3933 Quail Ridge Road Residential Project

Initial Study

prepared by

City of Lafayette
Planning & Building Department
3675 Mount Diablo Boulevard, #210
Lafayette, California 94549
Contact: Ms. Payal Bhagat, Senior Planner

prepared with the assistance of

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

May 2019

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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Abbreviations and Acronyms

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AQMP	air quality management plan
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BMP	best management practices
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CCCFPD	Contra Costa County Fire Protection District
CCCWP	Contra Costa Clean Water Program
CDFW	California Department of Fish and Wildlife
Central San	Central Contra Costa Sanitary District
CEQA	California Environmental Quality Act
CFP	California Fully Protected
CH_4	methane
CHRIS	California Historical Resources Information System
CO	carbon monoxide
CO_2	carbon dioxide
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CSC	California Species of Special Concern
CWA	Clean Water Act
dB	decibels
dBA	A-weighted sound pressure level
DBH	diameter at breast height
DOF	California Department of Finance

DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
FIRM	(Federal Emergency Management Agency) Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gases
ITE	Institute of Transportation Engineers
kBtu	thousand British thermal units
kWh	kilowatt-hours
Ldn	Day-Night Average (noise) Level
Leq	single steady A-weighted (noise) level
Lmax	highest root mean squared sound pressure level
Lmin	lowest root mean squared sound pressure level
LMC	Lafayette Municipal Code
LOS	level of service
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MMBtu	million British thermal units
MMcf	million cubic feet
MW	megawatts
NAAQS	national ambient air quality standards
N_2O	nitrous oxides
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NWIC	Northwest Information Center
O_3	ozone
Pb	lead
PG&E	Pacific Gas and Electric
$PM_{2.5}$	particulate matter with a diameter of up to 2.5 microns
PM_{10}	particulate matter with a diameter of up to ten microns
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill

SFBAAB	San Francisco Bay Area Air Basin
SO_2	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TMDL	total maximum daily load
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VdB	vibration decibels

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Initial Study

The City of Lafayette, as the Lead Agency, prepared this Initial Study for the 3933 Quail Ridge Road Residential Project in compliance with the California Environmental Quality Act (CEQA), the CEQA guidelines (California Code of Regulations [CCR] Section 15000 et. seq.), and the regulations and policies of the City of Lafayette, California.

1. Project Title

3933 Quail Ridge Road Residential Project

2. Lead Agency Name and Address

City of Lafayette
Planning & Building Department
3675 Mount Diablo Boulevard, #210
Lafayette, California 94549

3. Contact Person and Phone Number

Ms. Payal Bhagat, Senior Planner
(925) 284-1976

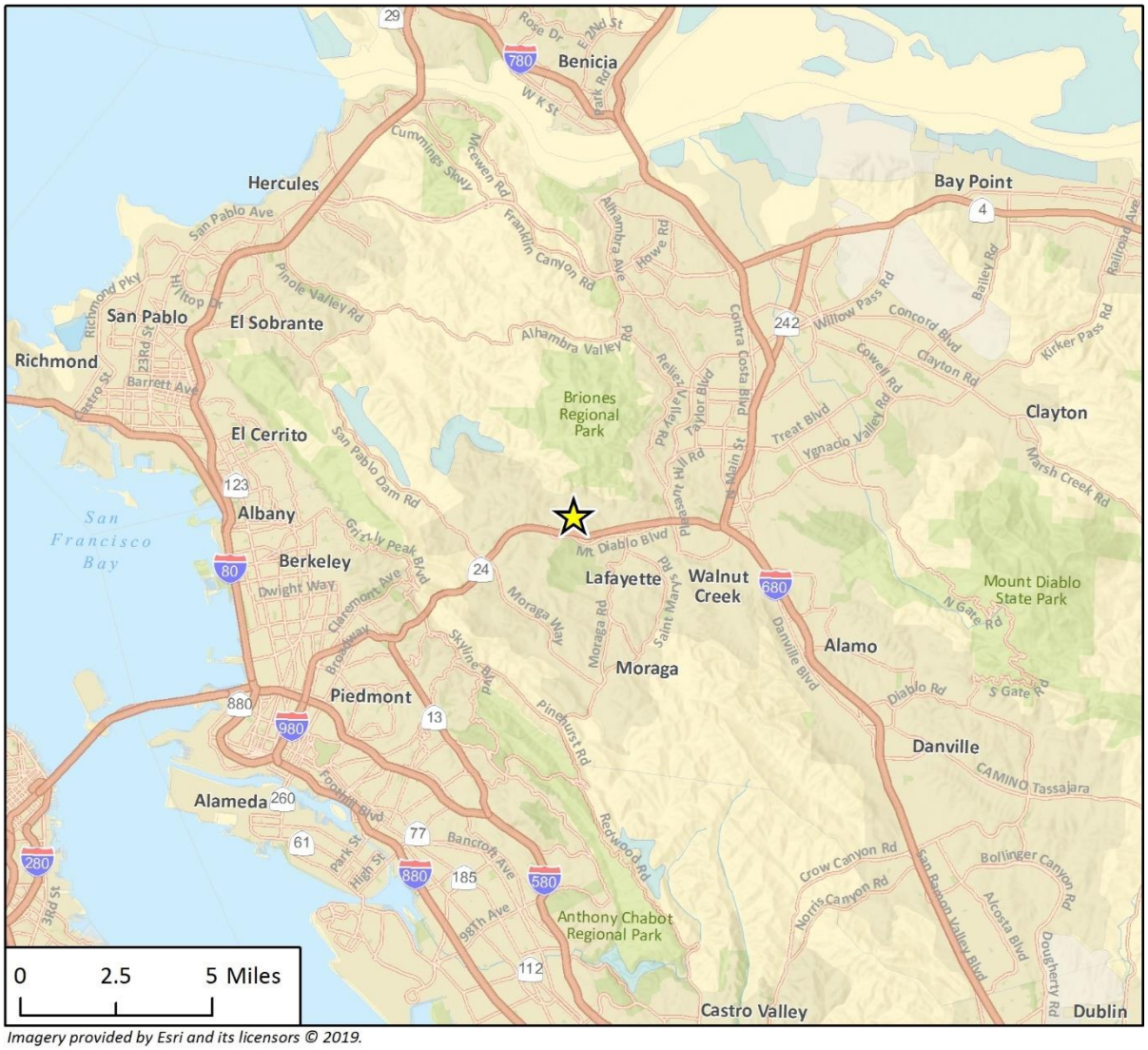
4. Project Location

The project site is 1.1 acres (48,750 square feet) in size and is located near the terminus of Quail Ridge Road, west of its intersection with Via Roble, in the central western portion of Lafayette. The Assessor's Parcel Number is 247-130-012 and the site address is 3933 Quail Ridge Road, Lafayette, California 94549. The project site is vacant, and it has an active landslide through the majority (approximately 80 percent) of the property. Several trees are located along the perimeter of the project site, primarily in the southwest and northeast corners. Figure 1 shows the regional location of the project site and Figure 2 provides an aerial image of the project site in its neighborhood context.

5. Project Sponsor's Name and Address

Ravi and Jessica Reddy
3000 – F Danville Blvd, #268
Alamo, California 94507

Figure 1 Regional Location



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Project Location

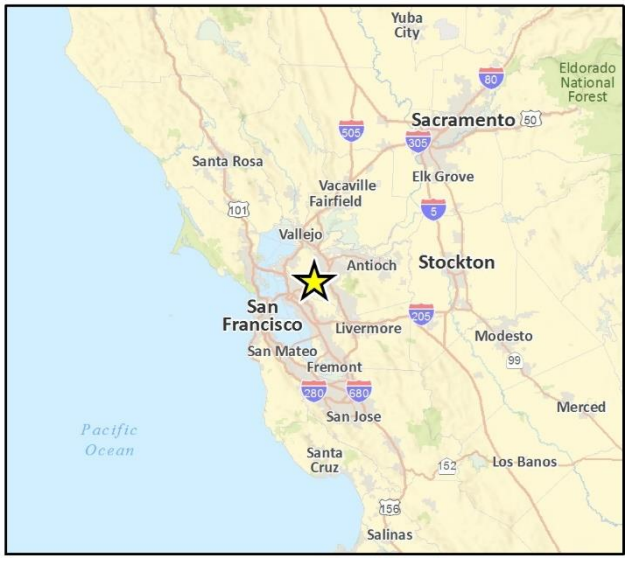


Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2 Project Location

6. General Plan Designation

Low Density Single-family Residential up to two dwelling units per acre, Hillside Overlay Area

7. Zoning

Single-family Residential District (R-20)

8. Project Description

Project Background

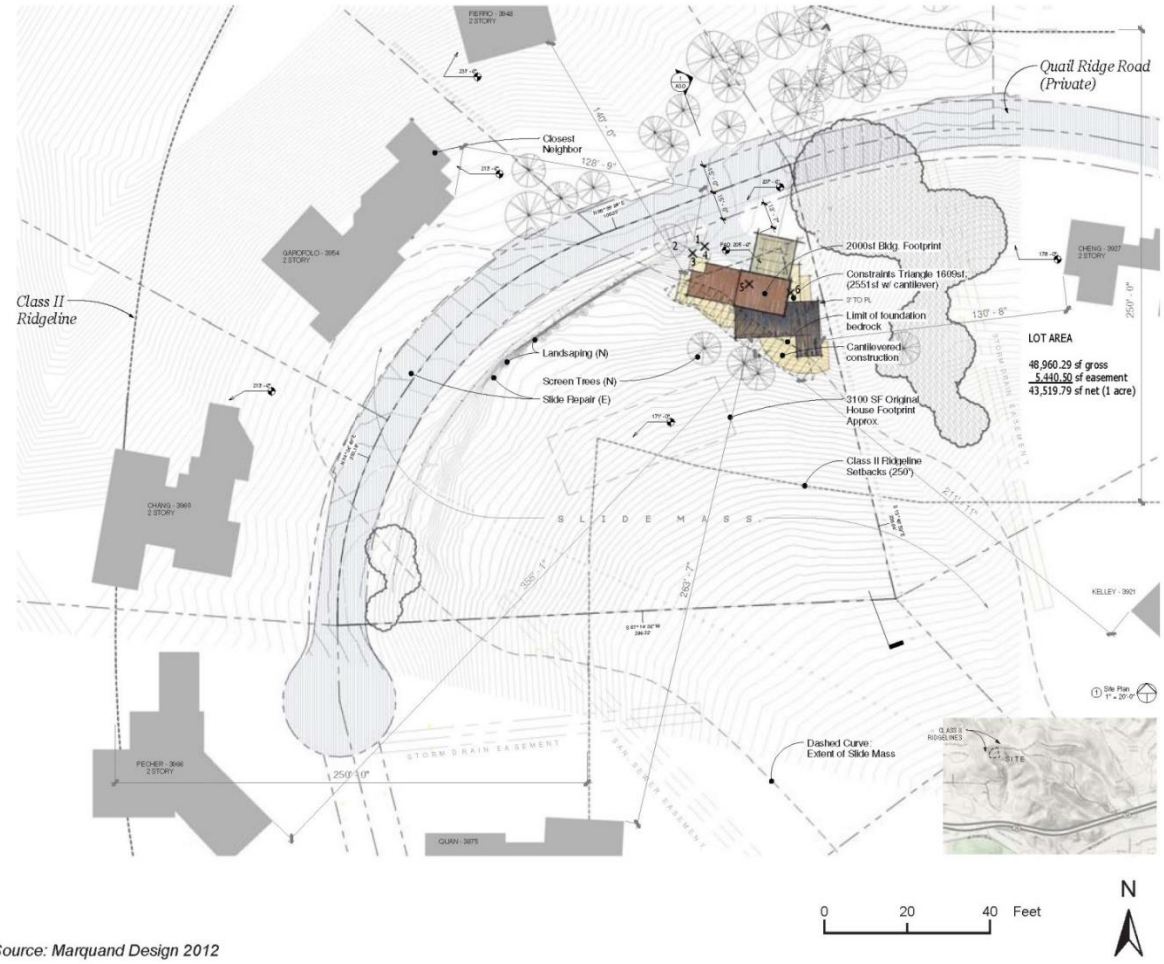
In 1997, an approximately 3.7-acre landslide affected approximately 80 percent of the project site. The residence was destroyed and the debris subsequently removed. The site was partially re-graded, and Quail Ridge Road was repaired and stabilized between 1999 and 2001. The balance of the slide was graded to drain evenly to the south, but the landslide itself was not repaired.

In the winter of 2005/2006, a pumping system installed during the original road repair failed, leading to the re-activation of the landslide area below the road repair. In 2008, the property owner requested to continue the soils review to determine if the portion of the lot not affected by the landslide was buildable. The City evaluated a series of soils reports and associated peer reviews. In December 2008, the City determined it was geotechnically feasible to construct a single-family residence at the northeast corner of the site, outside the limits of the slide. In 2012, the applicant formally submitted an application for a Phase I Hillside Development Permit.

Project Components

The project would involve construction of a two-story, single-family residence, including an attached two-car garage and outdoor decks. Figure 3 shows the proposed site plan. The residence would be approximately 4,000 square feet in size, including the garage, and approximately 35 feet in height. During construction, four protected trees would be removed and replaced with at least three trees south of the proposed residence. Landscaping along the steepest portion of the slide mass near Quail Ridge Road would be installed as part of the project. Development on the project site is constrained by the landslide area and required setbacks from nearby ridgelines and from all property lines. Foundation piles would also be required to anchor the residence to the underlying stable bedrock in the northeast corner of the site. It is assumed that no soils engineering or other major earthwork processes that would require heavy-duty construction equipment would be necessary to prepare the site. A private driveway on Quail Ridge Road would provide vehicular access to the site.

Figure 3 Proposed Site Plan



Source: Marquand Design 2012

City Permits and Approvals Required

The following permits and approvals are required from the City of Lafayette prior to construction of the proposed project:

- Phase I Hillside Development Permit
- Exception for development within a Class II Ridgeline Setback
- Exception to Exceed the 15-Degree Declination Requirement
- Variance Permit
- Design Review
- Grading Permit
- Tree Removal Permit, Category II

9. Surrounding Land Uses and Setting

The project site is in an area of large-lot residential properties on rolling topography with views over wooded hillsides. The site is surrounded by single-family residences with the same zoning and land use designations as the site. In the site vicinity, all parcels are developed, with the exception of those currently inaccessible by paved roadways. Most of the site consists of a steeply sloped landslide area that trends downward, from northwest to southeast. Trees are located on the more stable soil at the landslide's edges.

