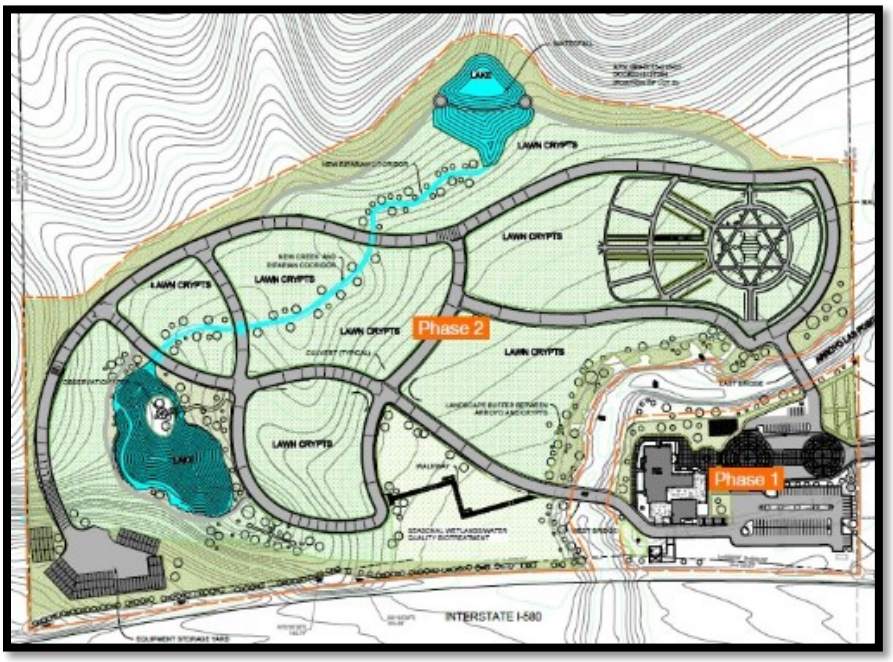
MONTE VISTA MEMORIAL GARDENS

Draft Environmental Impact Report

SCH No. 2020069045

January 2022



Prepared for:

Alameda County Community Development Agency
224 Winton Ave Room 111
Hayward, CA 94544

Prepared by:

RCH GROUP

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224 Winton Ave Room 111
Hayward, CA 94544

Submitted by:

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ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY

PLANNING DEPARTMENT

NOTICE OF AVAILABLITY of a Draft Environmental Impact Report for the Monte Vista Memorial Gardens Project Alameda County Planning Application PLN2017-00194

TO: State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, and Interested Organizations and Parties.

SUBJECT: Notice of Availability of a Draft Environmental Impact Report (Draft EIR) for the Monte Vista Memorial Gardens Project in compliance with California Code of Regulations, Title 14, Section 15087.

SUMMARY: NOTICE IS HEREBY GIVEN that the Alameda County Planning Department (County), as lead agency for the Project, has completed a Draft EIR in compliance with the California Environmental Quality Act (CEQA). The proposed project that is the subject of the Draft EIR is the construction and operation of Monte Vista Memorial Gardens (MVMG or the "Project") a proposed memorial park project that would include a funeral home, interment (burial) areas and associated services, including a crematorium and mortuary.

The purpose of this notice is to (1) serve the public Notice of Availability (NOA) of a Draft EIR pursuant to the CEQA Guidelines Section 15087, and (2) advise and solicit comments regarding the content of the Draft EIR for a 45-day period, commencing on January 13, 2022 and ending at 4:30 PM on February 28, 2022, after which a final EIR will be prepared containing comments and responses to comments that, together with the Draft EIR, will form the final EIR. The final EIR will be used by the Alameda County Planning Commission in its consideration of approval of the proposed Monte Vista Memorial Gardens Project.

PROJECT TITLE: Monte Vista Memorial Gardens Project

PROJECT LOCATION: The Project would be developed at 3656 Las Colinas Road, Livermore, CA in unincorporated Alameda County. Development of the Project would occur on approximately 47 acres in the southern portion of the ±104-acre parcel (Assessor's Parcel Number 099-0015-016-03) just north of the City of Livermore between the North Livermore Avenue and North First Street exits.

PROJECT DESCRIPTION: Monte Vista Memorial Gardens (MVMG or the "Project") is a proposed memorial park project that would include a funeral home, interment (burial) areas and associated services, including a crematorium and mortuary. MVMG would provide memorial services for the Tri-Valley region where there are over 1,200 deaths per year with about 750 cremations and 300 burials done locally. The mission of the MVMG is to provide services for the final needs of present and future Tri-Valley residents. MVMG would be the first cemetery developed in Alameda County in over 110 years and would accommodate the needs of several multi-cultural communities. The cemetery would include an area specifically designed for the Jewish community, with appropriate burial services, practices, and artwork for Jewish residents.

Project development would occur in two phases. Once approved, the Phase I buildout of the Project would occur over approximately 5 years. Phase II buildout would occur over approximately 100 years. Phase II would be developed in subphases based on future demand and other development and regulatory factors. Permitting would begin for Phase II following approval of the CUP from Alameda County.

SIGNIFICANT ENVIRONMENTAL EFFECTS: The project would have significant impacts in the following environmental areas:

- Air Quality (air pollution from ground disturbing construction activities)
- Biological Resources (sensitive species, seasonal wetlands and "other waters of the United States", and local policies.
- Cultural Resources (cultural and/or tribal cultural resources and human remains)
- Geologic, soils and seismic (earthwork and proposed lakes)
- Hydrology and Water Quality (construction effects, operation of proposed lakes)

All of these impacts can be reduced to less than significant levels after mitigation is implemented.

PUBLIC REVIEW AND DOCUMENT AVAILABILITY: The 45-day public review period for the Draft EIR is from January 13, 2022 to February 28, 2022. The Draft EIR will be available for review at the following locations:

Alameda County Planning Department
224 W. Winton Avenue, Room 111
Hayward, CA 94544

Livermore Public Library – Civic Center
1188 S Livermore Ave
Livermore, CA 94550

And on the County's website:
https://www.acgov.org/cda/planning/landuseprojects/currentprojects.htm

PUBLIC COMMENTS: Written comments on the Draft EIR must be received no later than February 28, 2022 at 4:30 PM.

Please send written comments to:
Alameda County Planning Department
224 W. Winton Avenue, Room 111
Hayward, CA 94544
ATTN: Albert V. Lopez, Planning Director

Please include a return address and contact name with your written comments. You are also encouraged to email your comments to albert.lopez@acgov.org with "Monte Vista Memorial Gardens EIR" as the subject.

PUBLIC PROCESS: Although CEQA does not require formal hearings at any stage of the environmental review process (State CEQA Guidelines Section 15202[a]), it does encourage "wide public involvement, formal and informal…in order to receive and evaluate public reactions to environmental issues" (State CEQA Guidelines Section 15201) and requires the lead agency to provide the public with the

opportunity to provide comments. The County, as lead agency, circulated a Notice of Preparation (NOP) of an EIR (SCH # 2020069045) for the proposed project on June 29, 2020. The NOP was distributed for a 30-day comment period that ended on July 29, 2020. In addition, the County held a public scoping meeting on July 20, 2020, to solicit input on the scope and focus of the EIR. Comments received on the NOP and during the public scoping meeting were considered in the preparation of the EIR. Appendix A of the Draft EIR contains the NOP, and Appendix B contains written comments received on the NOP.

