1300e-003		42.3991
Total	0.0237	0.1368	0.1796	7.1000e-004	0.0478	1.1300e-003	0.0490	0.0128	1.0800e-003	0.0139		71.7264	71.7264	2.6800e-003		71.7934

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/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.5 Building Construction - 2019

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/day										lb/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	4.6400e-003	0.1249	0.0305	2.8000e-004	6.7700e-003	8.6000e-004	7.6300e-003	1.9500e-003	8.3000e-004	2.7800e-003		29.3555	29.3555	1.5500e-003		29.3943
Worker	0.0190	0.0119	0.1491	4.3000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		42.3709	42.3709	1.1300e-003		42.3991
Total	0.0237	0.1368	0.1796	7.1000e-004	0.0478	1.1300e-003	0.0490	0.0128	1.0800e-003	0.0139		71.7264	71.7264	2.6800e-003		71.7934

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Ranchettes at Neroly Project - 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/day										lb/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	3.7900e-003	0.1140	0.0272	2.8000e-004	6.7700e-003	5.6000e-004	7.3300e-003	1.9500e-003	5.3000e-004	2.4800e-003		29.1708	29.1708	1.4400e-003		29.2067
Worker	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	0.0212	0.1245	0.1613	6.9000e-004	0.0478	8.3000e-004	0.0487	0.0128	7.8000e-004	0.0136		70.2096	70.2096	2.4300e-003		70.2703

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/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

Ranchettes at Neroly Project - 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/day										lb/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	3.7900e-003	0.1140	0.0272	2.8000e-004	6.7700e-003	5.6000e-004	7.3300e-003	1.9500e-003	5.3000e-004	2.4800e-003		29.1708	29.1708	1.4400e-003		29.2067
Worker	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	0.0212	0.1245	0.1613	6.9000e-004	0.0478	8.3000e-004	0.0487	0.0128	7.8000e-004	0.0136		70.2096	70.2096	2.4300e-003		70.2703

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.6 Paving - 2019

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/day										lb/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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

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/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.6 Paving - 2019

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/day										lb/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	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	2.8006	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.7 Architectural Coating - 2019

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/day										lb/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	3.8000e-003	2.3800e-003	0.0298	9.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.4742	8.4742	2.3000e-004		8.4798
Total	3.8000e-003	2.3800e-003	0.0298	9.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.4742	8.4742	2.3000e-004		8.4798

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/day										lb/day					
Archit. Coating	2.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	2.8006	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.7 Architectural Coating - 2019

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/day										lb/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	3.8000e-003	2.3800e-003	0.0298	9.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.4742	8.4742	2.3000e-004		8.4798
Total	3.8000e-003	2.3800e-003	0.0298	9.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.4742	8.4742	2.3000e-004		8.4798

3.7 Architectural Coating - 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/day										lb/day					
Archit. Coating	2.5342					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	2.7764	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.7 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/day										lb/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	3.4800e-003	2.1000e-003	0.0268	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.2078	8.2078	2.0000e-004		8.2127
Total	3.4800e-003	2.1000e-003	0.0268	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.2078	8.2078	2.0000e-004		8.2127

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/day										lb/day					
Archit. Coating	2.5342					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	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.7764	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

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

3.7 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/day										lb/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	3.4800e-003	2.1000e-003	0.0268	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.2078	8.2078	2.0000e-004		8.2127
Total	3.4800e-003	2.1000e-003	0.0268	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		8.2078	8.2078	2.0000e-004		8.2127

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Ranchettes at Neroly Project - 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/day										lb/day					
Mitigated	0.2078	0.8501	2.1254	7.3700e-003	0.6073	6.4800e-003	0.6138	0.1625	6.0700e-003	0.1686		744.7176	744.7176	0.0269		745.3912
Unmitigated	0.2078	0.8501	2.1254	7.3700e-003	0.6073	6.4800e-003	0.6138	0.1625	6.0700e-003	0.1686		744.7176	744.7176	0.0269		745.3912

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	123.76	123.76	123.76	285,837	285,837
Total	123.76	123.76	123.76	285,837	285,837

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
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
Single Family Housing	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
NaturalGas Unmitigated	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas 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/day					
Single Family Housing	1507.42	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Total		0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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/day					
Single Family Housing	1.50742	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Total		0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