Quail Ridge Road is a private road that provides direct access to the site. Local access is provided by Via Roble and Mount Diablo Boulevard, and regional access is provided by State Route 24 (SR-24) through central Lafayette.

10. Other Public Agencies Whose Approval is Required

The City of Lafayette is the only public agency with discretionary authority to approve this project.

11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The City has not received any requests from California Native American tribes to be notified of proposed projects in the city, pursuant to Public Resources Code (PRC)Section 21080.3.1.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

☐ 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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

P. Bhagat

Signature

07/24/2019

Date

Payal Bhagat

Printed Name

Senior Planner

Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

The following goals and policies from the City of Lafayette General Plan apply to the project site:

Policy LU-1.1. Scale**:** Development shall be compatible with the scale and pattern of existing neighborhoods.

Goal LU-2. Ensure that development respects the natural environment of Lafayette. Preserve the scenic quality of ridgelines, hills, creek areas, and trees.

Policy LU-2.2. Cluster Development**:** Preserve important visual and functional open space by requiring development to be clustered on the most buildable portions of lots, minimizing grading for building sites and roads.

Policy LU-2.3. Preservation of Views: Structures in the hillside overlay area shall be sited and designed to be substantially concealed when viewed from below from publicly

owned property. The hillsides and ridgelines should appear essentially undeveloped, to the maximum extent feasible.

Policy OS-1.1. Protection of Major Ridgelines**:** Preserve Major Ridgelines in their natural state as scenic resources and wildlife corridors.

Policy OS-1.2. Ridgeline Protection: Protect all ridgelines consistent with their function as scenic resources for the community and as wildlife corridors.

Goal OS-3: Maintain the semi-rural character and beauty of the city by preserving its open and uncluttered natural topographic features.

a. Would the project have a substantial adverse effect on a scenic vista?

Ridgelines are located north and west of the project site, and views of ridgelines are available to the south of the project site from Quail Ridge Road. The proposed project would be constructed on a lot zoned for low-density single-family residential uses and would occupy less than 10 percent of the total lot square footage. It would not exceed 35 feet or two stories in height. This is in keeping with the zoning regulations sections 6-781 through 6-793. The house would be built into the slope (Figure 4), minimizing its height as viewed from Quail Ridge Road. The project site is not in an area with prominent visual access to a designated scenic vista as identified in Map I-5 of the City's General Plan. The views from the nearest neighboring lot are directed away from the proposed project, situating it out of the adjacent line-of-sight (Figure 3). Furthermore, the project site is 48,750 square feet in size, while the project footprint would be about 4,000 square feet (less than 10 percent of the total project site), leaving most of the site undeveloped. This design would leave the view to the ridgeline in the far distance (Figure 5) unobscured from Quail Ridge Road and from the properties located directly north of the site. Project implementation would have a less than significant impact on a scenic vista. This impact will not be discussed in the EIR.

Figure 4 Elevation Shows Slope Integration

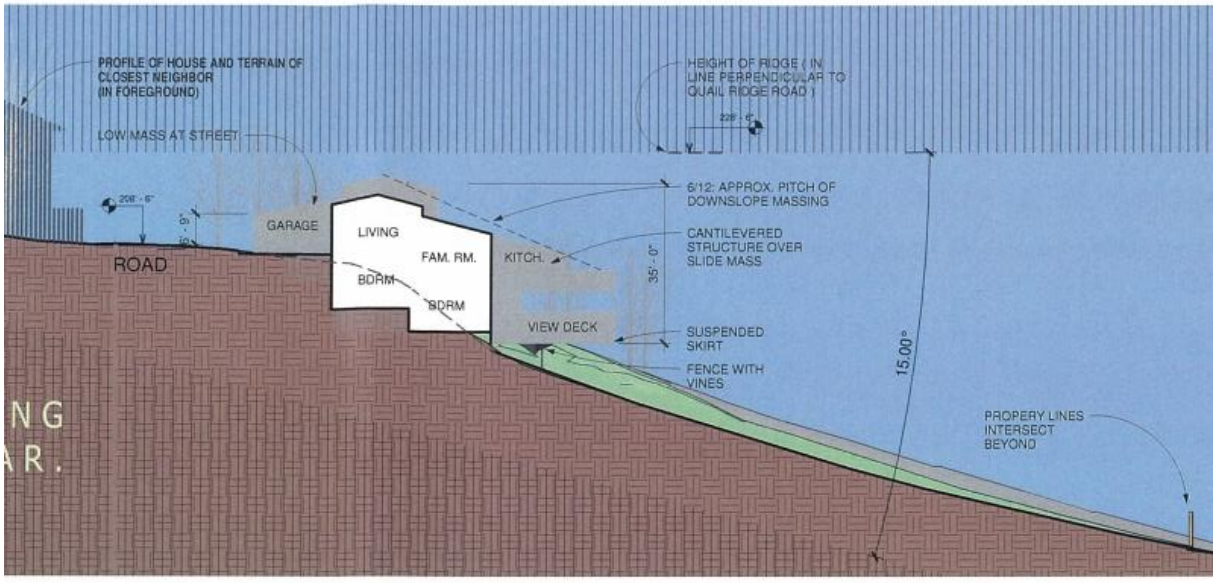


Figure 5 View from Northern Project Site Boundary at Quail Ridge Road toward the Distant Ridge Line in the Southwest

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The nearest designated state scenic highway is SR-24 (California Department of Transportation 2019), which stretches from the Caldecott Tunnel in Oakland to Interstate 680 in Walnut Creek, passing through Lafayette about 0.5 mile south of the project site. Due to intervening topography and vegetation, the site is not visible from SR-24. The site contains no historic buildings, rock outcroppings, or significant scenic resources. Refer to Section 4, *Biological Resources*, for a discussion of trees on site.

Because the site is not visible from SR-24, the proposed project would not affect views from a state-designated scenic highway, and the project would have no impact under this issue area. This impact will not be discussed in the EIR.

NO IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is in an urbanized (suburban) residential area with large lots, zoned for low-density single-family residential uses. The project site is designated in the City's General Plan as Low Density Single-family Residential (up to two dwelling units per acre) (City of Lafayette 2002). The site is zoned as Single-family Residential District R-20 (City of Lafayette 2013a). Surrounding and adjacent parcels are developed with single-family residences in compliance with the designated land use and zoning district, and the project would result in construction of a single-family residence that would also be in compliance with the designated land use and zoning. As stated in Section 8, *Project Description*, the project would require permits and approvals for construction within the Class II Ridgeline Setback. The surrounding residences are also constructed in the Class II Ridgeline Setback areas; therefore, the project would be consistent with surrounding land uses. With approval of the Exception for Development within a Class II Ridgeline Setback, the project would not be considered to conflict with the zoning of the site. Additionally, project design would be subject to the City's Design Review Commission for final approval to determine its compliance with the Residential Design Review Guidelines (City of Lafayette 1990). As the project is consistent with the land use and zoning designations for the project site, and the design review process would ensure project design follows City design guidelines, impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The project site is in a suburban area with low to moderate levels of existing lighting from exterior structure lighting, light visible through windows at adjacent residential uses, and from vehicular traffic on Quail Ridge Road. The proposed project would continue the existing development pattern of single-family dwellings on large lots and thus would not substantially change the existing light environment beyond what is allowed or expected in areas of Lafayette zoned for R-20 development.

The primary sources of glare in the project area are the sun's reflection off light colored and reflective building materials and finishes, and metallic and glass surfaces of parked vehicles. The proposed residence's windows could generate glare from reflected sunlight during certain times of the day. The exterior building colors would be compatible with the surrounding landscape, in adherence with the City's Residential Design Guidelines and thus glare from light-colored surfaces would be minimal. Furthermore, windows would be shielded by landscaping and other design features that break up massing and reduce the possibility of excessive glare from reflected light. Impacts related to light and glare would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

PRC Section 12220(g) defines forest land as:

> land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

PRC Section 4526 defines timberland as:

> land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.

Government Code Section 51104(g) defines a timberland production zone as:

> an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The project site and surrounding area is located entirely within the Urban and Built-Up Land area (California Department of Conservation [DOC] 2016). The project would only modify the project site; therefore, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be affected by project implementation and no impact would occur. This impact will not be discussed in the Environmental Impact Report (EIR).

NO IMPACT

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

The project site and surrounding areas are not subject to Williamson Act contracts (DOC 2013). The project would only modify the project site; therefore, no Williamson Act contracts would be affected by project implementation and no impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

While some vegetation is present on the project site, the site itself is not forest or timberland. The project site is not currently utilized for the provision of forest and timber resources, as it is located in a residential area in Lafayette. As such, the project would not convert forest or timberland uses, and no impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	■

Setting

Air Quality Background

The city of Lafayette is within the Diablo Valley-San Ramon Valley subregion of the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Air quality in the SFBAAB is affected by the region's emission sources and by natural factors. Topography, speed, and direction of wind, and air temperature gradient all influence air quality. The SFBAAB is affected by a Mediterranean climate, with warm, dry summers and cool, damp winters.

Air pollutant emissions in the SFBAAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

The United States (U.S.) Environmental Protection Agency has set primary national ambient air quality standards (NAAQS) for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with a diameter of up to ten microns (PM_{10}) and up to 2.5 microns

($PM_{2.5}$), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards.

As the local air quality management agency, the BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet them. Depending on whether or not standards are met or exceeded, a local air basin is classified as in "attainment" or "non-attainment." The BAAQMD is in non-attainment for the federal standards for O_3 and $PM_{2.5}$ and in non-attainment for the state standard for O_3, $PM_{2.5}$, and PM_{10}.

Regulatory Setting

Air Quality Management

The BAAQMD is primarily responsible for assuring national and state ambient air quality standards are attained and maintained in the Bay Area. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities. The BAAQMD has jurisdiction over much of the nine-county Bay Area, including Contra Costa County.

The BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) as an update to the 2010 Clean Air Plan. The 2017 Plan provides a regional strategy to protect public health and protect the climate. Consistent with the GHG reduction targets adopted by the state, the 2017 Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors—reactive organic gases (ROG) and nitrogen oxides (NO_X)—and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants (BAAQMD 2017a).

BAAQMD Screening Criteria

The BAAQMD recommends that lead agencies determine appropriate air quality emissions thresholds of significance based on substantial evidence in the record. The BAAQMD's significance thresholds in the updated May 2017 CEQA Guidelines for project operations within the SFBAAB are the most appropriate thresholds for use in determining air quality impacts of the proposed project. The BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts. If a project meets all of the screening criteria, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2017b).

The screening criteria for operational criteria pollutant emissions of single-family residential developments is 325 dwelling units. For construction-related emissions, the screening criteria is 114 dwelling units.

BAAQMD also provides a preliminary screening methodology to conservatively determine whether a proposed project would exceed CO thresholds. If the following criteria are met, a project would result in a less than significant impact related to local CO concentrations:

- 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.
- 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, bridge underpass, natural or urban street canyon, below-grade roadway).

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Vehicle use, energy consumption, and associated air pollutant emissions are related directly to population growth. To be consistent with an air quality management plan (AQMP), a project must conform to the local General Plan and must not result in or contribute to an exceedance of the local jurisdiction's forecasted future population. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. Population growth would lead to increased vehicle use, energy consumption, and associated air pollutant emissions. The most recent and applicable adopted air quality plan is the 2017 Plan. Therefore, the proposed project would result in a significant impact if it would conflict with or obstruct implementation of the 2017 Plan (BAAQMD 2017b).

The proposed project would increase the population in Lafayette by adding one new single-family residence. BAAQMD uses the Association of Bay Area Government's (ABAG) growth forecast. The latest ABAG projections do not include a population forecast but do provide a housing forecast. The ABAG estimates that the number of housing units in Lafayette will be 10,000 in 2040 (ABAG 2017). The California Department of Finance (DOF) estimates the city currently has 9,943 housing units (DOF 2018). Therefore, the addition of the one housing unit associated with the proposed project would bring the city's total housing units to 9,944. The housing growth associated with the project is within ABAG projections and therefore within the 2017 Plan projections. Thus, the project would be consistent with the AQMP. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project 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?

Project construction would involve site preparation, grading, excavation, building construction, and architectural coating, which have the potential to generate air pollutant emissions. Long-term emissions associated with project operation would include emissions from vehicle trips (mobile sources), natural gas and electricity use (energy sources), and landscape maintenance equipment, consumer products and architectural coating associated with on-site development (area sources). Per the BAAQMD CEQA Guidelines, the project does not meet the screening criteria (114 dwelling units for construction and 325 dwelling units for operation) for construction- or operation-related

emissions. Therefore, air quality emissions related to the project would not exceed the thresholds of significance set by BAAQMD, described in detail in the BAAQMD CEQA Guidelines.

As mentioned in the BAAQMD CEQA Guidelines, the proposed project would result in a less than significant impact related to local CO concentrations if the project is consistent with an applicable congestion management program; would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and 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, bridge underpass, natural or urban street canyon, below-grade roadway). There are no applicable congestion management programs or plans with which the project must comply. Mount Diablo Boulevard west of Lafayette Circle, experiences a maximum of approximately 15,000 trips per day through the intersection (TJKM Transportation Consultants 2015). With the increase of an estimated 10 daily trips (per the Institute of Transportation Engineers (ITE) trip generation rate for single-family residences), the project would not result in an increase in traffic volumes at affected intersections to more than 44,000 vehicles per hour. Although the project is located in an area served by a bridge underpass at Via Roble and Dolores Drive, the 24,000 vehicle per hour standard is not met by existing operations of the Dolores Drive and Mount Diablo Boulevard intersection. Thus, the project would not result in individually or cumulatively significant impacts from CO emissions.

A toxic air contaminant (TAC) is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. In the Bay Area, there are a number of urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. However, according to the BAAQMD CEQA Guidelines (Figure 5-1), the project site is not located in an impacted community. Sources of TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities (BAAQMD 2017b). The proposed project does not involve any of these uses; therefore, it is not considered a source of TACs.