The Draft EIR incorporates public and agency responses to the NOP. Like the NOP, the Draft EIR is being circulated for review and comment by appropriate agencies, as well as organizations and individuals who have requested notification. In accordance with Section 15205(d) of the State CEQA Guidelines, the County has scheduled a 45-day public review period for the Draft EIR, ending on February 28, 2022 at 4:30 p.m. Within that 45-day period, the County will hold one public hearing before the Planning Commission via teleconference and video conference to request comments on the Draft EIR, at the following time and link.

Monday February 7, 2022, at 3:00 pm.
https://us02web.zoom.us/j/95946946292
Call-in Number: (669) 900-9128 or (346) 248-7799
WEBINAR ID# 95946946292

The meeting will be held in conformance with the County's Teleconferencing Guidelines for Planning Public Hearings (PDF), at the link provided or at the Planning Department webpage below:

http://www.acgov.org/cda/planning

Following the close of the public review period for the Draft EIR, the County will prepare a final EIR, incorporating all comments received during the public comment period, for consideration by the Planning Commission, at a date for which notice shall be provided. As required by CEQA (Section 21092.5), the final EIR, including written responses to the comments submitted by public agencies, will be available at least 10 days prior to certification.

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

Monte Vista Memorial Gardens (MVMG or the "Project") is a proposed memorial park project that would include a funeral home, interment areas and associated services, including a crematorium and mortuary. MVMG would provide memorial services for the Tri-Valley region where there are over 1,200 deaths per year with about 750 cremations and 300 burials done locally. The mission of the MVMG is to provide services for the final needs of the present and future Tri-Valley residents.

MVMG would be the first cemetery developed in Alameda County in over 110 years and would accommodate the needs of several multi-cultural communities. The cemetery would include an area specifically designed for the Jewish community, with appropriate burial services, practices and artwork for Jewish residents. This Environmental Impact Report (EIR) has been prepared for the County to evaluate the environmental effects of construction and operation of the Project. The Project requires a Conditional Use Permit (CUP) from Alameda County, among other approvals. The entire Project site parcel is zoned "A" Agricultural and cemetery uses are permitted on Agricultural-zoned lands with a CUP. County approval of the CUP is a discretionary approval triggering California Environmental Quality Act (CEQA) review. The Alameda County Community Development Department has reviewed the proposed Project and determined that the Project may have significant adverse impacts on the physical environment and required an EIR to be prepared to meet CEQA requirements.

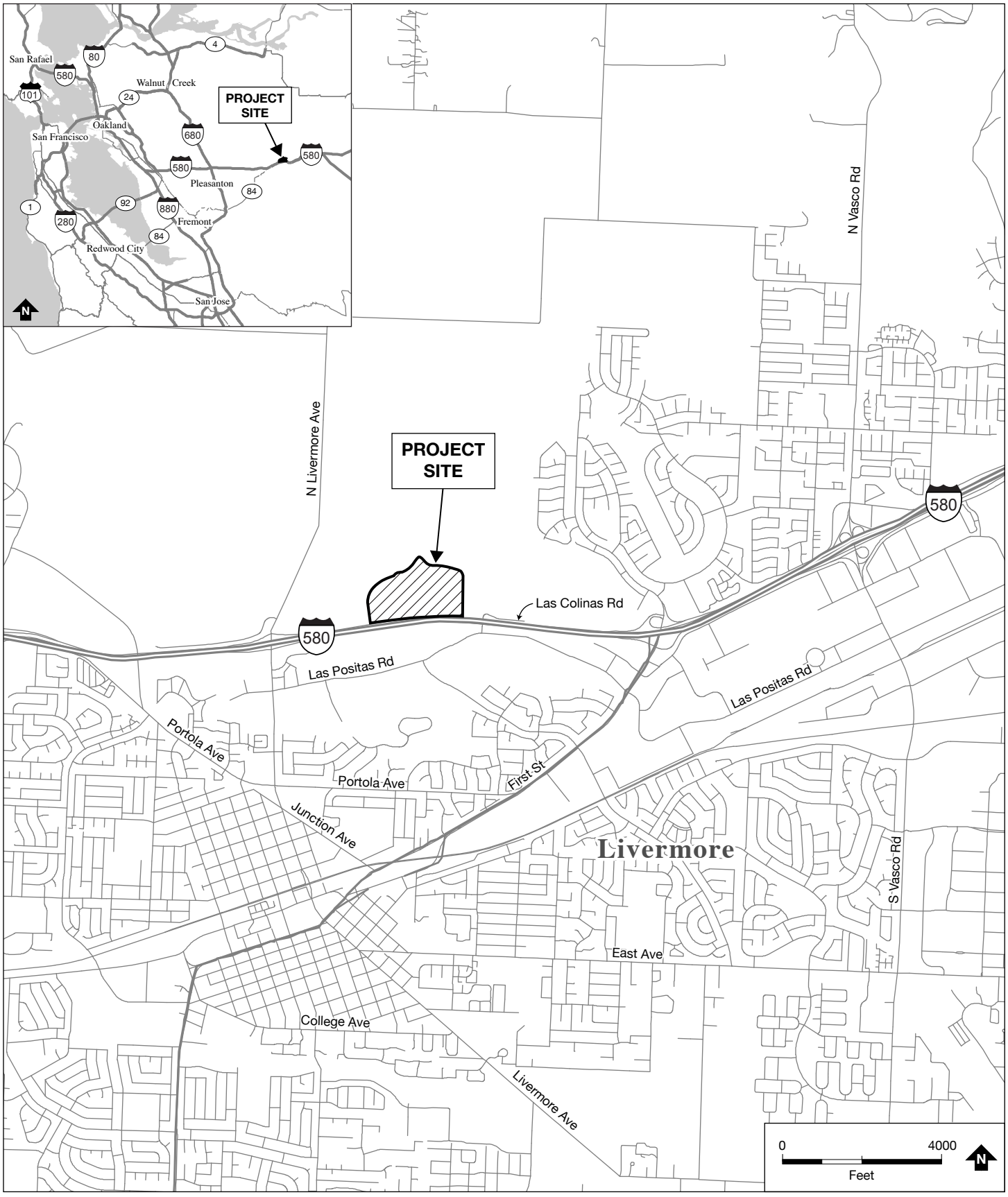
The Project would be developed at 3656 Las Colinas Road, Livermore, CA in unincorporated Alameda County. Development of the Project would occur on approximately 47 acres in the southern portion of the ±104-acre parcel (Assessor's Parcel Number 099-0015-016-03) just north of the City of Livermore between the North Livermore Avenue and North First Street exits. (See **Figure ES-1**). Project development would occur in two phases.

ES.2 PROJECT OBJECTIVES

Pursuant to State CEQA *Guidelines* 15124(b), the Project Description includes this statement of the project objectives. The objectives are intended to demonstrate the purpose of the Project. The primary objectives of the Project include the following:

- Develop the Project site with a cemetery that would be considered a low-intensity traffic use consistent Alameda County Measure D.

- Provide a cemetery that is conveniently located for present and future Tri-Valley residents.



Source: RCH Group 2021

Figure ES-1
Regional Location

RCH GROUP
planning & environmental consulting

- Provide a Funeral Home building with full-service amenities and staff that support the cemetery mission, including an appropriate and peaceful space for religious ceremony and practices intended to accommodate a wide variety of religious and cultural standards or practices for Tri-Valley residents.

- A portion of the cemetery would be used to provide a cemetery area that would be exclusively for the Jewish Community. The Jewish community is an estimated 40,000 members in Alameda County, with approximately 10,000 members in the Tri-Valley area. This cemetery would provide services for Judaism's three major groups (Orthodox, Conservative and Reform) and accommodate religious restrictions unique to each of the major groups.