6.0 Area Detail

6.1 Mitigation Measures Area

	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/day					
Mitigated	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Unmitigated	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

6.2 Area by SubCategory

Unmitigated

	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/day					
Architectural Coating	0.0903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	13.4721	0.2594	17.4238	0.0328		2.4638	2.4638		2.4638	2.4638	264.9184	80.2941	345.2125	0.3276	0.0187	358.9722
Landscaping	0.0326	0.0124	1.0749	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003		1.9312	1.9312	1.8700e-003		1.9780
Total	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

Ranchettes at Neroly Project - 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/day					
Architectural Coating	0.0903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	13.4721	0.2594	17.4238	0.0328		2.4638	2.4638		2.4638	2.4638	264.9184	80.2941	345.2125	0.3276	0.0187	358.9722
Landscaping	0.0326	0.0124	1.0749	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003		1.9312	1.9312	1.8700e-003		1.9780
Total	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

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

Ranchettes at Neroly Project - Bay Area AQMD Air District, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

Ranquettes at Neroly Project
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	13.00	Dwelling Unit	7.14	23,400.00	37

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	5			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity Factors for CO2 adjusted based on PG&E RPS reductions

Land Use - Applicant provided

Construction Phase - Applicant provided

Demolition -

Grading - Applicant provided

Vehicle Trips - Based on ITE trip generation rates for single family homes (210)

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	65.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	130.00
tblConstructionPhase	PhaseEndDate	8/9/2019	10/11/2019
tblConstructionPhase	PhaseEndDate	7/24/2020	11/1/2019
tblConstructionPhase	PhaseEndDate	6/26/2020	5/1/2020
tblConstructionPhase	PhaseEndDate	8/21/2020	5/15/2020
tblConstructionPhase	PhaseStartDate	6/27/2020	10/14/2019
tblConstructionPhase	PhaseStartDate	8/10/2019	11/4/2019
tblConstructionPhase	PhaseStartDate	7/25/2020	11/18/2019
tblGrading	AcresOfGrading	32.50	7.14
tblLandUse	LotAcreage	4.22	7.14
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	9.91	9.52
tblVehicleTrips	SU_TR	8.62	9.52

2.0 Emissions Summary

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Energy	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Mobile	0.1805	0.8942	2.1510	6.9000e-003	0.6073	6.5300e-003	0.6138	0.1625	6.1200e-003	0.1686		696.9531	696.9531	0.0275		697.6409
Total	14.2925	1.3050	20.7087	0.0407	0.6073	2.4875	3.0948	0.1625	2.4871	2.6496	264.9184	956.5221	1,221.4405	0.3603	0.0219	1,236.9887

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/day					
Area	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Energy	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Mobile	0.1805	0.8942	2.1510	6.9000e-003	0.6073	6.5300e-003	0.6138	0.1625	6.1200e-003	0.1686		696.9531	696.9531	0.0275		697.6409
Total	14.2925	1.3050	20.7087	0.0407	0.6073	2.4875	3.0948	0.1625	2.4871	2.6496	264.9184	956.5221	1,221.4405	0.3603	0.0219	1,236.9887

Ranquettes at Neroly Project - 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
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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/3/2019	6/28/2019	5	20	
2	Site Preparation	Site Preparation	6/29/2019	7/12/2019	5	10	
3	Grading	Grading	7/13/2019	10/11/2019	5	65	
4	Building Construction	Building Construction	11/4/2019	5/1/2020	5	130	
5	Paving	Paving	10/14/2019	11/1/2019	5	15	
6	Architectural Coating	Architectural Coating	11/18/2019	5/15/2020	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7.14

Acres of Paving: 0

Residential Indoor: 47,385; Residential Outdoor: 15,795; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0407	0.0000	0.0407	6.1600e-003	0.0000	6.1600e-003			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	3.5134	35.7830	22.0600	0.0388	0.0407	1.7949	1.8356	6.1600e-003	1.6697	1.6758		3,816.8994	3,816.8994	1.0618		3,843.4451