The project would not violate any air quality standards or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Therefore, these impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as population groups that are more susceptible to exposure to pollutants and examples include health care facilities, retirement homes, school and playground facilities, and residential areas. The proposed project would be located close to sensitive receptors, including the surrounding residences. As discussed above in the response to question b, the project would not create emissions that would exceed BAAQMD thresholds and would not generate new sources of TACs. Therefore, it would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction activities temporary odors from vehicle exhaust and construction equipment engines would occur. However, construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors (adjacent residences). In addition, construction-related odors would be temporary and would cease upon completion of construction. The proposed project would involve construction of a single-family residence. This is not considered a source of substantial objectionable odors as listed on Table 3-3 in the BAAQMD *CEQA Air Quality Guidelines* (BAAQMD 2017b). Therefore, the proposed project would have no impact related to other emissions, including odors. This impact will not be discussed in the EIR.

NO IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Rincon Senior Biologist Kyle Weichert prepared a memorandum dated May 2019 that summarizes the results of a reconnaissance-level survey conducted on April 19, 2019 (see Appendix A). The survey area included the full extent of the project site as well as an inventory of trees located in the proposed building footprint.

Vegetation and Habitat

Vegetation observed in the study area consists of consists primarily of non-native annual grassland dominated by non-native annual grasses, including rip-gut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and wild oats (*Avena fatua*), as well as ruderal herbs such as vetch (*Vicia villosa*), annual burclover (*Medicago polymorpha*), and milk thistle (*Silybum marianum*). A large coast live oak (*Quercus agrifolia*) is present in the western corner of the site. The northeast corner of the site and proposed residence location contains a grove of several planted and ornamental trees, including:

- One coast redwood (*Sequoia sempervirens*); diameter at breast height (DBH) 20 inches
- One incense cedar (*Calocedrus decurrens*); DBH 15.5 inches
- One coast live oak (*Quercus agrifolia*); DBH: 7.5 inches
- One toyon (*Heteromeles arbutifolia*); 10+ trunks, DBH range 2-5 inches (calculated total diameter per LMC Section 6-1702[I]: at least 13 inches)
- Two unknown ornamental species; each 8+ trunks, DBH range 1-3 inches (calculated total diameter per LMC Section 6-1702[I]: 6+ inches)

The trees were in fair condition and appear to have been planted ornamentally. Two trees were not in flowering condition during the survey and therefore could not be identified to genus or species. (Appendix A)

No drainages or wetlands potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW) were observed on site. No native vegetation communities were observed on the project site.

Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of statutes and guidelines. Primary authority for general biological resources lies with the land use control and planning authority of local jurisdictions. CDFW is a trustee agency for biological resources throughout the state under CEQA and also has direct jurisdiction under the Fish and Game Code of California. Under the federal and state Endangered Species Acts, the CDFW and the U.S. Fish and Wildlife Service (USFWS) also have direct regulatory authority over species formally listed as Threatened or Endangered. USACE has regulatory authority over specific biological resources, namely wetlands and waters of the U.S., under Section 404 of the Federal Clean Water Act.

Plants or animals may be considered “special-status” due to declining populations, vulnerability to habitat change, or restricted distributions. Special-status species are classified in a variety of ways, both formally (e.g., federal and state Threatened and Endangered Species) and informally (“Special Animals”). Species may be formally listed and protected as Threatened or Endangered by the CDFW or USFWS or as California Fully Protected (CFP). Informal listings by agencies include California Species of Special Concern (CSC) a broad database category applied to species, roost sites, or nests, or as USFWS Candidate taxa. CDFW and local governmental agencies may also recognize special

listings developed by focal groups (i.e., Audubon Society Blue List, California Native Plant Society (CNPS) Rare and Endangered Plants, U.S. Forest Service regional lists). Section 3503.5 of the Fish and Game Code of California specifically protects birds of prey, and their nests and eggs, against take, possession, or destruction. Section 3503 of the Fish and Game Code also incorporates restrictions imposed by the federal Migratory Bird Treaty Act (MBTA) with respect to migratory birds.

Chapter 6-17 of the Lafayette Municipal Code (LMC) provides tree protection requirements that would be applicable to the project. This chapter defines a protected tree as "any species with a diameter of six-inches or more and located on an undeveloped property" (LMC Section 6-1702[Q][4]).

LMC Section 6-2072 requires projects in the Hillside Overlay District to implement "site planning techniques to preserve hillsides, ridgelines, knolls and open space, minimize impacts on wildlife habitats to the extent feasible, and provide for the preservation of vegetation, terrain, scenic vistas, trail corridors, streams or water courses, or other areas of ecological significance through dedication, easement, land trust or other suitable regulation." Furthermore, the City's Stormwater Quality Control Guidelines require projects that more than 500 square feet of impervious surfaces in the Hillside Overlay District to implement site-specific best management practices (BMP) to minimize stormwater quality impacts.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the Federal Endangered Species Act; those considered "Species of Concern" by the USFWS; those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act; animals designated as "Species of Special Concern" by the CDFW; and CDFW Special Plants, specifically those occurring on lists 1B and 2 of the CNPS Inventory of Rare and Endangered Vascular Plants of California, Sixth Edition.

The CDFW California Natural Diversity Database (CNDDB), USFWS IPaC Resource List, and CNPS Online Inventory of Rare and Endangered Plants were consulted to identify possible special-status species on site. No critical habitat is designated on site, although critical habitat for the Alameda whipsnake (*Masticophis lateralis euryxanthus*) is located north of Lafayette (USFWS 2019a, USFWS 2019b). CNDDB identified 22 threatened, endangered, or species of special concern as potentially occurring within the quadrangle including the project site: foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*), northern harrier (*Circus hudsonius*), bald eagle (*Haliaeetus leucocephalus*), tule greater white-fronted goose (*Anser albifrons elgasi*), yellow warbler (*Setophaga petechia*), grasshopper sparrow (*Ammodramus savannarum*), Suisun song sparrow (*Melospiza melodia maxillaris*), Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*), yellow rail (*Coturnicops noveboracensis*), long-eared owl (*Asio otus*), willow flycatcher (*Empidonax traillii*), Sacramento perch (*Archoplites interruptus*), steelhead (*Oncorhynchus mykiss irideus*), big free-tailed bat (*Nyctinomops macrotis*), San Francisco dusky-footed woodrat (*Neotoma fusipes annectens*), American badger (*Taxidea taxus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Alameda whipsnake (*Masticophis laterlis euryxanthus*), western pond turtle (*Emys marmorata*), Santa Cruz tarplant (*Holocarpha macradenia*), and pallid manzanita

(*Arctostaphylos pallida*) (CDFW 2019). In addition, the CNPS Rare Plant List identified 67 1- or 2-listed plants in the County (CNPS 2019).

No native vegetation communities were observed on the project site, and no individuals or signs of special-status species were observed on the project site (Appendix A). However, project construction would require removal of four trees that may support nesting birds, including raptors protected under the MBTA and the Fish and Game Code. Removal of these trees could result in the destruction of nests. While the reconnaissance-level survey did not identify any special-status species on site, it was not a protocol-level survey to definitively determine the presence or absence of special-status species. The project could have potential impacts to species; therefore, implementation of Mitigation Measures BIO-1 and BIO-2 would be required. In addition to the mitigation measures described below, permitting would be required if federal and state listed species are present and may be impacted by the proposed project. These mitigation measures will be listed in the EIR's executive summary and included in the project's mitigation monitoring and reporting program.

Mitigation Measures

BIO-1 Pre-construction Special-Status Surveys and Reporting

No more than one week prior to vegetation clearing and ground disturbance within the project site, a qualified biologist shall conduct pre-construction surveys for special-status wildlife species within the construction footprint and within a 100-foot survey buffer area. If non-listed special-status species are detected in the construction footprint, the qualified biologist may capture and relocate, as feasible, to adjacent appropriate habitat within the open space on-site or in suitable habitat adjacent to the project area. If individuals are not relocated or leave the site of their own accord, the qualified biologist shall implement an avoidance buffer suitable for protection of the individual(s). If listed special status species are detected within the construction footprint or survey buffer area, the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service, as appropriate, shall be notified prior to construction activities. The methods and results of the pre-construction survey(s) and any relocation efforts during those surveys shall be documented in a brief letter report (Pre-Construction Survey Report) and submitted to the City no later than three weeks following the completion of the survey(s).

BIO-2 Nesting Bird Pre-construction Surveys and Monitoring

To avoid disturbance of nesting and special-status birds, including raptorial species protected by the MBTA and California Fish and Game Code, project construction, including, but not limited to, vegetation removal, ground disturbance, and construction shall occur outside of the bird breeding season (February 1 through August 30). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than one week prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot inside the project boundary, including a 300-foot buffer (500-foot for raptors), and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the project vicinity. If nests are found, an avoidance buffer shall be determined and demarcated by the biologist of a minimum of 50 feet for non-raptor bird species and at least 300 feet for raptor species. Larger buffers may be recommended and/or smaller buffers may be established depending upon the species, status of the nest, and construction activities occurring in the vicinity of the nest. The buffer area(s) should be closed to all construction personnel

and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist should confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer. Encroachment into the buffer shall occur only at the discretion of the qualified biologist. If buffer zones are determined to be infeasible, a full-time qualified biological monitor shall be on site to monitor construction within the buffer zones to avoid impacts to active nests and nesting birds.

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to special-status species to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No native vegetation communities were observed on the project site, and no drainages or wetlands potentially under the jurisdiction of the USACE, RWQCB, or CDFW were observed on site. Project construction would not directly impact riparian habitat, sensitive natural communities, or protected wetlands, nor would it indirectly impact such habitat that may occur off site. Thus, the project would not have a substantial adverse effect on any riparian habitat, sensitive natural community, or state or federally protected wetlands. No impact would occur.

NO IMPACT

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is surrounded by developed parcels, as shown in Figure 2, and is not located directly adjacent to intact wildlife habitat. Additionally, the residence would be constructed on the northeast corner of the project site, with the remainder of the project site unchanged. While project construction could result in minor alterations of wildlife behavior in the site vicinity, the project would not substantially interfere with movement of resident or migratory fish or wildlife, nor impede the use of wildlife nursery sites, because areas for wildlife movement and nursery sites would remain on and around the project site. Therefore, potential impacts on wildlife movement would be less than significant.

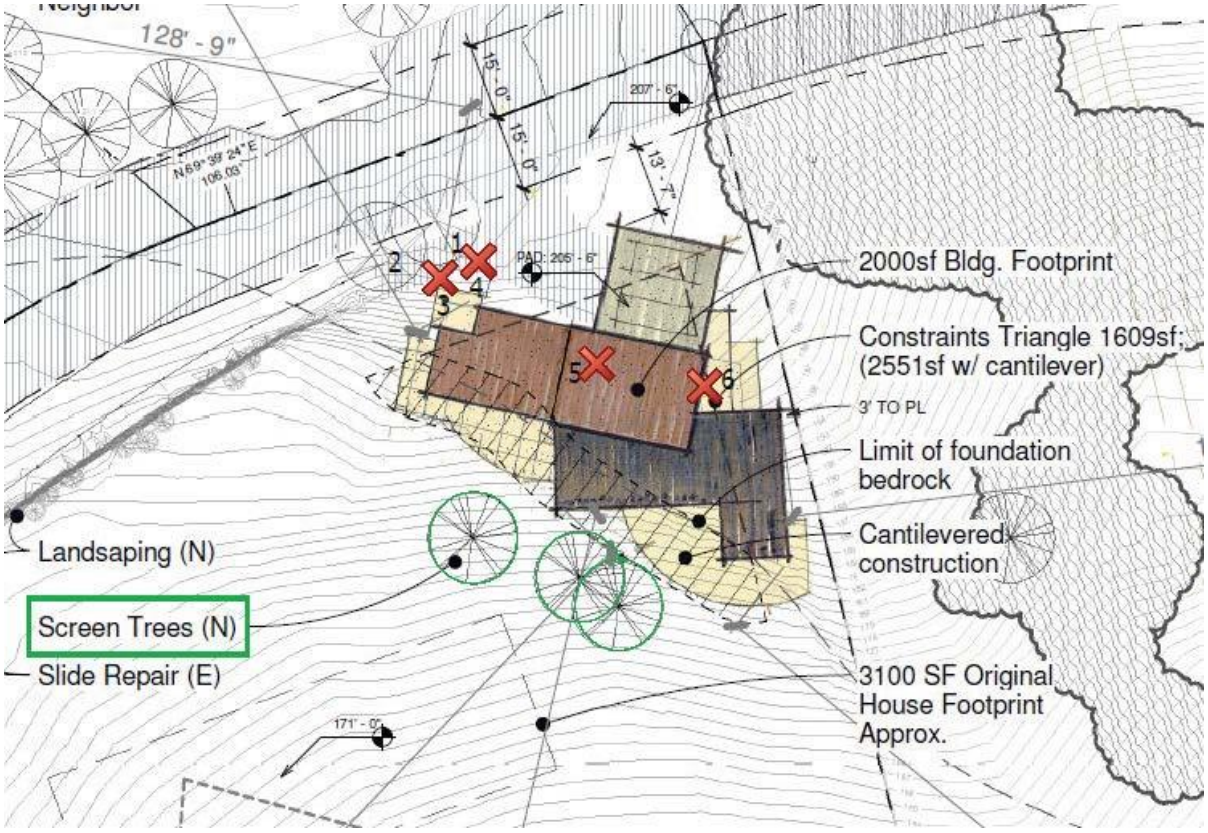
LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Removal of protected trees from the project site requires that the applicant obtain a Category II Tree Protection Permit from the City. Four trees would be removed from the project site, all of which meet the definition of a protected tree per LMC Section 6-1702[Q]. The City's Tree Ordinance Sections 6-1704, 6-1707 requires a permit to remove protected trees and indicates that they are to be replaced at a 2:1 ratio, where the tree shall be "the same genus and species [as those] removed or destroyed, or an alternative species approved by the Director [of the Planning and Building

Department]." The project would replace the removed trees at the property boundary with larger specimens downslope from the building footprint to soften views of the proposed residence from below (Figure 6). Therefore, with approval of a Category II Tree Protection Permit, the project would not conflict with local policies and ordinances, and no impact would occur.