ES.3 PROJECT FACILITIES AND OPERATIONS

ES.3.1 PROJECT OVERVIEW AND PHASING

The Project would include a funeral home with crematorium, interment (burial lots), an entry plaza, internal roadways, parking, landscaping, new wetlands, lakes, and other associated infrastructure and improvements (See **Figure ES-2**). The Project would provide cemetery and mortuary products and services to a wide range of multi-cultural members of the Tri-Valley. These include online memorial service broadcasts, intimate areas for private discussions amongst family members, selection of music, private salons, a children's playroom, ADA accessibility, a chapel for religious services, professional services of director and staff, caskets, vaults and urns, remembrance products, digital photographs and slideshows, deceased body transportation and storage, obituary services, cremation services, public viewings, private family visitations, catering, graveside services, markers and memorials, and various other services that would be provided to all clients.

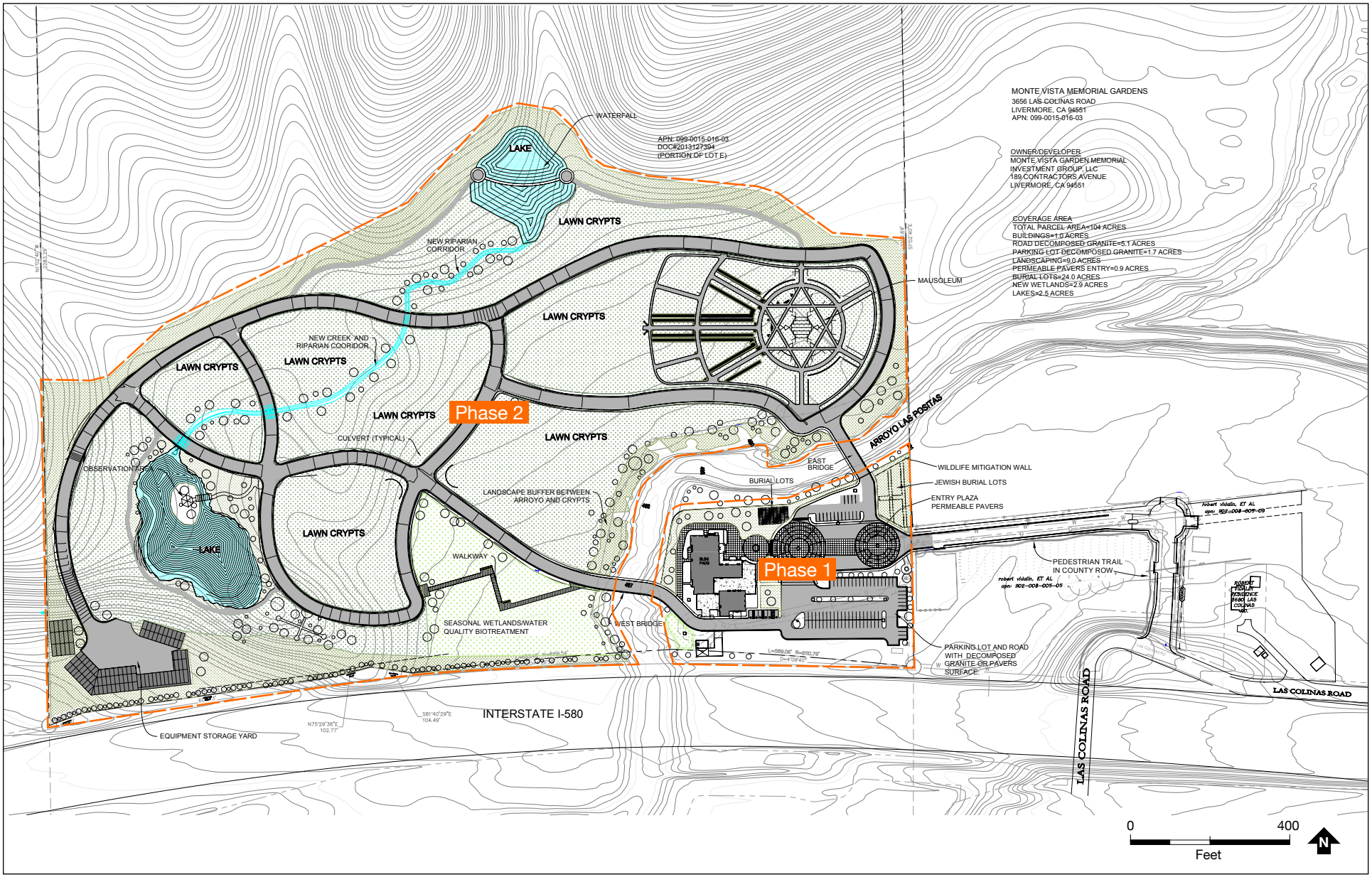
As discussed in more detail below, the Project would be constructed in two phases (See **Figure ES-2**). Phase I includes all development east of Arroyo Las Positas, and Phase II includes development west of Arroyo Las Positas. Once approved, the Phase I buildout of the Project would occur over approximately 5 years. Phase II buildout would occur over approximately 100 years.

Phase I Development

Phase I development would be on the 6.8 acres of the Project site east of Arroyo Las Positas. Development on Phase I would include construction and operation of the funeral home and entry plaza, the single-story "Pavilion" building, the access road, the parking lot, two interment areas (burial lots), and landscaping.

Phase II Development

Phase II development would be on the 40.3 acres of the Project site west of Arroyo Las Positas. Development during Phase II would include construction and operation of the remaining interment areas (burial lots) and roads, new wetland features, lakes, and landscaping. Phase II would be developed in subphases based on future demand and other development and regulatory factors. Permitting would begin for Phase II following approval of the CUP from Alameda County.



Source: ENGEO 2020; Hogan Land Services 2021

Figure ES-2
Site Plan

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ES.3.2 SITE ACCESS AND PARKING

Currently an unimproved County Road provides access to the Project site. The Project applicant is open to improving the current County road to serve as the access to the Project site. Improvements to the access road (i.e., curbs, gutters, and lighting) could affect some areas of the adjacent wetlands. The loss of any wetlands would require mitigation.

The parking at the Project site would consist of 91 total parking spaces (6 handicap ADA spaces, 30 EV charging stalls and 55 standards parking spaces).

ES.3.3 FUNERAL HOME AND PAVILION BUILDINGS

As described above, the Funeral Home and Pavilion Buildings would occur during implementation of Phase I. The two-story Funeral Home building (Building A) would house the morgue, crematorium, sales offices, staff offices, chapel, garage, a receiving area, preparation room, family preparation room, reception area, guest lounge, and associated storage and sanitary facilities. The exterior of the building would be 'Tuscan' in design, with courtyards and gardens. The building would include a chapel accommodating approximately 120-140 guests. A viewing room also is planned for those individuals who request witnessed cremation.

The single-story Pavilion building (Building B) would have table seating for approximately 120-130 guests, kitchens, and associated storage and sanitary facilities.

The Funeral Home building would have the capacity for two cremation retorts, an embalming room and refrigeration unit capable of holding 100 bodies. In addition to the main body preparation room, there would be a separate family preparation room, for those cultures that must ritualistically cleanse and dress the body.