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.2 Demolition - 2019

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/day										lb/day					
Hauling	1.8600e-003	0.0629	0.0128	1.6000e-004	3.4900e-003	2.4000e-004	3.7400e-003	9.6000e-004	2.3000e-004	1.1900e-003		16.9117	16.9117	9.3000e-004		16.9349
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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0622	0.1071	0.4351	1.3400e-003	0.1267	1.0600e-003	0.1278	0.0336	9.8000e-004	0.0346		134.0065	134.0065	4.1100e-003		134.1092

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/day										lb/day					
Fugitive Dust					0.0407	0.0000	0.0407	6.1600e-003	0.0000	6.1600e-003			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	3.5134	35.7830	22.0600	0.0388	0.0407	1.7949	1.8356	6.1600e-003	1.6697	1.6758	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.2 Demolition - 2019

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/day										lb/day					
Hauling	1.8600e-003	0.0629	0.0128	1.6000e-004	3.4900e-003	2.4000e-004	3.7400e-003	9.6000e-004	2.3000e-004	1.1900e-003		16.9117	16.9117	9.3000e-004		16.9349
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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0622	0.1071	0.4351	1.3400e-003	0.1267	1.0600e-003	0.1278	0.0336	9.8000e-004	0.0346		134.0065	134.0065	4.1100e-003		134.1092

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.3 Site Preparation - 2019

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/day										lb/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	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092

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/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

3.3 Site Preparation - 2019

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/day										lb/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	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1386	0.0000	6.1386	3.3228	0.0000	3.3228			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	2.5805	28.3480	16.2934	0.0297	6.1386	1.3974	7.5359	3.3228	1.2856	4.6084		2,936.8068	2,936.8068	0.9292		2,960.0361

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.4 Grading - 2019

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/day										lb/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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

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/day										lb/day					
Fugitive Dust					6.1386	0.0000	6.1386	3.3228	0.0000	3.3228			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	2.5805	28.3480	16.2934	0.0297	6.1386	1.3974	7.5359	3.3228	1.2856	4.6084	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.4 Grading - 2019

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/day										lb/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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

3.5 Building Construction - 2019

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/day										lb/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	4.8600e-003	0.1266	0.0348	2.7000e-004	6.7700e-003	8.8000e-004	7.6500e-003	1.9500e-003	8.4000e-004	2.7900e-003		28.6252	28.6252	1.6800e-003		28.6672
Worker	0.0201	0.0147	0.1408	3.9000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		39.0316	39.0316	1.0600e-003		39.0581
Total	0.0250	0.1413	0.1756	6.6000e-004	0.0478	1.1500e-003	0.0490	0.0128	1.0900e-003	0.0139		67.6568	67.6568	2.7400e-003		67.7253

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/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

3.5 Building Construction - 2019

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/day										lb/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	4.8600e-003	0.1266	0.0348	2.7000e-004	6.7700e-003	8.8000e-004	7.6500e-003	1.9500e-003	8.4000e-004	2.7900e-003		28.6252	28.6252	1.6800e-003		28.6672
Worker	0.0201	0.0147	0.1408	3.9000e-004	0.0411	2.7000e-004	0.0414	0.0109	2.5000e-004	0.0112		39.0316	39.0316	1.0600e-003		39.0581
Total	0.0250	0.1413	0.1756	6.6000e-004	0.0478	1.1500e-003	0.0490	0.0128	1.0900e-003	0.0139		67.6568	67.6568	2.7400e-003		67.7253

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Ranchettes at Neroly Project - 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/day										lb/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	3.9900e-003	0.1152	0.0311	2.7000e-004	6.7700e-003	5.7000e-004	7.3400e-003	1.9500e-003	5.4000e-004	2.4900e-003		28.4327	28.4327	1.5500e-003		28.4716
Worker	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	0.0224	0.1282	0.1571	6.5000e-004	0.0478	8.4000e-004	0.0487	0.0128	7.9000e-004	0.0136		66.2360	66.2360	2.4700e-003		66.2980

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/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

Ranchettes at Neroly Project - 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/day										lb/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	3.9900e-003	0.1152	0.0311	2.7000e-004	6.7700e-003	5.7000e-004	7.3400e-003	1.9500e-003	5.4000e-004	2.4900e-003		28.4327	28.4327	1.5500e-003		28.4716
Worker	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	0.0224	0.1282	0.1571	6.5000e-004	0.0478	8.4000e-004	0.0487	0.0128	7.9000e-004	0.0136		66.2360	66.2360	2.4700e-003		66.2980