Figure 6 Tree Replacement, Plan Detail



NO IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not under the jurisdiction of any Habitat Conservation Plans, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved plan, and no impact would occur.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

In May 2019, Rincon requested a search of the California Historical Resources Information System housed at the Northwest Information Center (NWIC) located at Sonoma State University. The purpose of the records search was to identify all previously recorded cultural resources, as well as previously conducted cultural resources studies on the proposed project site and within a 0.5-mile radius to assess the regional sensitivity for cultural resources. The records search included a review of the National Register of Historic Places, the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

The NWIC records search identified 12 previously conducted cultural resources studies within a 0.5-mile radius of the project site; none of which included the project site.

The NWIC records search identified two cultural resources within a 0.5-mile radius surrounding the project site. The resources each were recorded in the early twentieth century and consist of prehistoric habitation sites, one of which included a burial mound. Both are situated on valley floors well away from the project site. No resources have been recorded on the project site.

Rincon also completed a review of the historical aerials available for the project site (NETRonline 2019). Aerial images of the project site are available from 1946, 1958, 1968, 1980, 1987, 1993, 2002, 2005, 2009, 2010, and 2012. The images show that the project site remained vacant from 1946 to at least 1968. Between 1968 and 1980, one structure was constructed on the property. This structure is known to have been destroyed in the 1997 landslide. Historical U.S. Geological Survey (USGS) maps from 1897 through 2015 depict the proposed project site as vacant with nearby housing developments becoming increasingly prevalent by 1960 (NETRonline 2019).

Elevation on the project site ranges from 143 to 208 feet above mean sea level; the project site is steeply sloped and contains an active landslide. Soils mapped at the site consist of Los Osos clay loam with 30 to 50 percent slopes (NRCS 2019). Los Osos clay loam is considered a moderately well to well-developed soil. Soils in the project site overlie the Pliocene-aged Orinda Formation (Dibblee and Minch 2005). The presence of well-developed soils and the age of the geologic formation on

which the project site is situated indicate that any archaeological resources in the area should be at or close to the surface and that the project site and vicinity is not sensitive for buried archaeological resources. Additionally, the project site was subject to a landslide in 1997 and soils on the project site suffer high levels of erosion. These factors, coupled with the steep slopes of the project site past development, suggest a low sensitivity for surface archaeological resources as well.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No buildings, structures, sites, or objects that may be considered historical resources are present on the project site. The project would not impact historical resources.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The project is not expected to affect archaeological resources, including those that may be considered historical resources. As discussed above, no archaeological resources have been recorded at the project site. Additionally, given the age of soils on the project site, erosional characteristics of the project site, and the landslide that occurred on the site, the project site is considered to have low sensitivity for archaeological resources. In the unlikely event that resources are encountered during project ground disturbance, the Mitigation Measure CR-1 would be required to address unanticipated discoveries during construction. This mitigation measure will be listed in the EIR's executive summary and included in the project's mitigation monitoring and reporting program.

Mitigation Measure

CR-1 Unanticipated Archaeological Resources

If archaeological resources are encountered during ground-disturbing activities, work within 50 feet of the find shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

Implementation of Mitigation Measure CR-1 would reduce potential impacts to unanticipated archeological resources to less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains are known to exist on the project site, but the discovery of human remains is always a possibility during ground-disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site and provide recommendations for treatment to the landowner within 48 hours of being granted access. With adherence to existing regulations, impacts to unanticipated human remains would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	■	☐

Project-related energy consumption would include energy consumed during project construction and operation, such as fuel consumed by vehicles, natural gas consumed for heating and/or power, and electricity consumed for power. The analysis of energy consumption herein involves the quantification of anticipated vehicle and equipment fuel, natural gas, and electricity consumption during construction and operation of the proposed project, to the extent feasible, as well as a qualitative discussion of the efficiency, necessity, and wastefulness of that energy consumption.

a. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Construction

Project construction would result in short-term consumption of energy from the use of construction equipment and processes. Energy use would be primarily from fuel consumption to operate heavy-duty equipment, light-duty vehicles, machinery, and generators. Temporary grid power may also be provided to construction trailers or electric construction equipment. Using the California Emission Estimator Model (CalEEMod) default values for equipment usage (type of equipment, hour of use, and length of each phase) based on project site acreage, approximately 668 gallons of gasoline and 23,663 gallons of diesel in total would be used during project construction (California Air Pollution Control Officers Association [CAPCOA] 2013, CAPCOA 2017). Project construction would be required to comply with the LMC, which incorporates the California Green Building Standards Code. The California Green Building Standards Code includes specific requirements related to recycling, construction materials, and energy efficiency standards that apply to construction of residences to minimize wasteful, inefficient, and unnecessary energy consumption. Therefore, project construction would not involve wasteful, inefficient, or unnecessary consumption of energy resources.

Operation

The proposed project would also involve the use of energy during occupancy of the residence. The California Green Building Standards Code includes specific requirements related to energy efficiency standards that apply to new residences and that minimize wasteful, inefficient, and unnecessary energy consumption. The project would be required to comply with the LMC, which incorporates the California Green Building Standards Code (LMC Section 3-304). This code requires water-efficient plumbing fixtures and fittings, recycling services, and other energy-efficient measures in all new single-family dwellings. The proposed residence would require permanent grid connections for electricity and natural gas. Using CalEEMod default values for energy use by climate zone and land use type (T24, NT24, and lighting electricity; and T24 and NT24 natural gas) based on the proposed single-family residence, approximately 7,982 kilowatt-hours (kWh) per year of electricity would be used for lighting and large appliances, and approximately 42,324 thousand British thermal units (kBtu) per year of natural gas would be used primarily for heating (CAPCOA 2017). Estimated project energy would be an incremental increase in energy usage compared to existing conditions. Therefore, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during operation.

The proposed project would also involve the use of energy from private vehicle travel to and from the site. According to the California Air Resources Board (CARB), the average miles per gallon for all gasoline vehicles in operational year 2021 is 14.7 miles per gallon (CARB 2019). Assuming a trip length of 10.8 miles (CAPCOA 2017), project operation would require 2,680 gallons of gasoline per year. This estimate conservatively assumes that a variety of vehicle types would travel to and from the project site, whereas for a residential development, most, if not all, vehicle trips would be conducted in passenger vehicles, which generally operate at a higher fuel efficiency than 14.7 miles per gallon. Estimated gasoline consumption from project operation would be an incremental increase in gasoline use compared to existing conditions. Therefore, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources from travel to and from the site.

Conclusion

Project construction and operation would not result in potentially significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy. Impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Table 1 provides energy efficiency goals and policies provided in the City of Lafayette General Plan and its Environmental Action Plan; it describes the project's consistency with these policies (City of Lafayette 2002, 2019).

Table 1 Project Compliance with Energy Efficiency Goals and Policies

Energy Efficiency Goal or Policy	Project Consistency
City General Plan	
Goal C-6: Provide an attractive, well-designed system of walkways for safe and efficient pedestrian movement in Lafayette. The walkway system should connect residential areas with the local and regional trails system, public transportation, schools, parks and other community amenities, and the Downtown Core area.	**Consistent.** The project would not impede implementation of the planned recreational trails, which includes the Walter Costa Trail along Quail Ridge Road in the project vicinity.
Goal OS-11: Reduce the consumption of non-renewable energy resources.	**Consistent.** The project would be required to comply with the LMC, which incorporates the California Green Building Standards Code. The code includes specific requirements related to efficient water usage.
City of Lafayette Environmental Action Plan	
SW—Goal 1: Community Waste Reduction, Recycling, & Composting – Increase community waste reduction, recycling, and composting to 75-percent of yearly solid waste generation by 2025.	**Consistent.** The project would be required to comply with the LMC, which incorporates the California Green Building Standards Code. The code includes specific requirements related to recycling and solid waste generation.
W—Goal 1: Community Water Conservation – Decrease water usage by 30-percent per capita by 2025.	**Consistent.** The project would be required to comply with the LMC, which incorporates the California Green Building Standards Code. The code includes specific requirements related to efficient water usage.
EU—Goal 1: Community Energy Use – Reduce community energy use from 2015 by 5-percent by 2020, 10-percent by 2025, and 15-percent by 2030 and transition to 75% renewable energy by 2025.	**Consistent.** The project would be required to comply with the LMC, which incorporates the California Green Building Standards Code. The code includes specific requirements related to energy efficiency standards that would reduce energy use requirements from the proposed residence. Per Program 1.3 of this goal, the project would adhere to additional energy efficiency performance standards.
GC—Goal 1: Community Green Construction – Increase number of certified green buildings on an ongoing basis.	**Not Applicable.** This goal is intended to be implemented by the municipality, not individual project developers. Nonetheless, the project would by consistent with the California Green Building Standards.

As shown in Table 1, the project would be generally consistent with applicable energy efficiency goals and policies. Therefore, potential impacts associated with renewable energy and energy efficiency would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	■	☐	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	■	☐	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	■	☐	☐	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	■	☐	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The nearest mapped active fault, the Hayward Fault, is approximately 5.5 miles west of the project site (DOC 2019a). Additional fault zones are located at farther distances, primarily to the west and east, extending north and south (USGS 2019a). Therefore, the project site is located in an area identified with high regional seismic activity, and it is reasonable to assume that the site will be exposed to strong ground shaking during the life of the project. Additionally, strong ground-shaking events have the potential to reactivate the existing on-site landslide. No active faults are located under the project site; thus, surface rupture on the site itself is not likely to occur, despite the high likelihood of regional earthquakes.

Project construction would be required to comply with the seismic safety requirements in the International Building Code, the California Building Code, and the City of Lafayette Building Code. Compliance with such requirements would reduce seismic ground shaking impacts to the maximum extent practicable with current engineering practices. Furthermore, the project would not increase ground-shaking hazards at adjacent properties. Therefore, impacts related to strong seismic ground shaking would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

As shown in Figure 7, the project site is not designated as being within a potential liquefaction zone. As liquefaction risk is low, lateral spreading due to liquefaction is not likely to occur on the project site. Therefore, impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

c. Would the project 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 offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

The project site contains an active landslide, which limits the developable area of the site. This is a potentially significant impact and will be addressed in greater detail in the EIR.

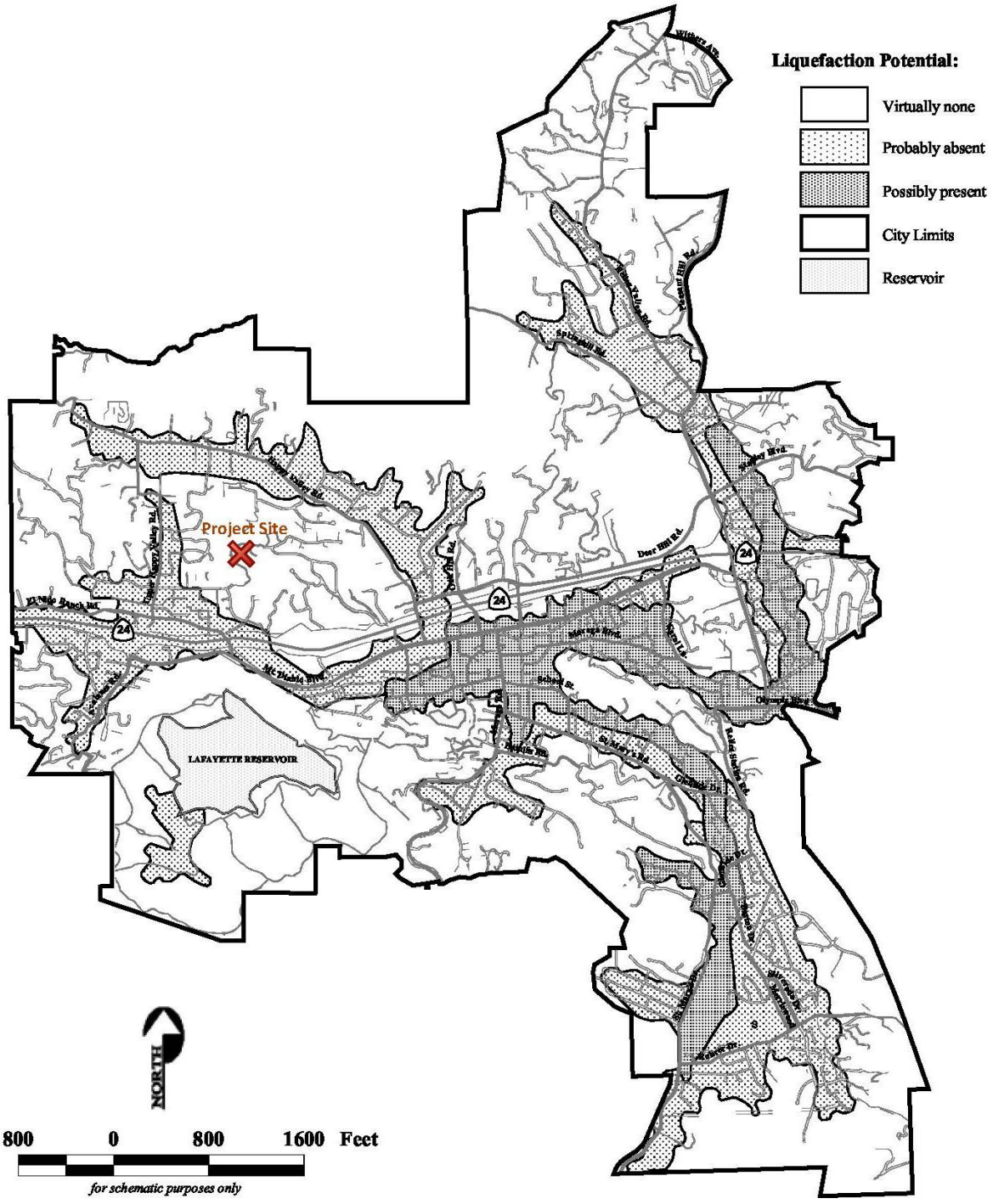
POTENTIALLY SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

During project construction, soil erosion and loss of topsoil could occur. This is a potentially significant impact and will be addressed in greater detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

Figure 7 City of Lafayette Liquefaction Potential



Source: City of Lafayette 2002

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

The project site contains expansive soils with a high shrink-swell potential (Alan Kropp & Associates 2003, Seidelman Associates 2008, NRCS 2019). This is a potentially significant impact and will be addressed in greater detail in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project site would be served by the municipal sewer system and would not require the installation of an on-site septic tank or alternate wastewater treatment systems. Therefore, no impacts from septic systems or alternative wastewater disposal systems would occur. This impact will not be discussed in the EIR.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site is situated in the Acalanes Ridge of the Coast Ranges Province, which is one of eleven major geomorphic provinces in California (California Geological Survey 2002). According to published geologic mapping by Dibblee and Minch (2005) and site-specific geotechnical studies, the project site is immediately underlain by the Orinda Formation (Tor) and Quaternary landslide rubble (Qls). The Orinda Formation is Pliocene to possibly latest Miocene in age and consists of gray to greenish gray, interbedded, terrestrial sandstone, claystone, and pebble conglomerate derived from Franciscan detritus (Dibblee and Minch 2005). The active landslide deposits derive from a large landslide that occurred in 1997, affecting approximately 80 percent of the project site (Seidelman 2008).