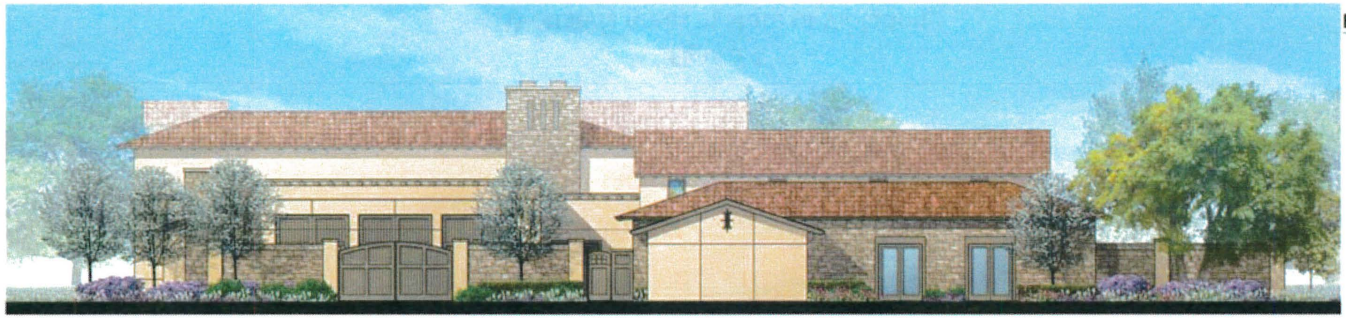
The Funeral Home building would have adequate office space for funeral directors, cemetery managers, administration, and sales. It would house the limousines and hearses and would include storage space for inventory.

Funeral Home operations would use approximately 300 gallons per day of potable water from a municipal supply. An on-site septic system would dispose of blackwater. Stormwater runoff from impervious areas such as rooftops and surrounding parking areas would be treated in a bioretention area near the Arroyo prior to discharge, in conformance with local standards.

Conceptual building elevations of the Funeral Home building are shown in **Figures ES-3 and ES-4**.

ES.3.4 CEMETERY GROUNDS

As shown in **Figure ES-2**, most of the cemetery grounds would be in Phase II. The approximately 47-acre cemetery grounds, of which approximately 24 acres would consist of various memorial monuments and burial gardens, would be on the western side of Arroyo Las Positas. All utilities would be installed underground.



Exterior Materials

Roof:	High Barrel Concrete Tile by Eagle Roofing Santa Barbara & Santa Cruz (50/50 Blend)
Fascia:	Copper Gutter o/ 6x8 Rafter Tails
Barge:	6x8 Rake Board
Walls:	Smooth Trowel Finish Stucco Mineret Bluffstone Veneer by Eldorado Stone
Windows:	Insulated Metal Frame w/ Dual Pane Glass
Doors:	Insulated Metal Frame w/ Dual Pane Glass Insulated Metal
Garage Door:	Insulated Metal Roll-up
Accents:	Stone Wall Cap & Frieze Block Metal Expansion Joints W/ 1" Reveal @ Stucco Copper Leaders & Downspouts Fabricated Metal Trellis & Arbors Stucco Finished Pilaster @ Garden Walls Composite Timber & Wood Gates

South Elevation

East Elevation

0 40

Feet

Source: Edward C. Novak, Architect 2018

Figure ES-3

South and East Conceptual Elevations

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Exterior Materials

Roof:	High Barrel Concrete Tile by Eagle Roofing
	Santa Barbara & Santa Cruz (50/50 Blend)
Fascia:	Copper Gutter o/ 6x8 Rafter Tails
Barge:	6x8 Rake Board
Walls:	Smooth Trowel Finish Stucco
	Mineret Bluffstone Veneer by Eldorado Stone
Windows:	Insulated Metal Frame w/ Dual Pane Glass
Doors:	Insulated Metal Frame w/ Dual Pane Glass
	Insulated Metal
Garage Door:	Insulated Metal Roll-up
Accents:	Stone Wall Cap & Frieze Block
	Metal Expansion Joints W/ 1" Reveal @ Stucco
	Copper Leaders & Downspouts
	Fabricated Metal Trellis & Arbors
	Stucco Finished Pilaster @ Garden Walls
	Composite Timber & Wood Gates

North Elevation

West Elevation

0 40

Feet

Source: Edward C. Novak, Architect 2018

Figure ES-4

North and West Conceptual Elevations

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The main cemetery with lakes, a flowing waterway, and monuments to the west of Arroyo Las Positas, would be accessed from the Funeral Home via two 24-foot-wide clear-span bridges designed for both pedestrian and vehicle use. These bridges would provide freeboard of at least one foot above the 500-year flood plain.

Phase II includes two proposed "lakes" or ponds connected by a perennial linear waterway (i.e., creek) that would be the primary landscape feature of the cemetery (**Figure ES-2**). A proposed wetland feature is also planned on the south side of the cemetery grounds near the southern property boundary on the north side of Interstate 580. The burial area itself would have an extensive sub-drainage system draining to the lower lake feature to maximize onsite water re-use.

The two lakes would be connected by a man-made perennial creek that would drain from the upper lake to the lower lake. The water would be re-circulated back to the upper lake via by a water pump. During summer months, an onsite groundwater well would supplement water in the upper lake's pool, and during winter months the lakes would capture precipitation as surface water runoff from the remainder of the Project site west of the creek.

In addition to the proposed man-made lakes, the Project proposes to install a 2.6-acre seasonal wetland area west of Arroyo Las Positas, along the southern boundary of the central portion of the site. Water in this wetland area would come from direct precipitation. The wetland would be designed to only receive supplemental surface runoff in the event of very large storm events, along with discharge from the lower lake during storm events. The water would be detained in this wetlands area and then discharged at 10-year and 100-year predevelopment flows via a stabilized outfall structure into Arroyo Las Positas.

ES.4 EMPLOYMENT AND HOURS OF OPERATION

MVMG would create temporary construction jobs and would also create permanent professional positions. The Project is expected to create more than 10 permanent professional positions to maintain Project operations.

MVMG would initially be open Monday-Friday from 9:00 a.m. to 4:00 p.m. and once fully operational MVMG would be open 7 days a week. MVMG cemetery burials and funeral services would occur Monday-Friday. Weekend burials and funerals would be available upon request with applicable weekend/holiday fees. The Magen David Memorial Gardens Cemetery (Jewish section of the cemetery) would be open Sunday-Friday from 9:00 a.m. to 4:00 p.m.

ES.5 PROJECT IMPACTS AND MITIGATION MEASURES

The potentially significant adverse effects of the Project are described in Chapters 3 and 4. Mitigation measures have been identified that would reduce all the specific Project significant impacts to a level of insignificance.

Table ES-1, at the end of this chapter, presents a summary of potential environmental impacts, their level of significance before mitigation, mitigation measures, and the level of significance after mitigation.

ES.6 ALTERNATIVES TO THE PROJECT

CEQA requires an EIR to describe and evaluate the comparative merits of a range of reasonable alternatives to the project, or to the location of the project, that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the project's significant effects (CEQA Guidelines Section 15126.6). Chapter 5 (Alternatives to the Project) of this EIR provides an analysis of the impacts anticipated from three alternatives to the Project. The Project alternatives considered in this EIR include (1) No Project Alternative; (2) Reduced Project Footprint Alternative; and (3) Access Road Coordination Alternative. The following provides a summary of each alternative and the EIR conclusions pertaining to it.