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.6 Paving - 2019

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/day										lb/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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

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/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Ranchedes at Neroly Project - Bay Area AQMD Air District, Winter

3.6 Paving - 2019

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/day										lb/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	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	2.8006	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

3.7 Architectural Coating - 2019

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/day										lb/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	4.0200e-003	2.9400e-003	0.0282	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8063	7.8063	2.1000e-004		7.8116
Total	4.0200e-003	2.9400e-003	0.0282	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8063	7.8063	2.1000e-004		7.8116

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/day										lb/day					
Archit. Coating	2.5342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	2.8006	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.7 Architectural Coating - 2019

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/day										lb/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	4.0200e-003	2.9400e-003	0.0282	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8063	7.8063	2.1000e-004		7.8116
Total	4.0200e-003	2.9400e-003	0.0282	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.8063	7.8063	2.1000e-004		7.8116

3.7 Architectural Coating - 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/day										lb/day					
Archit. Coating	2.5342					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	2.7764	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

3.7 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/day										lb/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	3.6800e-003	2.6000e-003	0.0252	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.5607	7.5607	1.8000e-004		7.5653
Total	3.6800e-003	2.6000e-003	0.0252	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.5607	7.5607	1.8000e-004		7.5653

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/day										lb/day					
Archit. Coating	2.5342					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	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.7764	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

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

3.7 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/day										lb/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	3.6800e-003	2.6000e-003	0.0252	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.5607	7.5607	1.8000e-004		7.5653
Total	3.6800e-003	2.6000e-003	0.0252	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.5607	7.5607	1.8000e-004		7.5653

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Ranquettes at Neroly Project - 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/day										lb/day					
Mitigated	0.1805	0.8942	2.1510	6.9000e-003	0.6073	6.5300e-003	0.6138	0.1625	6.1200e-003	0.1686		696.9531	696.9531	0.0275		697.6409
Unmitigated	0.1805	0.8942	2.1510	6.9000e-003	0.6073	6.5300e-003	0.6138	0.1625	6.1200e-003	0.1686		696.9531	696.9531	0.0275		697.6409

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	123.76	123.76	123.76	285,837	285,837
Total	123.76	123.76	123.76	285,837	285,837

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
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
Single Family Housing	0.575198	0.040076	0.193827	0.113296	0.016988	0.005361	0.017552	0.025197	0.002581	0.002349	0.005904	0.000881	0.000789

5.0 Energy Detail

Historical Energy Use: N

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
NaturalGas Unmitigated	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas 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/day					
Single Family Housing	1507.42	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Total		0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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/day					
Single Family Housing	1.50742	0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976
Total		0.0163	0.1389	0.0591	8.9000e-004		0.0112	0.0112		0.0112	0.0112		177.3437	177.3437	3.4000e-003	3.2500e-003	178.3976

6.0 Area Detail

6.1 Mitigation Measures Area

	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/day					
Mitigated	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502
Unmitigated	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

Ranquettes at Neroly Project - Bay Area AQMD Air District, Winter

6.2 Area by SubCategory

Unmitigated

	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/day					
Architectural Coating	0.0903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	13.4721	0.2594	17.4238	0.0328		2.4638	2.4638		2.4638	2.4638	264.9184	80.2941	345.2125	0.3276	0.0187	358.9722
Landscaping	0.0326	0.0124	1.0749	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003		1.9312	1.9312	1.8700e-003		1.9780
Total	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

Ranquettes at Neroly Project - 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/day										lb/day					
Architectural Coating	0.0903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	13.4721	0.2594	17.4238	0.0328		2.4638	2.4638		2.4638	2.4638	264.9184	80.2941	345.2125	0.3276	0.0187	358.9722
Landscaping	0.0326	0.0124	1.0749	6.0000e-005		5.9200e-003	5.9200e-003		5.9200e-003	5.9200e-003		1.9312	1.9312	1.8700e-003		1.9780
Total	14.0957	0.2718	18.4986	0.0329		2.4697	2.4697		2.4697	2.4697	264.9184	82.2253	347.1437	0.3294	0.0187	360.9502