Based on a literature review and in accordance with Society of Vertebrate Paleontology guidelines (2010), the geologic units underlying the project site were determined to have low to high paleontological sensitivity. The Orinda Formation immediately underlies the northeastern portion of the project site and is considered to have a high paleontological sensitivity because numerous localities have been documented in this unit yielding scientifically significant fossil specimens including *Lepisosteus* (gar), *Sorex* (shrew), *Hypolagus* (lagomorph), *Barbourofelis* (large predatory cat), *Gomphotherium* (proboscid), *Hipparion* (horse), *Procamelus* (camel), and *Aphelops* (rhinoceros) (UCMP 2019). Active landslide deposits consist of an assortment of disturbed sediments and are generally less likely to contain well-preserved fossils and important taphonomic information than intact deposits. As such, landslide deposits have a low paleontological resource potential.

Project ground disturbance would be restricted to the northeastern project site for the proposed single-family residence. Because the northeastern project site is underlain by an intact geologic unit with a high paleontological sensitivity (Orinda Formation), paleontological resources may be encountered during ground-disturbing activities associated with project construction (e.g., grading, excavation, or any other activity that disturbs the surface of the site). Construction activities may result in the destruction, damage, or loss of undiscovered scientifically important paleontological resources. Therefore, impacts to paleontological resources would be potentially significant. Implementation of Mitigation Measure GEO-1 during project construction would reduce potential

impacts related to paleontological resources by providing for the recovery, identification, and curation of previously unrecovered fossils. This mitigation measure will be listed in the EIR's executive summary and included in the project's mitigation monitoring and reporting program.

Mitigation Measure

GEO-1 Paleontological Resources Monitoring

A Qualified Paleontologist shall conduct paleontological monitoring during ground-disturbing activities (including, but not limited to, site preparation, grading, excavation, and trenching). The Qualified Paleontologist shall have at least a Master's Degree or equivalent work experience in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques.

Ground-disturbing activities within areas of the project site underlain by paleontologically sensitive deposits (i.e., Orinda Formation) shall be monitored on a full-time basis. Monitoring shall be supervised by the Qualified Paleontologist and shall be conducted by a qualified paleontological monitor, defined as an individual who meets the minimum qualifications per standards set forth by the Society of Vertebrate Paleontology (2010), which includes a B.S. or B.A. degree in geology or paleontology with one year of monitoring experience and knowledge of collection and salvage of paleontological resources.

The duration and timing of the monitoring shall be determined by the Qualified Paleontologist. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, he or she may recommend reducing monitoring to periodic spot-checking or may recommend that monitoring cease entirely. Monitoring shall be reinstated if any new ground disturbances are required, and reduction or suspension shall be reconsidered by the Qualified Paleontologist at that time.

If a paleontological resource is discovered, the monitor shall have the authority to temporarily divert construction equipment around the find until it is assessed for scientific significance and collected. Once salvaged, significant fossils shall be prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the UCMP). Curation fees are the responsibility of the project owner.

A final report shall be prepared describing the results of the paleontological monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the lead agency for the project. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

Implementation of Mitigation Measure GEO-1 would reduce this impact to a less than significant level. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

Setting

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHG), gases that trap heat in the atmosphere, analogous to the way in which a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases, and O_3. GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (CARB 2018).

Regulatory Setting

Pursuant to the requirements of Senate Bill (SB) 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions and analysis of the effects of GHG emissions. The CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Most individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the

effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

BAAQMD Screening Criteria

In the 2017 BAAQMD CEQA Air Quality Guidelines, the BAAQMD outlines an approach to determine the significance of projects. The BAAQMD recommends that lead agencies determine appropriate GHG emissions thresholds of significance based on substantial evidence in the record. The BAAQMD's significance thresholds in the updated May 2017 CEQA Guidelines for project operations within the SFBAAB are the most appropriate thresholds for use in determining GHG emission impacts of the proposed project. The BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant GHG emission impacts. If all of the screening criteria are met by a project, then the lead agency or applicant would not need to perform a detailed assessment of their project's GHG emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2017b).

The screening criteria for operational GHG emissions of single-family residential developments is 56 dwelling units. For construction-related GHG emissions, the screening criteria is 114 dwelling units. Therefore, for the purpose of this analysis, it was assumed that the project would result in a less than significant impact and would not require additional analysis if it would involve construction of fewer than 114 single-family dwelling units and operation of fewer than 56 single-family dwelling units.

Impact Analysis

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

The project's proposed construction activities, energy use, daily operational activities, and mobile sources (traffic) would generate GHG emissions. However, as the project only involves construction of one single-family residence, it is below the BAAQMD screening threshold (114 dwelling units for construction and 56 dwelling units for operation) for a GHG emission analysis and would have a less than significant impact on the environment from construction- and operation-related GHG emissions. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Lafayette does not currently have a qualified GHG reduction plan. However, the City has a General Plan that includes measures to reduce vehicle trips, promote alternative modes of transportation, and reduce solid waste generation. Additionally, the Environmental Action Plan contains measures that intend to reduce waste generation, increase recycling, reduce energy use, encourage green building practices, and reduce mobile GHG emissions. The project would be consistent with these measures because it is located one mile from a high-quality transit corridor (BART), which would encourage residents to utilize public transit, and would be served by recycling and green waste services to divert solid waste from landfills.

Additionally, SB 375, signed in August 2008, requires the inclusion of Sustainable Communities' Strategies in Regional Transportation Plans for the purpose of reducing GHG emissions. The Metropolitan Transportation Commission and ABAG adopted a Sustainable Communities' Strategies that meets GHG reduction targets. Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use, and housing plan that would support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area (ABAG 2017). The Sustainable Communities' Strategies builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2040 would be updated every four years to reflect new priorities. A goal of the Sustainable Communities' Strategies is to reduce vehicle miles traveled (VMT) per capita by 10 percent (ABAG 2017).

The proposed project would be located within one mile of a major public transit system (BART), which would encourage residents to utilize public transit, reducing total vehicle miles travelled by shortening the vehicle portion of a commuter trip. This access to alternative transportation would reduce average VMTs, thereby reducing mobile-related GHG emissions and contributing to achieving GHG-reduction goals.

The project would be infill development that would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and would be consistent with the objectives of the Regional Transportation Plans/Sustainable Communities' Strategies, General Plan, Environmental Action Plan, and SB 375. Therefore, the proposed project would not conflict with state regulations intended to reduce GHG emissions statewide and would be consistent with applicable GHG reduction plans. Impacts related to GHG emissions would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The proposed project would involve the construction of one single-family residence, which typically would not use or store large quantities of hazardous materials. Potentially hazardous materials such as fuels, lubricants, and solvents would be used during project construction. However, the transport, use, and storage of hazardous materials during project construction would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the CCR, Title 22. Therefore, through the compliance with applicable laws and regulations, the project would have a less than significant impact. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The project site is not located within 0.25 mile of an existing or proposed school. The nearest school is Happy Valley Elementary School, located approximately 0.44 mile north of the project site. Project operation would not involve use or storage of hazardous materials. Though potentially hazardous materials such as fuels, lubricants, solvents, and oils could be used during project construction, the transport, use, and storage of any and all hazardous materials would be conducted in accordance with all applicable State and federal lows, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the CCR, Title 22. Regardless, due to the distance to the nearest school, impacts to schools associated with hazardous emissions would not occur. This impact will not be discussed in the EIR.

NO IMPACT

d. Would the project be located on a site that is included on a list of hazardous material 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?

The following databases were checked, pursuant to Government Code Section 65962.5, on March 27, 2019, for known hazardous materials contamination in the project area.

- **U.S. Environmental Protection Agency**
  - Comprehensive Environmental Response, Compensation, and Liability Information System/ Superfund Enterprise Management System / Envirofacts database search
- **State Water Resources Control Board (SWRCB)**
  - GeoTracker search for leaking underground storage tanks and other cleanup sites
- **California Department of Toxic Substances Control**
  - EnviroStor search for hazardous facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites

The project site is not included on a list compiled pursuant to Section 65962.5 of the Government Code. The Envirofacts database identified nine sites southeast of the project site and near Highway 24. The GeoTracker database identified one open leaking underground storage tank case almost 1 mile southeast of the project site (SWRCB 2019). The EnviroStor database identified no sites within 1 mile of the project site (DTSC 2019a). The Cortese list identified no sites within the City of Lafayette (DTSC 2019b). While some sites were identified within one mile of the project site, they would not the project site itself due to the topography of the area and the distance between the project site and the listed sites (each site is close to 1 mile from the project site). No impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The project site is not located within an airport land use plan area, or within 2 miles of a public or private airport. The closest airports are the John Muir Memorial Hospital Heliport, which is approximately 5.5 miles east of the site; the Buchanan Field Airport, which is approximately 7.8 miles northeast of the project site; and the Oakland International Airport, which is approximately 12 miles southwest of the project site. Therefore, there would be no safety hazard impacts related to airports and airstrips. This impact will not be discussed in the EIR.

NO IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project site is within Zone 2 of the City's Emergency Operations Plan: Wildland Fire Evacuation Plan (City of Lafayette 2016). The project would be required to comply with applicable City codes and regulations (including LMC Chapter 8-3 and Chapter VI: Safety of the City General Plan) pertaining to emergency response and evacuation. Project construction and operation would not restrict implementation of the plan nor would it impede the emergency access route of Zone 2 along Via Roble. No roads would be permanently closed because of the proposed project, and no structures would be developed that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would be accessed by a private driveway along Quail Ridge Road. This driveway would provide sufficient ingress/egress for typical passenger vehicles that would access the project site. As such, project implementation would not interfere with existing emergency evacuation plans or emergency response plans. Therefore, no impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project site is located in a very high fire hazard severity zone, as is most of northern Lafayette (CAL FIRE 2009). The implementation of the City's Wildfire Evacuation Plan would not be impeded by the proposed project. Compliance with applicable building codes to ensure fire safety measures are included in project design, as well as compliance with the City's Wildfire Evacuation Plan would ensure minimal exposure of people or structures to wildland fires. This impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	■

Setting

The project site is 1.1 acres and steeply sloped with an approximately 100-foot elevation difference between the northern and southeastern site boundaries (USGS 2018). The project site was previously developed with a single-family residence, which was removed following the 1997 landslide. Water drains in sheet flow from the northern boundary to the southeastern corner of the site. The nearest downstream creek is Lafayette Creek at the intersection of Pine Lane and El Nido Ranch Road, approximately 0.5 mile from the project site. Lafayette receives approximately 19.5 inches of rain annually, with rainfall concentrated in the winter months (Weather Atlas 2019).

Regulatory Setting

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. The NPDES permit process regulates those discharges (CWA Section 402). NPDES permitting authority is administered by the SWRCB and its nine RWQCBs. The project site is in a watershed administered by the San Francisco Bay RWQCB (San Francisco Bay RWQCB 2017).

Individual projects in the City that disturb more than one acre are required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing BMPs the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Section 401 of the CWA requires that any activity that would result in a discharge into waters of the U.S. be certified by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible and minimized and mitigated where avoidance is not possible. Section 303(d) of the CWA requires states to establish total maximum daily load (TMDL) programs for streams, lakes, and coastal waters that do not meet certain water quality standards.

California Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for state waters in the region are contained in the *Water Quality Objectives* Chapter of the Basin Plan for the San Francisco Bay RWQCB (San Francisco Bay RWQCB 2017). The Water Quality Control Plan, or Basin Plan, protects designated beneficial uses of State waters through the issuance of Waste Discharge Requirements and through the development of TMDL. Anyone proposing to discharge waste that could affect the quality of the waters of the State must make a

report of the waste discharge to the RWQCB or SWRCB as appropriate, in compliance with Porter-Cologne.

Contra Costa Clean Water Program

The City of Lafayette is a contributing city to the Contra Costa Clean Water Program (CCCWP), which was established in 1991 in response to federal stormwater NPDES regulations. Per the CCCWP Stormwater C.3 Guidebook (CCCWP 2017), projects less than 10,000-sf in size are required to prepare and submit a Stormwater Control Plan for a Small Land Development Project. The plan must implement on of the following options: (1) disperse runoff from some amount of roof or paved area to a vegetated area; (2) incorporate some amount of permeable pavement into your project; (3) include a cistern or rain barrel if allowed by your municipality, or (4) incorporate a bioretention facility or planter box.

City of Lafayette General Plan

The Land Use Element and the Safety Element of the General Plan addresses hydrology and water quality issues. The following policies and programs relate to the proposed project:

Goal LU-18: Coordinate with other jurisdictions to protect and restore environmental resources and to provide public services.

Policy LU-18.2 Coordination of Public Services: Coordinate water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation with other jurisdictions to create the greatest public benefit and the least degree of environmental impact.

Program LU-18.2.1: Periodically review level of service standards with the districts providing water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation.

Program LU-18.2.2: Monitor growth and infrastructure capacity through project review under CEQA and through coordination with provider agencies.

Program LU-18.2.3: Consider infrastructure and service capacity when reviewing development proposals.

Policy LU-20.14 Storm Drainage: Require new development to mitigate its impact on the storm drainage system.

Goal S-3: Reduce Flood Hazards.

Policy S-3.1 Reduce Flood Hazards: Reduce flood risk by maintaining effective flood drainage systems and regulating construction.

Program S-3.1.1: Condition new development to maintain post development peak runoff rate and average volume similar to the predevelopment condition, to the maximum extent feasible. Consider use of alternative drainage systems that utilize on-site infiltration or slow runoff during peak periods. Where this is not feasible, the increase must be mitigated. Include clear and comprehensive mitigation measures as part of project approvals with financial and other measures to ensure their implementation.