ES.6.1 NO PROJECT ALTERNATIVE

If the Project is not approved, the Project site would remain undeveloped and would likely continue to support grazing. Tri-Valley residents would have to utilize existing cemeteries in the region or seek cemetery services outside of the region. Furthermore, Tri-Valley residents would not be provided with a cemetery and Funeral Home building with full-service amenities intended to accommodate a wide variety of religious and cultural standards, including a portion of the cemetery dedicated for Judaism's three major groups. Therefore, the No Project Alternative would not meet the Project objectives.

ES.6.2 REDUCED PROJECT FOOTPRINT ALTERNATIVE

The Reduced Project Footprint Alternative would limit the Project site to 20 acres, which is consistent with the North Livermore Urban Growth Boundary Initiative. Under the Reduced Project Footprint Alternative, Phase I would be developed identical to the Project (funeral home and entry plaza, the single-story pavilion building, the access road, the parking lot, two interment areas (burial lots), and landscaping. However, to achieve the 20-acre Project site, Phase II would only develop approximately 13.2 acres west of Arroyo Las Positas for interment areas, roads, new wetlands, and landscaping. It is assumed that the lakes would not be developed under the Reduced Project Footprint Alternative and landscaping areas would be reduced to include as much interment area as possible to support the Project objectives.

The Reduced Project Footprint Alternative would meet or partially meet each of the Project objectives, however it would require a significant reduction in interment areas, which could limit services for future Tri-Valley residents. Furthermore, the Reduced Project Footprint Alternative could potentially reduce the portion of the cemetery used to provide a cemetery exclusively for Judaism's three major groups.

ES.6.3 ACCESS ROAD COORDINATION ALTERNATIVE

As indicated in the Notice of Preparation an alternative focusing on the access issues, coupled with resolution of the Abatement Order forms the basis of one of the EIR alternatives. This alternative addresses access road issues, provides an update on the status of the Abatement Order resolution, and advances the planning of a connection to a proposed offsite trail in the City of Livermore. This Access Road Coordination Alternative would provide a connection that allows

for better pedestrian access for the Project to South of Interstate-580 and would connect to a planned trail to the north of the Project. As such, it can be considered an entrance road coordination alternative to the Project, affecting primarily the design, construction, and operation of the access road to the Project site.

The Access Road Coordination Alternative would be consistent with Objective 1 and would not be applicable to the other Project Objectives.

The Access Road Coordination Alternative has no impacts that would be greater than the Project. The Access Road Coordination Alternative would result in less impacts to Land Use and Planning.

ES.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The EIR must assess the identified alternatives and determine which among the alternatives is the environmentally superior alternative. One of the alternatives to be assessed is the "No Project" alternative. If the No Project alternative is identified as the environmentally superior alternative, then another of the remaining alternatives must also be identified as the environmentally superior alternative.

Chapter 5 includes a comparison of each of the three alternatives to the proposed Project with regard to impacts for each of the resource areas in the EIR (see **Table 5-1**). Chapter 5 also assesses the ability of each of the three alternatives to meet the four Project objectives (see **Table 5-2**).

Since Reduced Project Footprint Alternative substantially meets Project Objectives 1 and 3 and partially meets Objectives 2 and 4, while reducing impacts to all resource areas except for public services and utilities, and transportation, and having no impacts greater than the Project, the Reduced Project Footprint Alternative is the environmentally superior alternative. However, the proposed Project meets all the objectives and could serve Tri-Valley residents farther into the future and a larger portion of the cemetery that would be used exclusively for the Jewish Community, compared to the Reduced Project Footprint Alternative.

ES.8 EIR PROCESS AND SCOPE

Based on a preliminary review of potential Project impacts, the County determined that an EIR would be the appropriate level of environmental review for the Project. In June 2020, the County prepared and circulated a Notice of Preparation (NOP) for this EIR (**Appendix A**), in accordance with CEQA Guidelines §15082, to seek comments from affected agencies and the public regarding the scope of the EIR. To avoid a public gathering during the COVID-19 crisis, the County held a virtual scoping meeting via Zoom Webinar on July 20, 2020. Several comment letters were received during the 30-day NOP scoping period from interested governmental agencies and a neighbor that owns a parcel that abuts the Project site (See **Appendix B**).

The County will circulate this Draft EIR for review by public agencies and interested persons and organizations for a 45-day public review period starting on January 13 and ending on February 28, in accordance with CEQA Guidelines §15105. Oral and written comments will be accepted at a

public meeting on the Draft EIR prior to the close of the review period. Details for written comments and public meetings are included in the Notice of Availability at the front of this Draft EIR and will also be posted on the County's website at:

www.acgov.org/cda/planning/landuseprojects/currentprojects.htm

Written comments should be emailed to albert.lopez@acgov.org or submitted to:

Albert Lopez, Planning Director
ATTN: Monte Vista Memorial Gardens Project EIR
Alameda County Community Development Agency
224 W. Winton Avenue, Room 111
Hayward, CA 94544

At the close of the public review period, the County will evaluate the comments received on the environmental issues and prepare written responses, as required by CEQA Guidelines §15088. The comments and responses will be included in the Final EIR as a separate chapter, along with any revised EIR text necessitated by the response to comments.

ES.9 AREAS OF CONTROVERSY

In June 2020, the County prepared and circulated a Notice of Preparation (NOP) for this EIR (**Appendix A**), in accordance with CEQA Guidelines §15082, to seek comments from affected agencies and the public regarding the scope of the EIR. Several comment letters were received during the 30-day NOP scoping period from interested governmental agencies and a neighbor that owns a parcel that abuts the Project site (See **Appendix B**).

Currently an unimproved County Road provides access to the Project site. This County-owned property lies between two private properties in County jurisdiction that are subject to an active Clean-Up and Abatement Order No. R2-2017-1021 issued by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). A representative of the Project applicant has been named in said Order as a "discharger" due to unauthorized fill placed into jurisdictional waters on these sites (wetlands). Resolution of the Order would be required by the County prior to their project approval and issuance of any grading, building, or other construction-related permits. Participants subject to the Abatement Order submitted a plan to the SFBRWQCB on August 2, 2021, to address the issues in the Abatement Order. The plan would not affect the location of the access road. See Chapter 2, Project Description, for more information and figures related to the access road and the location of wetlands that are the subject of the Clean-Up and Abatement Order.

Prior to the preparation of this EIR, the City of Livermore provided comments on the MVMG Project and associated improvements for Las Colinas Road in November 2019 (City of Livermore, 2019a). The City strongly recommended that the Project applicant demonstrate consistency with the City of Livermore General Plan (and Scenic Corridor Policy within) and the North Livermore Urban Growth Boundary Initiative. The City of Livermore also requested the Project applicant to confirm that the MVMG Project was consistent with provisions in the North Livermore Urban Growth Boundary Initiative related project size, development envelope, maximum floor area, areas of special environmental concern (wildlife habitat and slopes), Scenic Corridor Policy, and the

Catholic High School Land Use Entitlements (discussed below). Related to CEQA, the City of Livermore also requested the opportunity to review Environmental Review Documents for the Project and noted that they reserve the right to comment on several CEQA resource topics (i.e., aesthetics, air quality, biological resources, etc.), all of which are analyzed in this EIR.