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

Ranchettes at Neroly Project - Bay Area AQMD Air District, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Ranchettes at Neroly Project

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	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
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
Demolition	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
Excavators	Diesel	No Change	0	4	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	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	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	6	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	10	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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.61300E-002	1.11870E-001	1.19200E-001	1.90000E-004	7.50000E-003	7.50000E-003	0.00000E+000	1.65962E+001	1.65962E+001	1.31000E-003	0.00000E+000	1.66290E+001
Concrete/Industrial Saws	4.62000E-003	3.58900E-002	3.70200E-002	6.00000E-005	2.29000E-003	2.29000E-003	0.00000E+000	5.37657E+000	5.37657E+000	3.80000E-004	0.00000E+000	5.38603E+000
Cranes	2.67200E-002	3.17950E-001	1.23580E-001	3.30000E-004	1.32400E-002	1.21800E-002	0.00000E+000	2.90384E+001	2.90384E+001	9.32000E-003	0.00000E+000	2.92716E+001
Excavators	1.63000E-002	1.67620E-001	2.03950E-001	3.20000E-004	8.08000E-003	7.44000E-003	0.00000E+000	2.89803E+001	2.89803E+001	9.17000E-003	0.00000E+000	2.92096E+001
Forklifts	2.90900E-002	2.61250E-001	2.31030E-001	3.00000E-004	1.97300E-002	1.81500E-002	0.00000E+000	2.63748E+001	2.63748E+001	8.47000E-003	0.00000E+000	2.65866E+001
Generator Sets	2.68800E-002	2.32390E-001	2.41230E-001	4.30000E-004	1.33800E-002	1.33800E-002	0.00000E+000	3.67385E+001	3.67385E+001	2.15000E-003	0.00000E+000	3.67923E+001
Graders	1.58200E-002	2.13840E-001	5.97400E-002	2.20000E-004	6.86000E-003	6.31000E-003	0.00000E+000	1.93892E+001	1.93892E+001	6.13000E-003	0.00000E+000	1.95425E+001
Pavers	4.32000E-003	4.68700E-002	4.35300E-002	7.00000E-005	2.30000E-003	2.11000E-003	0.00000E+000	6.33439E+000	6.33439E+000	2.00000E-003	0.00000E+000	6.38450E+000
Paving Equipment	3.19000E-003	3.38500E-002	3.78500E-002	6.00000E-005	1.68000E-003	1.54000E-003	0.00000E+000	5.48828E+000	5.48828E+000	1.74000E-003	0.00000E+000	5.53169E+000
Rollers	3.40000E-003	3.36100E-002	2.86100E-002	4.00000E-005	2.21000E-003	2.03000E-003	0.00000E+000	3.53372E+000	3.53372E+000	1.12000E-003	0.00000E+000	3.56167E+000
Rubber Tired Dozers	7.65800E-002	8.15020E-001	2.89180E-001	5.80000E-004	3.97400E-002	3.65600E-002	0.00000E+000	5.17698E+001	5.17698E+001	1.63800E-002	0.00000E+000	5.21793E+001
Tractors/Loaders/Backhoes	6.43900E-002	6.46630E-001	6.60800E-001	8.90000E-004	4.23100E-002	3.89300E-002	0.00000E+000	7.96764E+001	7.96764E+001	2.54300E-002	0.00000E+000	8.03121E+001
Welders	2.31400E-002	1.03250E-001	1.15700E-001	1.70000E-004	5.92000E-003	5.92000E-003	0.00000E+000	1.22343E+001	1.22343E+001	1.88000E-003	0.00000E+000	1.22815E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	1.61300E-002	1.11870E-001	1.19200E-001	1.90000E-004	7.50000E-003	7.50000E-003	0.00000E+000	1.65961E+001	1.65961E+001	1.31000E-003	0.00000E+000	1.66290E+001
Concrete/Industrial Saws	4.62000E-003	3.58900E-002	3.70200E-002	6.00000E-005	2.29000E-003	2.29000E-003	0.00000E+000	5.37657E+000	5.37657E+000	3.80000E-004	0.00000E+000	5.38603E+000
Cranes	2.67200E-002	3.17950E-001	1.23580E-001	3.30000E-004	1.32400E-002	1.21800E-002	0.00000E+000	2.90384E+001	2.90384E+001	9.32000E-003	0.00000E+000	2.92715E+001
Excavators	1.63000E-002	1.67620E-001	2.03950E-001	3.20000E-004	8.08000E-003	7.44000E-003	0.00000E+000	2.89803E+001	2.89803E+001	9.17000E-003	0.00000E+000	2.92095E+001
Forklifts	2.90900E-002	2.61250E-001	2.31030E-001	3.00000E-004	1.97300E-002	1.81500E-002	0.00000E+000	2.63748E+001	2.63748E+001	8.47000E-003	0.00000E+000	2.65865E+001