Program S-3.1.2: Require runoff rate/volume analysis and flow-duration analysis of projects where deemed necessary by City staff and/or required by provisions of the NPDES municipal stormwater permit.

Program S-3.1.3: Require analysis of the cumulative effects of development upon runoff, discharge into natural watercourses, and increased volumes and velocities in watercourses and their impacts on downstream properties. Include clear and comprehensive mitigation measures as part of project approvals with financial and other measures to ensure their implementation.

Policy S-3.2 Flood Protection Standard: In the review of flood control for proposed new development, establish as a standard the flow recurrence intervals used by the Contra costa County Flood Control District (e.g., the 100-year flood event).

Program S-3.2.1: Utilize the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM) to reduce the risk of flooding, to identify 100 Year Flood Events, to calculate flow rates within identified stream channels, and to review development proposals.

Policy S-3.3 Storm Drainage System: Maintain unobstructed water flow in the storm drainage system.

Program S-3.3.1: Enforce measures to minimize the volume and velocity of surface runoff, soil erosion, and sedimentation both during and after construction through implementation of the Grading Ordinance.

Policy S-3.5 Building Location: Consider potential flood hazards when siting a building. Intensity of development shall be the lowest in areas of high risk.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The project site is currently undeveloped and contains a substantial portion of an active landslide that extends onto adjacent properties. The proposed project would involve development of a single-family residence in the northeast corner of the project site, outside the active landslide area. Development would create changes to stormwater flow and introduce additional urban pollutants to the stormwater system through runoff. Furthermore, construction activities could result in temporary impacts to water quality of runoff leaving the site.

Grading activity during construction has the potential to impact water quality through erosion and through debris carried in runoff. Furthermore, the project construction would involve heavy equipment that could result in an increase in fuel, oil, and lubricants in the stormwater runoff due to leaks or accidental releases. To minimize these impacts, the project would be required to pay the City drainage impact fee, submit a Drainage Plan, implement design BMPs in the final design phase of the project, and submit an Erosion and Sediment Control Plan, as described in more detail below (please refer to discussion under questions c.[i], c.[ii], and c.[iii]). In addition, the project would be required to comply with the City's Grading Ordinance, which adopts by reference the Contra Costa County Grading Ordinance. Section 716-4.202 prohibits grading without a permit. To grant a permit, the zoning administrator or Design Review Commission must make a number of findings related to preventing adverse environmental impacts of grading activities. Findings must include a determination that the grading would not endanger the stability of the site or adjacent property, pose a significant ground movement hazard on an adjacent property, significantly increase erosion

or flooding of the site, or cause impacts to water quality that cannot be substantially mitigated. These regulations would prevent degradation of water quality from runoff at the project site. Each grading permit requires a final grading plan that is subject to review and approval by the City engineer and the zoning administrator. With compliance with existing regulations, impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The East Bay Municipal Utility District (EBMUD) supplies water to the City of Lafayette and would serve the project site. EBMUD's Urban Water Management Plan ([UWMP] EBMUD 2015) anticipates future growth in the region that includes the proposed project, as allowed under existing land use and zoning designations. EBMUD currently uses surface water primarily from the Mokelumne River, with supplemental water supply from East Bay area watersheds. Therefore, no incremental increase in demand on groundwater supplies would occur, as EBMUD does not use groundwater as a source of water. Groundwater was not observed on site during past site exploration borings (Alan Kropp & Associates, Inc. 2003).

The proposed project would introduce 3,500 square feet of impervious surfaces. This would impede groundwater recharge within the footprint of impervious surfaces. However, a drainage system would be included as part of the final project design that would ensure runoff from new impervious surfaces is allowed to percolate into the groundwater as it does under existing conditions. Because groundwater was not observed in past geological investigations of the project site, the project would not directly interfere with the groundwater table. Impacts related to depletion of groundwater supplies and groundwater recharge would be less than significant.

Because the project would be served by a water utility with sufficient supply that does not extract groundwater, and the project would not interfere with groundwater recharge, this impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?

The existing on-site drainage pattern is currently uncontrolled. On-site runoff flows from the northern boundary of the site along Quail Ridge Road, to the south, following the topography of the area which drains toward Pine Lane and Lafayette Creek. The proposed project would be required to pay the City's drainage impact fee based on the increase in impervious surfaces in accordance with the LMC Section 8-1703. The purpose of the required drainage impact fee is to maintain, improve, and expand existing drainage facilities provided by the City. Additionally, the City requires that a Drainage Plan be submitted for review by the City Engineer as part of the design review process for any project adding more than 500 square feet of impervious surfaces.

The project would disturb approximately 10 percent of the 1.1-acre project site, less than the 1 acre that triggers the need for coverage under the NPDES Permit. Most of the site would remain undisturbed. However, the project would be required to implement site-specific BMPs to minimize stormwater quality impacts, as it would create more than 500 square feet of impervious surfaces within the Hillside Overlay District. BMPs identified by the City's Stormwater Quality Control Guidelines include:

- **Design BMPs**
  - Minimize directly connected impervious areas
  - Minimize hardscape areas
  - Use permeable pavement options
  - Modify the driveway design
  - Promote infiltration with landscaping
  - Modify building design and construction
- **Construction BMPs (included in an Erosion and Sediment Control Plan)**
  - Limit access routes and stabilize driveways and access points
  - Phase construction to limit areas and periods susceptible to erosion impacts
  - Stabilize areas denuded by construction activities as soon as possible with seeding, mulching, sod stabilization, vegetative buffer strips, plastic covering, or application of ground base on areas to be paved
  - Protect adjacent properties with vegetative buffer strips, sediment barriers or filters, dikes or mulching
  - Delineate clearing limits, easements, setbacks, sensitive or critical areas and their buffers, and trees and drainage courses by marking them in the field
  - Stabilize and prevent erosion from temporary conveyance channels and outlets
  - Use sediment controls and filtration to remove sediment from water generated by dewatering or collected on-site during construction
  - Install permanent erosion controls (e.g., retaining wall, slope protection, outfall energy dissipater) for slopes greater than 10 percent
  - Use proper construction material and construction waste storage, handling, and disposal practices
  - Use proper vehicle and equipment cleaning, fueling, and maintenance practices
  - Control and prevent the discharge of all potential pollutants, including but not limited to, pesticides, petroleum products, nutrients, solid wastes, and construction chemicals

- Prepare a contingency plan in the event of unexpected rain or BMP failure, including but not limited to, an immediate response plan, storing extra or alternative control materials onsite (stakes, fences, hay bales), notifying the local agency, etc.

Additional BMPs may be required for post-construction and treatment control if design measure and construction BMPs are not implemented to the maximum extent practicable. Per the City's requirements, payment of the drainage impact fee, submittal of a Drainage Plan, implementation of design BMPs in the final design phase of the project, and submittal of an Erosion and Sediment Control Plan would ensure minimal erosion, siltation, flooding, and polluted runoff occur from development of the site. Impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

The proposed project would alter the existing drainage pattern of the project site by increasing the area of on-site impervious roadway surfaces to approximately 3,500 square feet. According to the Federal Emergency Management Agency Flood Insurance Rate Map (FIRM), the project site is located in Zone X, which is characterized as an area of minimal flood hazard and having a less than 0.2 percent annual chance to be inundated by flood waters as a result of a storm event (Map # 06013C0269F, June 16, 2009) (Federal Emergency Management Agency 2009). According to the California Governor's Office of Emergency Services (Cal OES) MyHazards online database, the project site is not located in a 100-year floodplain (Cal OES 2015).

The project would be required to submit for approval a Stormwater Control Plan for a Small Land Development Project, described above, with provisions for stormwater management. These provisions could include dispersing runoff to a vegetated area, incorporating permeable pavement, or other features to manage stormwater. Therefore, impacts on the redirection of flood flows would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The project site is located approximately nine miles east of the San Francisco Bay, and is not located in a tsunami or seiche zone, as shown in the Tsunami Inundation Maps for Contra Costa County (DOC 2019b). The nearest body of water that could experience seiche (water level oscillations in an enclosed or partially enclosed body of water) is the Lafayette Reservoir located approximately 1 mile south and at a lower elevation than the project site. No other large bodies of water with the potential to inundate the project site by a seiche are located near the site. The Briones Reservoir Dam is the nearest dame, approximately 3.7 miles northwest of the site, and Briones Reservoir drains into San Pablo Creek, downstream of the project sit. Based on the distance and the drainage pattern, the project site is not in the inundation area for this dam, or for any other dam or levee. Therefore, the proposed project would not result in the risk of release of pollutants due to inundation by a tsunami, seiche, or flooding. Impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project would be served by EBMUD, which maintains a UWMP (EBMUD 2015). This plan contains water quality goals more stringent than regulatory standards. EBMUD utilizes water treatment plants to ensure water quality standards and goals are met. Implementation of the project would increase water demand at the project site, but the project would not interfere with the ability of EBMUD to maintain water quality standards, as described in the UWMP.

The project site is within the service area of EBMUD's Groundwater Service Area, although the site itself is not underlain by the adjudicated groundwater basin. A Groundwater Sustainability Plan has not been adopted yet for the Groundwater Service Area. Because no groundwater management plans are currently adopted or approved for groundwater use in the project vicinity, and the project would not introduce more intensive uses or more water-demanding uses than allowed under existing zoning, no impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

a. Would the project physically divide an established community?

Project implementation would continue the existing residential development pattern in the neighborhood and would not cut off connected neighborhoods or land uses from each other. No new roads, linear infrastructure or other development features are proposed that would divide an established community or limit movement, travel or social interaction between established land uses. Project construction would not physically divide an established community. This impact will not be discussed in the EIR.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project site is designated in the City's General Plan as Low Density Single-family Residential (up to two dwelling units per acre) (City of Lafayette 2002). The site is zoned as Single-family Residential District R-20 (City of Lafayette 2013a). Surrounding and adjacent parcels are developed with single-family residences in compliance with the designated land use and zoning district, and the project would result in construction of a single-family residence that would also be in compliance with the designated land use and zoning. As stated in Section 8, *Project Description*, the project would require permits and approvals for construction within the Class II Ridgeline Setback. However, it should be noted that surrounding residences are also constructed within the Class II Ridgeline Setback areas; therefore, the project would be consistent with surrounding land uses. With approval of the Exception for development within a Class II Ridgeline Setback, and given the project's compliance with the designated land use and zoning of the project site, the project would have a less than significant impact regarding conflicts with existing land use plans. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No mineral resources are located within the City of Lafayette (USGS 2019b), and both the City's General Plan and County General Plan do not identify any significant mineral resources or mining operations within the City (City of Lafayette 2002; Contra Costa County 2004). The project would not require the use of substantial mineral resources during construction or operation and would not involve construction in a mineral resource site. Therefore, no impacts would occur. This impact will not be discussed in the EIR.

NO IMPACT

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13 Noise

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

Noise and Vibration Overview

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Sound pressure level is measured on a logarithmic scale with the 0 dBA level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA, and a sound that is 10 dBA less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dBA greater than the ambient noise level to be judged as twice as loud. In general, a 3 dBA change in the ambient noise level is noticeable, while 1 to 2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while areas adjacent to arterial streets are typically in the 50 to 60+ dBA range. Normal conversational noise levels are usually in the 60 to 65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels from point sources, such as those from individual pieces of machinery, typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from the noise source. Noise levels from lightly traveled roads typically attenuate at a rate of about 4.5 dBA per doubling of

distance. Noise levels from heavily traveled roads typically attenuate at about 3 dBA per doubling of distance. Noise levels may be reduced by intervening structures: generally, a single row of buildings between the receptor and the noise source reduces noise levels by about 5 dBA, and a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which residences in California are constructed generally provides a reduction of exterior-to-interior noise levels of approximately 20 to 25 dBA with closed windows.

In addition to the instantaneous measurement of sound levels, the duration of sound is important because sounds that occur over a long period are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period. Lmax is the highest root mean squared sound pressure level within the measurement period, and Lmin is the lowest root mean squared sound pressure level within the measurement period.

The time at which noise occurs is also important since nighttime noise tends to disturb people more than daytime noise. Community noise is usually measured using Day-Night Average Level (Ldn), which is the 24-hour average noise level with a 10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.), or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a 5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a 10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. Noise levels described by Ldn and CNEL typically do not differ by more than 1 dBA. In practice, CNEL and Ldn are often used interchangeably.

The relationship between peak hourly Leq values and associated Ldn/CNEL values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hour Leq to Ldn or CNEL. However, in urban areas near heavy traffic, the peak hour Leq is typically 2 to 4 dBA lower than the daily Ldn/CNEL. In less heavily developed areas, such as suburban areas, the peak hour Leq is often roughly equal to the daily Ldn/CNEL. For rural areas with little nighttime traffic, the peak hour Leq will often be 3 to 4 dBA greater than the daily Ldn/CNEL value. The project site is located in a suburban area; therefore, the Ldn/CNEL in the area would be roughly equivalent to the measured Leq.

Vibration refers to groundborne noise and perceptible motion. Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB).

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Most perceptible indoor vibration is caused by sources in buildings such as

operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

Regulatory Setting

California Code of Regulations

The CCR, Title 24, Section 1207.4 requires interior noise levels attributable to exterior sources to be at or below 45 dBA in any habitable room of a development based on the noise metric used in the noise element of the local general plan. All residential windows, exterior doors, and exterior wall assemblies would be required to have sound transmission class ratings that would ensure adequate attenuation of noise at a range of frequencies. The Noise Element of the Lafayette General Plan uses a noise metric of Ldn. Therefore, interior noise levels of the project would need to be at or below 45 dBA Ldn to be compliant with CCR requirements.

Lafayette General Plan

The City's General Plan Noise Element identifies noise sources and areas of noise impact to achieve and maintain noise control and land use compatibility in the City. Noise sources in the City are primarily from vehicular traffic, including automobiles, trucks, buses, and motorcycles. The BART is also a source of noise; however, traffic along SR-24 generally obscures noise from BART trains. High altitude aircraft are also a source of noise within the city, which produce an Ldn of less than 50 dBA (City of Lafayette 2002). The following goal and policies from the Noise Element apply to the proposed project:

Goal N-1. Ensure that all new development is consistent with the standards for noise.