In 2005, the City of Livermore approved a Mitigated Negative Declaration for a Catholic High School with a capacity of 1,600 students in an undeveloped area north of the Monte Vista MVMG Project site (City of Livermore, 2005). Primary access was proposed from Las Colinas Road via an extension into the school property from the Las Colinas overpass. Access for emergency vehicles only is proposed from Redwood Road. Otherwise, Redwood Road would be closed to traffic. Thus, the Catholic High School Project would not connect Las Colinas Road with Redwood Road and Springtown Boulevard, like the future 2-lane collector street identified in the City of Livermore General Plan Circulation Element. Mitigation for the Catholic High School Project includes the full cost of the extension of Las Colinas Road into the Catholic High School and construction of necessary traffic signals at the Las Colinas Road and Las Positas Road intersection. The Development Agreement for the Catholic High School Project was approved in 2005. No construction has started or is planned at the High School, but the City of Livermore recently extended the Development Agreement to December 14, 2025.

As mentioned in above, the City of Livermore has a future 2-lane collector street identified in its General Plan Circulation Map that connects Las Colinas Road with Redwood Road and Springtown Boulevard. That road would be about one-half mile from the Las Colinas Road and would cross Arroyo Las Positas and other sensitive habitats. The road, if built, would not follow the current County Road that connects Las Colinas to the Project site. Chapter 5 (Alternatives) considered but eliminated from further consideration a Project Alternative "Project with Future Road to Redwood Road and Springtown Boulevard". Building the roadway with the Project was rejected from further analysis because the roadway is not needed for the proposed Project. Furthermore, the roadway connecting to Redwood Road would likely have substantial biological and hydrologic impacts, since it would cross through Arroyo Las Positas and other sensitive habitats. It would be unnecessary to build the future road before it is needed to connect with Redwood Road and Springtown Boulevard, or before the Catholic High School Project comes to fruition.

ES.10 REFERENCES

Alameda County. 2020. *Notice of Preparation Environmental Impact Report (EIR) & Notice of Public Scoping Meeting*. June 29, 2020.

City of Livermore. 2005. Initial Study/Mitigated Negative Declaration, Conditional Use Permit CUP 05-007 and Development Agreement 05-004 Catholic High School. November 2005.

City of Livermore. 2019a. RE: Monte Vista Memorial Gardens Cemetery. November 13, 2019.

City of Livermore. 2019b. *Lassen Road Residential Development Project Initial Study/Mitigated Negative Declaration*. September 9, 2019.

TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.1 AESTHETICS/VISUAL			
Impact 3.1.1: The Project would not affect any scenic vista.	None required.	LS	LS
Impact 3.1.2: The Project would alter the existing visual character of the Project site and its surroundings.	None required.	LS	LS
3.2 AIR QUALITY			
Impact 3.2.1: The Project could conflict with the BAAQMD's 2017 Clean Air Plan.	None required.	LS	LS
Impact 3.2.2: Project construction activities could result in a cumulatively considerable net increase of emissions of criteria air pollutants and precursors.	**Mitigation Measure 3.2.2:** The Applicant shall require the following BAAQMD recommended basic construction mitigation measures during Project construction: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	S	LSM
Impact 3.2.3: Project operational activities could result in a cumulatively considerable net increase of emissions of criteria air pollutants and precursors.	None required.	LS	LS
Impact 3.2.4: Project operational activities could expose sensitive receptors to substantial concentrations of TACs.	None required.	LS	LS
Impact 3.2.5: Project operations could generate odors that could adversely affect a substantial number of people.	None required.	LS	LS

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES			
Impact 3.3.1: The Project could impact animal species identified as a candidate, sensitive, or special status, either directly or through habitat modification.	**Mitigation Measure 3.3.1a: Pre-Construction Surveys** The Project applicant/construction contractor shall retain a qualified biologist to confirm presence or absence of species of special concern within two weeks of planned construction. **Mitigation Measure 3.3.1b: Construction Employee Environmental Awareness Training** The Project applicant/construction contractor shall retain a qualified biologist to conduct environmental awareness training for construction crews before project implementation. The awareness training shall be provided to all construction personnel and shall brief personnel on the need to avoid effects on sensitive biological resources (i.e., special status animal and plant species, wetlands and other waters, and active bird nests). The education program shall include a brief review of the special-status species with the potential to occur in the Project area (including their life history, habitat requirements, and photographs of the species). The training shall identify the portions of the Project area in which the species may occur, as well as their legal status and protection. The program also shall cover the relevant permit conditions and mitigation measures that must be followed by all construction personnel to reduce or avoid effects on these resources during project implementation through completion. The training shall emphasize the role that the construction crew plays in identifying and reporting any special-status species observations to the on-site biologist. Training shall identify the steps to be taken if a special-status species is found within the construction area (i.e., notifying the crew foreman, who would call the designated biologist). An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions shall be provided to each crew member. The crew foreman shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs shall be conducted for appropriate new personnel as they are brought on the job. **Mitigation Measure 3.3.1c: San Joaquin Kit Fox** An intensive survey for active San Joaquin kit fox dens will be conducted by a qualified biologist within and surrounding the proposed construction area no less than 14 days and no more than 30 days prior to construction. The USFWS and the CDFW would be immediately contacted if this/these survey(s) determine that the San Joaquin kit fox does occupy construction areas or within the vicinity (200 feet) of ground disturbing activities, either by direct observation or identification of active den site(s). In addition, all ground disturbing work within 200 feet of any active den(s) shall be postponed until the USFWS and/or CDFW provide guidance regarding how to proceed.	S	LSM

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES (cont.)			
Impact 3.3.1 (cont.)	**Mitigation Measure 3.3.1d: San Joaquin Coachwhip and other Special-Status Reptiles and Amphibians** The MVMG Project area will be intensively surveyed for evidence of these reptile species within 30 days prior to construction. As appropriate, based on survey results, temporary fencing designed to prevent the entry of San Joaquin coachwhip shall be installed around the perimeter of all areas proposed for construction. The exclusion fencing shall be installed so that its bottom is buried into the ground 12" and 24" is exposed above ground. Following installation of this temporary fencing, a qualified biologist shall conduct a pre-ground disturbing activities survey to locate any San Joaquin coachwhip within the enclosed area. Any special-status reptiles or amphibians encountered within the fenced area would be captured and trans-located by the qualified biologist to similar suitable habitat on the Project site, in areas not adversely affected by Project activities. **Mitigation Measure 3.3.1e: Vernal Pool fairy shrimp and longhorn fairy shrimp** Prior to construction, U.S. Fish & Wildlife Service protocol-level (dry- and wet-season) vernal pool crustacean surveys shall be conducted by a qualified biologist to definitively determine presence or absence of these listed large branchiopods on-site. If no listed large branchiopods are found on-site, and this conclusion is confirmed by the USFWS, no further mitigation would be required. If, however, listed large branchiopods are found, assumed to be present (without surveys), or determined by the USFWS to be on-site, the Project applicant shall mitigate the loss of potential habitat in coordination with the USFWS as part of a Clean Water Act, Section 404 permitting process to provide for preservation of off-site lands that provide habitat for listed large branchiopods according to USFWS required mitigation ratio requirements. **Mitigation Measure 3.3.1f: California Red-Legged Frog** A qualified biologist shall conduct California red-legged frog protocol surveys to determine presence/absence of the species if concluded necessary by the USFWS, in accordance with the USFWS guidance (*USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog*), which requires up to eight surveys within potential habitat – six surveys within the breeding season (October 1 – June 30) and two surveys during the non-breeding season (July 1 – September 30). A qualified biologist shall conduct presence/absence surveys prior to ground-disturbing activities during the species' active season (October 1 – June 30). The Project shall immediately notify the USFWS, CDFW and Alameda County if any individuals or their signs are observed during these surveys. If found on-site, impacts to this species would be minimized and mitigated by erecting temporary exclusion fencing – with the bottom edge buried into the ground around all proposed work area. A qualified biologist (approved by the USFWS and California Department of Fish and Game [CDFG]) shall then relocate California red-legged frogs from within work areas to approved relocation areas.		