Generator Sets	2.68800E-002	2.32390E-001	2.41230E-001	4.30000E-004	1.33800E-002	1.33800E-002	0.00000E+000	3.67384E+001	3.67384E+001	2.15000E-003	0.00000E+000	3.67923E+001
Graders	1.58200E-002	2.13840E-001	5.97400E-002	2.20000E-004	6.86000E-003	6.31000E-003	0.00000E+000	1.93891E+001	1.93891E+001	6.13000E-003	0.00000E+000	1.95425E+001
Pavers	4.32000E-003	4.68700E-002	4.35300E-002	7.00000E-005	2.30000E-003	2.11000E-003	0.00000E+000	6.33439E+000	6.33439E+000	2.00000E-003	0.00000E+000	6.38449E+000
Paving Equipment	3.19000E-003	3.38500E-002	3.78500E-002	6.00000E-005	1.68000E-003	1.54000E-003	0.00000E+000	5.48827E+000	5.48827E+000	1.74000E-003	0.00000E+000	5.53168E+000
Rollers	3.40000E-003	3.36100E-002	2.86100E-002	4.00000E-005	2.21000E-003	2.03000E-003	0.00000E+000	3.53371E+000	3.53371E+000	1.12000E-003	0.00000E+000	3.56166E+000
Rubber Tired Dozers	7.65800E-002	8.15020E-001	2.89180E-001	5.80000E-004	3.97400E-002	3.65600E-002	0.00000E+000	5.17697E+001	5.17697E+001	1.63800E-002	0.00000E+000	5.21792E+001
Tractors/Loaders/Balckhoes	6.43900E-002	6.46630E-001	6.60800E-001	8.90000E-004	4.23100E-002	3.89300E-002	0.00000E+000	7.96763E+001	7.96763E+001	2.54300E-002	0.00000E+000	8.03120E+001
Welders	2.31400E-002	1.03250E-001	1.15700E-001	1.70000E-004	5.92000E-003	5.92000E-003	0.00000E+000	1.22343E+001	1.22343E+001	1.88000E-003	0.00000E+000	1.22815E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20510E-006	1.20510E-006	0.00000E+000	0.00000E+000	1.20272E-006
Concrete/Industrial Saws	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	1.03311E-006	1.03311E-006	0.00000E+000	0.00000E+000	1.02489E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.03518E-006	1.03518E-006	0.00000E+000	0.00000E+000	1.36941E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13745E-006	1.13745E-006	0.00000E+000	0.00000E+000	1.12839E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.08878E-006	1.08878E-006	0.00000E+000	0.00000E+000	1.08718E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.03150E-006	1.03150E-006	0.00000E+000	0.00000E+000	1.53511E-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	1.56629E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.82206E-006	1.82206E-006	0.00000E+000	0.00000E+000	1.80777E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.82988E-006	2.82988E-006	0.00000E+000	0.00000E+000	2.80767E-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	1.15898E-006	1.15898E-006	0.00000E+000	0.00000E+000	1.14988E-006
Tractors/Loaders/Balckhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12957E-006	1.12957E-006	0.00000E+000	0.00000E+000	1.24514E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.17371E-007	8.17371E-007	0.00000E+000	0.00000E+000	8.14235E-007

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)

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

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		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	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.20	0.11	0.20	0.11	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	0.09	0.05	0.09	0.05	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	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	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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 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	-0.01	0.13		
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			

No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			
	Commute	Commute Subtotal	0.00		

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	
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	
No	% Electric Chainsaw	

Energy Mitigation Measures

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

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