> **Policy N-1.2.** *Reduce Noise Impacts:* Avoid or reduce noise impacts first through site planning and project design. Barriers and structural changes may be used as mitigation techniques only when planning and design prove insufficient.
>
> **Policy N-1.3.** *Noise and Land Use Compatibility Standards:* Ensure that all new noise sensitive development proposals be reviewed with respect to Figure 1: Noise and Land Use Compatibility Standards. Noise exposure shall be determined through actual on-site noise measurements.
>
> **Policy N-1.4.** *Residential and Noise Sensitive Land Use Standards:* Require a standard of 40 - 45 Ldn (depending on location) for indoor noise level for all new residential development including hotels and motels, and a standard of 55 Ldn for outdoor noise, except near the freeway. These limits shall be reduced by 5 dB for senior housing and residential care facilities.

Lafayette Municipal Code

Chapter 5 of the City of Lafayette Municipal Code sets forth the City's noise standards, guidelines, and procedures concerning noise regulation. The LMC Section 5-205 restricts exterior noise levels at single-family residences to 50 dBA between 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m. For areas where the measured ambient noise level exceeds these thresholds, the threshold is raised in 5-dBA increments until it encompasses or reflects the ambient noise level (Section 5-205[c]).

The LMC also includes a restriction for construction activities. According to LMC Section 5-207(e), construction activities, including the use of mechanical equipment, are restricted to the hours of 7:00 a.m. through 10:00 p.m. on Monday through Friday, with no construction allowed on Sundays

or holidays, such that the noise from construction equipment creates a disturbance across a residential or commercial property line or at any time violates the City's noise standards. Section 5-208(d) includes special provisions for construction noise. This section permits construction between the hours of 8:00 a.m. and 8:00 p.m. on weekdays, and between 10:00 a.m. and 6:00 p.m. on Sundays and holidays with authorization of a valid city permit. With a valid city permit construction noise is allowed during these hours if it meets at least one of the following noise limitations:

- No individual piece of equipment may produce a noise level exceeding 83 dBA at a distance of 50 feet. If the device is housed within a structure on the property, the measurement must be made outside the structure at a distance as close to 25 feet from the equipment as possible.
- The noise level at the nearest affected property may not exceed 80 dBA.

Ambient Noise Levels

The project setting consists of private residential roadways that do not experience substantial traffic volumes. The primary off-site noise sources in the vicinity are occasional vehicle traffic on Quail Ridge Road, overhead flights from passing aircraft, and birds. The City's General Plan estimates ambient noise levels in Lafayette neighborhoods to be 55 dBA (City of Lafayette 2002).

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The nearest noise-sensitive receptors to the project site are existing single-family residences that surround the project site, with the closest single-family residences located to the north across Quail Ridge Road and on the parcel adjacent to the eastern project boundary are approximately 100 feet from the boundary of proposed construction areas within the project site. The nearest adjacent residential property boundary is within 25 feet of the proposed construction area on site. In addition, the proposed project would involve construction of one single-family residence, which would also be considered a new noise-sensitive receptor in the existing residential community surrounding the project site.

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Exterior and Interior Noise

Because CEQA does not require analysis of potential impacts of the environment on proposed projects, the following impact analysis of the ambient environment on the project is provided for informational purposes only to disclose existing noise conditions in the project vicinity. The existing ambient sound level at the project site is estimated to be 55 dBA.

According to the City's General Plan Noise Element, the project site is within the 60 dBA Ldn noise contour, which is the City's standard for maximum outdoor noise levels in residential areas. Based on the expected ambient noise level of approximately 55 dBA Ldn, the proposed project would not be exposed to an incompatible noise environment. In addition, the General Plan requires interior noise levels attributable to exterior sources to no greater than 45 dBA Ldn. Based on an exterior noise exposure level up to 55 dBA Ldn, interior noise levels at the proposed residence would be approximately 30 to 35 dBA Ldn, which would be below the State's 45 dBA interior noise standard. Impacts would be less than significant.

Construction Noise

Temporary noise levels would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. To determine impacts, noise is estimated at the nearest sensitive receptor, consisting of a single-family residence within 100 feet of the project site. Table 2 demonstrates the typical noise levels associated with heavy construction equipment during phases of construction at distances of 25, 50, and 100 feet from the noise source. While the nearest residential structure is approximately 100 feet from the construction boundary, the nearest adjacent residential property boundary is within 25 feet of the proposed construction area on site. Noise levels at a distance of 50 feet are provided by the Federal Transit Administration (FTA), while the other distances under evaluation are calculated at an attenuation rate of 6 dBA per doubling of distance, based on the distances of the project site to the nearest sensitive receptors. Pile-driving equipment would be required for the project because the building foundation would need to be supported by the underlying bedrock, located approximately 18 feet below ground surface.

Table 2 Construction Noise Levels

Equipment	Approximate Noise Level at 25 feet (dBA, Leq)	Approximate Noise Level at 50 Feet (dBA, Leq)	Approximate Noise Level at 100 feet (dBA, Leq)
Air Compressor	86	80	74
Backhoe	86	80	74
Compactor	88	82	76
Concrete Mixer	91	85	79
Crane	94	88	82
Dozer	91	85	79
Generator	88	82	86
Grader	91	85	79
Loader	86	80	74
Paver	91	85	79
Pile-driver (impact)	107	101	95
Roller	91	85	79
Scraper	91	85	79
Truck	90	84	78

An attenuation rate of 6 dBA per doubling of distance was used to calculate noise levels at 25 feet and 100 feet.
Source: FTA 2018

The City of Lafayette establishes allowable hours of operation and noise limits for construction activities to minimize disturbance associated with such activities. According to the City of Lafayette Municipal Code Section 5-207(e), noise sources associated with construction are exempt from Municipal Code requirements, provided the activities do not take place before 8:00 a.m. or after

8:00 p.m. on weekdays (Monday through Saturday) or before 10:00 a.m. or after 6:00 p.m. on Sundays and federal holidays. In addition, either noise levels produced by individual pieces of equipment shall not exceed 83 dBA at 50 feet, or the noise level at the nearest affected property shall not exceed 80 dBA. As shown in Table 2, noise from construction equipment has the potential to exceed the City's standard 80 dBA at the residences 100 feet away from the site. These impacts would be temporary and would only last during the construction period. Nonetheless, due to the exceedance of construction noise standards in the City of Lafayette Municipal Code, impacts are potentially significant and mitigation is required. Mitigation Measure NOI-1 would be required to achieve this reduction. This mitigation measure will be listed in the EIR's executive summary and included in the project's mitigation monitoring and reporting program.

Operational Noise

Occupancy at the project site may generate noise from private vehicles (doors opening/closing, brakes, etc.), decks, patios, circulation walkways, and/or heating, ventilation, and air conditioning equipment. However, these noise-generating sources would be typical of the existing residential community and would not result in a substantial increase in ambient noise levels.

Other sources of noise from the proposed residence include traffic noise from vehicles that would use area roadways. According to the ITE Trip Generation Manual 9th Edition (ITE 2012), the trip generation rate for a single-family residence is 9.52 average daily trips (ADT) per dwelling unit. Therefore, the proposed residence would generate approximately 10 ADT on area roadways.

Because existing roadway noise is approximately 55 dBA at 3933 Quail Ridge Road, the noise exposure increase that would constitute a significant impact is 3 dBA Ldn. Modeling of traffic noise indicates that, in general, a 10 percent increase in traffic volume would raise traffic noise by approximately 0.4 dBA. The project would add approximately 10 daily trips to local roadways, which is less than 10 percent of the existing traffic on local roadways. Fourteen single-family residences are located between the terminus of Quail Ridge Road and Via Roble. Using the ITE trip generation rate for these residences, existing traffic is approximately 140 daily trips along this section of Quail Ridge Road. The addition of 10 daily trips from the project site represents an approximately 7.1 percent increase in trips. Therefore, the project would increase roadway noise by less than 0.4 dBA compared to existing conditions due to the minimal increase in roadway traffic. Therefore, the increase in roadway noise would be imperceptible to the human ear and would not exceed the threshold of 3 dBA. Impacts related to roadway noise would be less than significant.

Mitigation Measure

NOI-1 Construction Noise Reduction

As required by the City Municipal Code Section 5-208(d), construction activities shall only take place between the hours of 6:00 a.m. to 8:00 p.m. weekdays and Saturdays, or between 10:00 a.m. and 6:00 p.m. Sundays and federal holidays. In addition, either noise levels produced by individual pieces of equipment shall not exceed 83 dBA at 50 feet, or the noise level at the nearest affected property shall not exceed 80 dBA. Furthermore, the following requirements are provided to reduce construction noise:

- Prior to the start of and for the duration of construction, the contractor shall properly maintain and tune all construction equipment in accordance with the manufacturer's recommendations to minimize noise emissions.

- During construction, the contractor shall place temporary sound barriers along the northern and eastern boundaries of the construction area on site, to further reduce noise levels from construction equipment.
- Prior to use of any construction equipment, the contract shall fit all equipment with properly operating mufflers, air intake silencers, and engine shrouds no less effective than as originally equipped by the manufacturer.
- During construction, the construction contractor shall place stationary construction equipment and material delivery (loading/unloading) areas to maintain the greatest distance from the nearest residences.
- The construction contractor shall post a sign at the work site that is clearly visible to the public, providing a contact name and telephone number for filing a noise complaint.
- These measures shall be listed on all grading plans and monitored by the City of Lafayette during construction.

Implementation of Mitigation Measure NOI-1 would reduce construction noise levels. As a result, mitigated construction activities would increase ambient noise levels up to 83 dBA at 50 feet during construction. These noise levels would be typical of normal construction activities, would occur only during daytime hours as required by the LMC, and would be temporary. Therefore, implementation of Mitigation Measure NOI-1 would reduce construction noise impacts to a less than significant level. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Project construction would create groundborne vibration from the use of heavy construction machinery such as rollers, dozers, and loaded trucks; however, project operation would not generate significant ground-borne vibration because single-family residences do not require the use of heavy industrial machinery. Therefore, this analysis considers vibration impacts only from project construction. To determine groundborne vibration impacts, vibration was modeled at the nearest sensitive receptors, approximately 100 feet from the project site.

To determine vibration impacts during project construction, vibration levels were calculated at these sensitive receptors using the vibration velocity in decibels (i.e., VdB) of the highest impact pieces of equipment that would be used during project construction: rollers, dozers, and loaded trucks (see Table 3). Table 3 lists groundborne vibration levels from a roller, dozer, and loading truck at 25 feet and 100 feet from the source.

Table 3 Estimated Groundborne Vibration during Construction

Equipment	Approximate Vibration Levels at 25 Feet (VdB)	Approximate Vibration Levels at 100 Feet (VdB)[1]
Pile Driver (impact)	104	86
Vibratory Roller	94	76
Large Bulldozer	87	69
Loaded Truck	86	68

[1] Values calculated using the equation: VdB (100 feet) = VdB (25 feet) - 30 * log (100 ft / 25 ft).

Source: FTA 2018

As shown in Table 3, construction equipment would generate peak vibration levels ranging from 68 VdB to 86 VdB at the nearest sensitive receptors. Although vibration would exceed 75 VdB (the approximate dividing line between barely perceptible and distinctly perceptible), such events would be intermittent and relatively short in duration. Construction activity would be limited to daytime hours as required by LMC Section 5-207(e), and would not disrupt residences during recognized hours of sleep. Groundborne vibration would not reach levels that could cause building damage to fragile buildings (100 VdB; FTA 2018) in the project vicinity. Therefore, vibration caused by project construction would result in a less than significant impact. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The project site is not located within an airport land use plan area, or within 2 miles of a public or private airport. The closest airports are the John Muir Memorial Hospital Heliport, which is approximately 5.5 miles east of the site; the Buchanan Field Airport, which is approximately 7.8 miles northeast of the project site; and the Oakland International Airport, which is approximately 12 miles southwest of the project site. The project site is not in an airport noise contour area. There are no private airstrips in the project vicinity. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with airports or a private airstrip. No impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project would be consistent with the land use and zoning designations for the site and would result in an incremental increase in population in the City. The increase was anticipated in the City's General Plan and would not be unplanned growth. This impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project site does not currently contain housing, and the project would not result in the removal of housing from the City. Therefore, the project would not displace existing people or housing and there would be no impact. This impact will not be discussed in the EIR.

NO IMPACT

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15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	■	☐
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	■	☐

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

1 Fire protection?

2 Police Protection?

3 Schools?

4 Parks?

5 Other public facilities?

The Lafayette Police Department is located approximately 1.6 miles southeast of the project site. The Moraga-Orinda Fire District is located approximately 1.5 miles west of the project site and Contra Costa Fire Station 15 is located approximately 2.1 miles east of the site. Happy Valley Elementary School is located approximately 0.4 mile north of the project site and Bentley Upper School is located approximately 0.5 mile south of the project site. The Lafayette Reservoir is located 0.6 mile south of the project site.

The proposed project would result in an incremental increase in population of approximately 3 new residents (DOF 2018) and a related incremental increase in demand for public services. The City requires the payment of development fees, including fees for the provision of parkland, park facilities, walkways, and public art. Additionally, as part of the Building Permit process, the Contra Costa County Fire Protection District (CCCFPD) reviews project plans to ensure that the CCCFPD's fire safety standards are met.

The CCCFPD has an average response time of 6.5 minutes to incidents in western Contra Costa County (CCCFPD 2019). The addition of one residence would not substantially decrease this average response time and would not reduce response times below the CCCFPD's goal of 10:00 to 11:45 average response time. The Lafayette Police Department had a ratio of 1.93 officers per 1,000 residents in 2016 (Lafayette Police Department 2016). This ratio would not substantially change with project implementation and no new or altered facilities would be required to provide police protection services to the site.

The Lafayette School District requires the payment of developer fees (Lafayette School District 2018). Pursuant to Section 65995 (3)(h) of the California Government Code (SB 50, chaptered August 27, 1998), the payment of statutory fees "is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Thus, payment of the development fees is considered full mitigation for the proposed project's impacts under CEQA. Impacts to parks and recreational facilities are described in more detail in Section 16, *Recreation*.

The project would maintain service ratios, would pay applicable development impact fees, and would not substantially reduce the provision of public services within the City. Therefore, the project would not require the provision of new or altered governmental facilities, and this impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The city has three regional recreational facilities, contains an extensive system of trails, and has several community and neighborhood parks. However, the City aims to maintain a ratio of five acres of parkland for every 1,000 residents and is approximately 44 acres short of this goal based on a projected population of 27,000 (City of Lafayette 2009).