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES (cont.)			
Impact 3.3.1 (cont.)	**Mitigation Measure 3.3.1g: California Tiger Salamander** A qualified biologist shall conduct presence/absence surveys prior to ground-disturbing activities and during construction during the species' active/breeding season – starting October 15 or when rain occurs. The Project would immediately notify the USFWS, CDFW and Alameda County if any individuals or their sign are observed during these surveys. If surveys conducted determined the species to be present, mitigation shall be implemented to meet State and Federal resource agency requirements. This mitigation could be achieved through the purchase of credits at a USFWS-approved mitigation bank, or through the placement of a conservation easement over occupied California tiger salamander habitat. The Natural Resources Conservation District, through the Alameda County Conservation Partnership, provides opportunities for in-lieu fee payments to fund restoration/preservation of California tiger salamander habitat in Alameda County. **Mitigation Measure 3.3.1h: Swainson's hawk** A preconstruction nesting bird survey shall be conducted on-site within 15 days prior to construction if construction associated with the Project would commence between March 1st and September 1st ("the nesting season"). The survey shall include all on-site trees and trees with ¼ mile of the Project site. If disturbance associated with the Project would occur outside of the nesting season, no surveys shall be required. If Swainson's hawk are identified as nesting on or near the Project site, a non-disturbance buffer of 250-feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with painted orange lath or via the installation of orange construction fencing. Disturbance within the buffer shall be postponed until a qualified ornithologist has determined that the young have attained sufficient flight skills to leave the area or that the nesting cycle has otherwise completed. **Mitigation Measure 3.3.1i: Special-Status Bird Species** A qualified biologist would conduct nesting bird surveys within 30 days of initiation of ground disturbing activities within suitable habitat (and within the appropriate nesting season) throughout the Project site to avoid impacts to nesting birds associated with construction. If an active nest is located, all clearing and construction within a buffer as designated appropriate by a biological monitor, shall be postponed until the nest is vacated and juveniles have fledged, and there is no evidence of a second attempt at nesting, as determined by a qualified biologist. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel should be instructed on the sensitivity of the area. Additional surveys would then be conducted if ground-disturbing activities are delayed due to active bird nesting, until the qualified biologist determines that the young associated with an active nest have fledged.		

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES (cont.)			
Impact 3.3.1 (cont.)	**Mitigation Measure 3.3.1j: Burrowing Owl** There are numerous mammal burrows that can act as habitat for this species within the Study Area. A pre-construction burrowing owl survey is recommended within 14-days prior to any site disturbance to ensure no subsequent occupation of, or adverse impacts to potential habitat on the parcel. Therefore, prior to issuance of grading permits, it is recommended that: A preconstruction survey by a qualified biologist is conducted. If possible, a winter survey should be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are preferable. The survey techniques shall be consistent with the CDFW Staff Report survey protocol and include a 260-foot-wide (buffer) zone surrounding the Study Area. Repeat surveys shall also be conducted not more than 30 days prior to initial ground disturbance to inspect for re-occupation and the need for additional protection measures. If no burrowing owls are detected during preconstruction surveys, then no further mitigation is required. If active burrowing owl burrows are identified, Project activities shall not disturb the burrow during the nesting season (February 1–August 31) or until a qualified biologist has determined that the young have fledged, or the burrow has been abandoned. A no disturbance buffer zone of 160-feet is required to be established around each burrow with an active nest until the young have fledged the burrow as determined by a qualified biologist. If destruction of the occupied burrow is unavoidable during the non-breeding season, September 1 – January 31, passive relocation of the burrowing owls shall be conducted. Passive relocation involves installing a one-way door at the burrow entrance, encouraging owls to move from the occupied burrow. No permit is required to conduct passive relocation; however, this process shall be conducted by a qualified biologist and in accordance with CDFW guidelines. In addition, to offset the loss of foraging and burrow habitat on the Project site, a minimum of 6.5 acres of foraging habitat (calculated on a 300-ft foraging radius around the burrow) per pair or unpaired resident bird, shall be acquired and permanently protected at a location acceptable to the CDFW. **Mitigation Measure 3.3.1k: Western Spadefoot Toad** A qualified biologist shall survey areas of suitable habitat for western spadefoot toad on the Project site, including ruts or small pools within on-site grassland, as well seasonal depressions. The survey shall be conducted during the active season of western spadefoot toad (which corresponds with the rainy season). The survey results shall be submitted to the CDFW and Alameda County prior to construction.		

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES (cont.)			
Impact 3.3.1 (cont.)	If surveys result in the observation of western spadefoot toad within Project impact areas in on-site grassland, observed individuals and/or eggs shall be removed from Project impact areas (with the prior approval of the CDFG) and be relocated to pre-determined suitable habitat in an appropriate area that would not be impacted. **Mitigation Measure 3.3.1l: American Badger** A qualified biologist shall conduct preconstruction surveys within on-site suitable habitat for American badger burrows within grassland habitat prior to any ground disturbing activities, including grading, construction, or site preparation activities within 30 days of proposed Project activities. If badgers are observed within Project impact areas in or within 200 feet of on-site grassland, observed individuals shall be captured, removed from Project impact areas through humane exclusion from burrows (with the prior approval of the CDFW), and relocated to suitable habitat in an appropriate area that will not be impacted. This relocation area would preferably be on-site but may also include off-site lands approved CDFW and Alameda County that contains suitable grassland habitat. All ground-disturbing work within 200 feet of the active burrow(s) shall be temporarily postponed if the American badger is observed breeding and denning on-site until direction from CDFW provides guidance regarding how to proceed.		
Impact 3.3.2: The Project could impact plant species identified as a candidate, sensitive, or special status.	**Mitigation Measure 3.3.2:** During the appropriate blooming/flowering season prior to construction, a qualified botanist shall conduct special-status plant species presence/absence surveys within areas proposed for grading or modification, in accordance with *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (California Department of Fish and Game 2009) to determine which special-status plants with the potential to occur on-site are evident and identifiable on-site. Survey results shall be submitted to the CDFW and Alameda County. If any sensitive plant species are observed during the presence/absence surveys, and it is determined that such plants would be impacted by Project activities, MVMG, CDFW, and the USFWS (if the species is also on the federal list of sensitive species) would be consulted to determine appropriate measures to ensure the protection of the species and its habitat. Such mitigation should include avoidance or, if avoidance is not possible, relocation of affected plants to a mitigation site located in similar habitat within the Project site, in an area where no impacts are expected to occur. The relocation site should be in an area that is protected from impacts through human disturbance by fencing during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season.	S	LSM
Impact 3.3.3: The Project could impact wetlands and "other waters of the United States".	**Mitigation Measure 3.3.3a:** The Project shall avoid all impacts to the 2.1 acres of on-site wetlands. This would include establishing appropriate development setbacks from Project uses and Arroyo Las Positas and the uses that could affect the seasonal wetlands.	S	LSM