The proposed project would incrementally increase the demand for park and recreational facilities. The project site has direct access to the existing Walter Costa Trail extends north to south, including the portion of Quail Ridge Road adjacent to the project site (City of Lafayette 2013b). This trail provides access from the project site to the Briones Regional Park located north of the city. While the City falls short of its park-to-population goals, Lafayette's proximity to adjacent regional parks and open space areas provides sufficient park facilities for use by new residents.

The project would be within the growth assumptions for the City; therefore, the demand for parks would not exceed the demand anticipated in local planning documents, including the City General Plan (City of Lafayette 2002) and the Parks and Recreation Facilities Master Plan (City of Lafayette 2009).

As stated in Section 15, *Public Services*, the project would be required to pay development fees, including for the provision parkland, park facilities, and walkways. The payment of these fees will aid the City in developing the required parkland facilities within the City, as identified above.

The project would increase the population of the City by approximately three residents; this incremental increase in demand for park and recreation facilities would not cause substantial physical deterioration of existing facilities or require the expansion of parkland facilities beyond

previously planned future expansions as described above. Therefore, impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The City of Lafayette strives to maintain a level of service (LOS) D for intersections in the downtown corridor, which includes Mount Diablo Boulevard and Dolores Drive, which would be utilized by project residents for local access to the site. The project is anticipated to result in an estimated 10 daily trips per the ITE trip generation rate for single-family residences, with one trip each during the a.m. and p.m. peak hours. The addition of 10 daily trips to project area roadways would not cause local intersections to exceed the LOS standard set by the City. As discussed in the City's General Plan, the intersection of Dolores Drive and Mount Diablo Boulevard operates no worse than LOS C during peak hours. As only one trip would be added during each peak hour by the project, this incremental increase would not substantially impact the existing LOS of the intersection.

Development of the site would not impair roadways or conflict with planned pedestrian, bicycle, and transit facilities in the vicinity. Therefore, this impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) describes criteria for analyzing transportation impacts. Depending on the type of project, different thresholds of significance are applicable. Section 15064.3(b)(1) applies to land use projects, including the proposed project:

> Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

BART is considered to be a high-quality transit corridor, but it is located approximately one mile from the project site. The Lafayette BART station provides parking for residents to use for commuting to other cities in the Bay Area, which would reduce VMT generated by the project.

The project would generate an estimated 10 daily trips, below the screening threshold for a VMT analysis as described in the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). Therefore, this impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

d. Would the project result in inadequate emergency access?

The project would not include hazardous design features such as sharp curves or dangerous intersections. Project operation would not involve the use of oversized or otherwise non-standard vehicles. The addition of one new single-family residence and associated new residents would not substantially increase traffic on local roadways serving the project site and surrounding area; therefore, emergency access to the project site and surrounding residences would not be impeded by the addition of the proposed project. Impacts would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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:				
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), or	☐	☐	☐	■
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.	☐	☐	☐	■

California Assembly Bill (AB) 52 was enacted in 2015 and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 states, "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states the lead agency shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

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

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those having requested notice of projects proposed in the jurisdiction of the lead agency.

No California tribes have requested notification of projects under AB 52 from the City of Lafayette, thus the City of Lafayette did not distribute AB 52 notification letters for the project.

a., b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a 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 (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), or (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?

No tribes have requested notification of projects under AB 52, thus the City of Lafayette assumes that no tribal cultural resources are on the project site.

Additionally, no cultural resources of Native American origin were identified that would be impacted by the project and the site is considered to have low archaeological sensitivity (see Section 5, *Cultural Resources*). Based on the above, it is assumed no tribal cultural resources are present on the project site. Therefore, no impacts would occur to tribal cultural resources. See Section 5, *Cultural Resources*, for mitigation measures related to the unanticipated discovery of archaeological resources. This impact will not be discussed in the EIR.

NO IMPACT

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	■	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c. Would the project 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?

Water

EBMUD supplies water to the city of Lafayette via either the Walnut Creek Water Treatment Plant, which has a capacity of 115 million gallons per day (mgd), or the Lafayette Water Treatment Plan (as needed), which has a capacity of 35 mgd (EBMUD 2015). EBMUD has an average district-wide water consumption is 192 mgd and has a total water treatment capacity of 375 mgd, with a total surplus of 183 mgd (EBMUD 2012, EBMUD 2019). The project's estimated water demand of approximately 106,000 gallons per year (CAPCOA 2017) would constitute less than 0.1 percent of the available water treatment capacity as well as less than 0.1 percent of the capacity of the Lafayette Water Treatment Plant. Therefore, water supply impacts of the proposed project would be less than significant. This impact will not be discussed in the EIR.

Wastewater

The project's estimated wastewater generation would be approximately 88,000 gallons per year (CAPCOA 2017), or approximately 241 gallons per day (this estimate assumes that water use is 120 percent of wastewater generation). The proposed project would be served by connection to the municipal sewer system. Wastewater would be treated by the Central Contra Costa Sanitary District (Central San) Treatment Plan located approximately 10 miles northeast of the project site in Martinez. The Central San Treatment Plant has a total treatment capacity of approximately 54 mgd and currently treats an average of 35 mgd with a remaining capacity of 19 mgd (Central San 2019). The project's anticipated wastewater generation would be less than 0.1 percent of the Central San Treatment Plant's remaining capacity. Therefore, the proposed project would not require the construction of new municipal wastewater treatment facilities or impact the treatment capacity of existing municipal wastewater treatment providers. Impacts to wastewater treatment facilities would be less than significant. This impact will not be discussed in the EIR.

Stormwater

The project would be designed and engineered with drainage features appropriate to accommodate the needs of the proposed project. As discussed in Section 10, *Hydrology and Water Quality*, the project would be required to comply with City requirements, including paying the drainage impact fee, submitting a Drainage Plan during design review, implementing design BMPs, and submitting an Erosion and Sediment Control Plan to ensure minimal erosion, siltation, flooding, and polluted runoff occur from development of the site. The proposed project would not require the construction of new stormwater drainage facilities or expansion of existing facilities. Impacts would be less than significant. This impact will not be discussed in the EIR.

Electricity, Natural Gas, and Telecommunications

A significant impact to electricity, natural gas, and telecommunications facilities may occur if a project's demand for these services exceeds the capacity of local providers. Electricity would be provided to the project site by Pacific Gas and Electric (PG&E) or Marin Clean Energy at the discretion of the project residents, and natural gas would be provided by PG&E. Telecommunications services would be provided by AT&T or Comcast at the discretion of the project residents. Telecommunications are generally available in the project area, and facility upgrades would not likely be necessary.

As described in Section 6, *Energy*, the project would require approximately 7,982 kWh per year of electricity and approximately 42.3 million British thermal units (MMBtu) per year of natural gas.

PG&E maintains power lines along Quail Ridge Road that serve adjacent properties and would serve the project site. The power line has a capacity of 11.3 megawatts (MW) and a peak load of 8.6 MW, with a remaining capacity of 2.7 MW. The substation that powers this line has a capacity of 29.7 MW and a peak load of 22.8 MW, with a remaining capacity of 6.9 MW (PG&E 2019). The project would require approximately 0.001 MW, less than 0.1 percent of the remaining capacity of the PG&E power lines and substation that would serve the project site. For 2017, the total system of natural gas that PG&E provided was 2,517 million cubic feet (MMcf) per day, or 2,610,000 MMBtu per year (California Gas and Electric Utilities 2018). Therefore, natural gas demand generated by the project would represent less than 0.1 percent of PG&E's natural gas demand. Accordingly, the project would be accommodated adequately by existing electricity, natural gas, and telecommunication facilities and would not require improvements to existing facilities, or the provision of new facilities, that would cause significant environmental effects. This impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Republic Services provides solid waste service including public trash, recyclables, and green waste collection in the City. The proposed project would generate solid waste during construction and operation. Handling of debris and waste generated during construction would be subject to LMC Section 5-602, which requires that projects divert at least 60 percent of construction or demolition waste (with an increase to 75 percent diversion effective January 1, 2020). The project would not involve demolition activities; therefore, construction activities would not generate substantial solid waste.

Solid waste generated by project operation would be collected by Republic Services and transferred to the Keller Canyon Landfill serving Contra Costa County. The permitted daily throughput of this landfill is 3,500 tons per day, the estimated average waste quantities disposed is 3,000 tons per day, the remaining capacity is 25.4 million tons, and the anticipated closure date is 2030 (California Department of Resources Recycling and Recovery [CalRecycle] 2019a, 2019b; Republic Services 2019). The Keller Canyon Landfill has an estimated average remaining capacity of 500 tons per day. According to CalEEMod default values, the project would generate approximately 0.42 tons of waste per year, or approximately 0.001 ton per day (CAPCOA 2017). This estimate is conservative as it does not factor in any recycling or waste diversion programs. The 0.001 ton of solid waste generated daily by the project would represent substantially less than one percent of the available surplus capacity of the Keller Canyon Landfill. The City is required to meet the statewide waste diversion goal of 50 percent set by AB 939. Project residents would be provided recycling and green waste collection services, which would reduce the amount of solid waste sent to landfills. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste, such as AB 939, the LMC, and the City's recycling program. Impacts related to solid waste and waste facilities would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project site is located in a very high fire hazard severity zone, as is most of northern Lafayette (California Department of Forestry and Fire Protection [CAL FIRE] 2009). The project site is within Zone 2 of the City's Emergency Operations Plan: Wildland Fire Evacuation Plan (2016). As described in Section 9, *Hazards and Hazardous Materials*, project construction and operation would not restrict implementation of the plan nor would it impede the emergency access route of Zone 2 along Via Roble. No roads would be permanently closed because of the proposed project, and no structures would be developed that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would be accessed by a private driveway along Quail Ridge Road. This driveway would provide sufficient ingress/egress for typical passenger vehicles that would access the project site. As such, project implementation would not interfere with existing emergency evacuation plans or

emergency response plans in the area. Therefore, no impact would occur. This impact will not be discussed in the EIR.

NO IMPACT

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project site is steeply sloped from 143 feet above mean sea level in the southeastern corner of the site to 208 feet above mean sea level in the northeastern corner of the site. Surrounding areas are hilly, with a ridgeline located north of Quail Ridge Road near the project site. In the project vicinity, prevailing wind blows to the southeast (National Oceanic and Atmospheric Administration 2019). Due to the presence of nearby slopes and wind direction, which could carry fires down slopes toward the site, the project would expose project occupants to wildfire impacts. However, building code fire safety requirements, project design review by the CCCFPD, and General Plan policies would require the provision of fire suppression and alarm systems, use of fire-resistant roofing and building materials, development and implementation of a Vegetation Management Plan, and payment of fire protection development fees, which would aid in preventing the spread of wildfires. Required compliance with these policies would reduce this impact to a less than significant level. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project would not involve the construction of new roads or the extension of utilities that could exacerbate wildfire risk or result in temporary or ongoing impacts to the environment. The project would be required to comply with building code and fire safety requirements, as well as General Plan policies. Construction BMPs, such as ensuring equipment has spark arresters installed, would ensure temporary construction does not exacerbate fire risks in the area. This impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would introduce people to the project site, which is within a very high fire hazard severity zone and contains an active landslide. As discussed in Section 10, *Hydrology and Water Quality*, the proposed project would introduce impervious surfaces to the site, which would increase the volume of stormwater runoff from the site. This increase in runoff volume could also increase the rate of surface runoff and flooding on or off site. Per the City's requirements, payment of the drainage impact fee, submittal of a Drainage Plan, implementation of design BMPs in the final design phase of the project, and submittal of an Erosion and Sediment Control Plan would ensure

minimal erosion, siltation, flooding, and polluted runoff occur from development of the site. The project site is located within 250 feet of a ridgeline and is not directly downstream of an established waterway that could result in substantial post-fire flooding and instability. Therefore, this impact would be less than significant. This impact will not be discussed in the EIR.

LESS THAN SIGNIFICANT IMPACT

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	☐	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As described in Section 4, *Biological Resources,* implementation of Mitigation Measures BIO-1 and BIO-2 would address potential impacts to special status species and migratory birds. Therefore, the project would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal, and impacts would be less than significant with mitigation incorporated.

As noted under Section 5, *Cultural Resources*, and Section 7, *Geology and Soils*, no historical, archeological, or paleontological resources were identified on site. Nevertheless, the potential for the recovery of buried cultural materials during development activities remains. Implementation of Mitigation Measures CR-1 and GEO-1 would reduce impacts to previously undiscovered cultural resources to a less than significant level by providing a process for evaluating and, as necessary, avoiding impacts to any resources found during construction. Therefore, impacts to important examples of California history or prehistory would be less than significant with mitigation incorporated.

As noted throughout the Initial Study, most other potential environmental impacts related to the quality of environment would be less than significant or less than significant with implementation of mitigation measures. Further analysis in an EIR is required for impacts to geology and soils.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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)?

Cumulative development in the City is anticipated to consist primarily of additional residences or modifications to existing residences because the over 75 percent City is designated for single-family residential land use (City of Lafayette 2002). Cumulative impacts associated with some of the resource areas have been addressed in the individual resource sections above: Air Quality, Greenhouse Gases, Water Supply, and Solid Waste (CEQA Guidelines Section 15064[h][3]) and would be less than significant. Some of the other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts, such as Mineral Resources and Agriculture and Forestry Resources. As such, cumulative impacts in these issue areas would also be less than significant (not cumulatively considerable). Other issues (e.g., aesthetics, hazards and hazardous materials) are site-specific by nature, and impacts at one location do not add to impacts at other locations or create additive impacts. The project would be incrementally increase traffic compared to existing conditions. However, the project would be consistent with the type and density of development anticipated by the City's General Plan and cumulative impacts would be less than significant. Therefore, the project's impacts would not be cumulatively considerable with implementation of the required mitigation measures. This impact would not require further analysis in an EIR.

LESS THAN SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in analyses for air quality, hazards and hazardous materials, and noise, the proposed project would not result, either directly or indirectly, in substantial adverse hazards related to air quality, hazardous materials, or noise. Compliance with applicable rules and regulations would reduce potential impacts on human beings to a less than significant level. However, potential impacts to humans from landslides require further analysis. Those impacts will be addressed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

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Appendix A

Biological Resources Reconnaissance Survey Results