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.3 BIOLOGICAL RESOURCES (cont.)			
Impact 3.3.3 (cont.)	**Mitigation Measure 3.3.3b:** A Section 404 permit from the U.S. Army Corps of Engineers and a Section 401 water quality certification from the Regional Water Quality Control Board may be required if there are any activities affecting wetlands. The Project shall communicate with the San Francisco Bay Regional Water Quality Control Board (RWQCB) to determine whether CA Dredge & Fill Procedures (aka Waste Discharge Requirement; WDR) permitting would be required and with the California Department of Fish & Wildlife to inquire about a possible 1602 Lake & Streambed Alteration Agreement (LSAA). Any resource permitting with these agencies could also require mitigation of wetland habitat loss through purchase of equivalent wetland credits at an approved Mitigation Bank within the Project's service area.		
Impact 3.3.4: The Project could conflict with local policies or ordinances protecting biological resources.	None required for Phase I. Implement Mitigation Measures for Phase II recommended for Impact 3.3.1, Impact 3.3.2, and Impact 3.3.3.	S	LSM
3.4 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES			
Impact 3.4.1: The Project could either directly or indirectly result in impacts to cultural resources or Tribal Cultural Resources.	**Mitigation Measure 3.4.1a:** If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to *CEQA Guidelines* Section 15064.5. If any find is determined to be significant, representatives from the County and the archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the County shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, proposed Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the Project site outside the 50-foot area while mitigation for historical resources or unique archaeological resources is being carried out. **Mitigation Measure 3.4.1b:** In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area suspected to overlie adjacent remains until the Alameda County Coroner has determined that the remains are not subject to any provisions of law concerning	S	LSM

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.4 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES (cont.)			
Impact 3.4.1 (cont.)	investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The Coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the Alameda County Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC). After notification, the NAHC will follow the procedures outlines in Public Resources Code Section (PRC) 5097.98 that include notifications of the most likely descendants (MLDs), and recommendations for the treatment of the remains. The MLDs will have 48 hours after notification by the NAHC to make their recommendations (PRC Section 5097.98).		
3.5 GEOLOGY, SOILS AND SEISMICITY			
Impact 3.5.1: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	**Mitigation Measure 3.5.1a:** The Project Applicant shall implement all recommendations outlined in ENGEO's Geotechnical Exploration Report, including but not limited to construction monitoring recommendations, earthwork recommendations, and foundation recommendations. The Project Applicant shall also implement any recommendations provided by future Supplemental Geotechnical Exploration Report(s) during development of the Project. **Mitigation Measure 3.5.1b:** The proposed lakes shall be designed under static and seismic loading conditions to ensure that the likelihood of lake system failure during a major earthquake event is minimal. Lake designs shall be reviewed and approved by the County Public Works Department prior to construction.	S	LSM
Impact 3.5.2: The Project could create impacts to topsoil or soil erosion.	**Mitigation Measure 3.5.2:** The Project stormwater system design shall locate and protect all stormwater outfalls to ensure proper stability and erosion protection. This may include energy dissipators, armoring, bio-revetments/gabions, and other erosion and slope protection features. Outfalls to be protected include lake outlets, discharge points into the Arroyo, and discharges into other swales and channels on-site.	S	LSM
Impact 3.5.3: The Project could result in liquefaction, landslides, lateral spreading.	None required.	LS	LS

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.5 GEOLOGY, SOILS AND SEISMICITY (cont.)			
Impact 3.5.4: The Project is located on Expansive Soils.	**Mitigation Measure 3.5.4:** As described in ENGEO's Geotechnical Exploration Recommendations (2018), building damage due to volume changes associated with expansive soils shall be reduced by: (1) using a rigid mat foundation that is designed to resist the settlement and heave or expansive soil, (2) deepening the foundations to below the zone of moisture fluctuation and/or (3) using a layer of select fill below building locations. Successful performance of structures on expansive soils requires special attention during construction and it is imperative that exposed soils be kept moist prior to placement of concrete for foundation construction. Building-specific geotechnical reports shall include provisions to address expansive soils. These reports shall be reviewed and approved by the County prior to issuance of any building permits.	S	LSM
Impact 3.5.5: The Project could directly or indirectly destroy a unique paleontological resource.	**Mitigation Measure 3.5.5:** In the event a paleontological or other geologically sensitive resource (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist. The paleontologist shall notify the appropriate representative at the Counter of Alameda who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant, the County shall implement measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.	S	LSM
3.6 GREENHOUSE GAS EMISSIONS			
Impact 3.6.1: The Project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	None required.	LS	LS
Impact 3.6.2: The Project could conflict with the County's Climate Action Plan, BAAQMD's Clean Air Plan, or CARB's 2017 Scoping Plan.	None required.	LS	LS
3.7 HAZARDS, HAZARDOUS MATERIALS AND WILDFIRE			
Impact 3.7.1: Project construction activities would use construction materials and fuels considered hazardous, and regular landscape maintenance of the Project site would likely involve the use of hazardous chemicals. Spills or accidents involving hazardous chemicals could occur and result in potential health and environmental impacts.	None required.	LS	LS
Impact 3.7.2: The Project could result in an increased risk in wildfires.	None required.	LS	LS

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.8 HYDROLOGY AND WATER QUALITY			
Impact 3.8.1: The Project could degrade surface or groundwater quality.	**Mitigation Measure 3.8.1a:** The Project applicant shall file an NOI to comply with the Construction General Permit with the San Francisco Bay RWQCB prior to each phase of construction. Individual SWPPPs shall be prepared for each NOI and shall detail the treatment measures and BMPs to control pollutants that shall be implemented and complied with during the construction and post-construction phases of the project. The SWPPPs are subject to approval by the San Francisco Bay RWQCB, which makes the final determination on which BMPs are required for the Project. **Mitigation Measure 3.8.1b:** Prior to the issuance of grading permits for the Project, the Project applicant shall submit a Stormwater Control Plan to Alameda County for review and approval. The Stormwater Control Plan shall identify pollution prevention measures and practices to prevent polluted runoff from leaving the Project site. The plan shall be implemented to the satisfaction of Alameda County prior to building occupancy. **Mitigation Measure 3.8.1c:** Prior to the issuance of grading permits for the Project, the Project applicant shall submit a final drainage plan as prepared by a qualified civil engineer to Alameda County for review and approval. The approved plan shall be incorporated into the Project design and constructed to the satisfaction of Alameda County. **Mitigation Measure 3.8.1d:** The lakes shall be maintained on a regular basis by the Project Applicant (or successors-in-interest). Inspections of the lakes shall be conducted at least once a year between July 1st and September 1st. Accumulations of sediment and debris may occur in the lakes. Therefore, the lakes shall be inspected, and excess sediments and debris removed prior to the rainy season, and after heavy rain events. An annual inspection and maintenance report shall be prepared by the property owner and submitted to Alameda County by October 15 of each year, at the property owner's expense.	S	LSM
Impact 3.8.2: The Project could potentially decrease groundwater supplies.	None required.	LS	LS
Impact 3.8.3: The Project could increase risk of flood hazards or provide sources of polluted runoff.	None required.	LS	LS
3.9 LAND USE, PLANNING AND AGRICULTURE			
Impact 3.9.1: The Project would conform to the ECAP and Agricultural Zoning Land Use Designation Requirements.	None required.	LS	LS
Impact 3.9.2: The Project would result in a loss of Agricultural Land.	None required.	LS	LS

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.9 LAND USE, PLANNING AND AGRICULTURE (cont.)			
Impact 3.9.3: The Project would conflict with Alameda County General Plan and ECAP Policies.	None required.	LS	LS
3.10 NOISE			
Impact 3.10.1: Construction and operation of the Project could increase noise levels at sensitive off-site residential receptors.	None required.	LS	LS
3.11 TRANSPORTATION			
Impact 3.11.1: The Project would generate vehicle miles travelled (VMT) that could conflict or be inconsistent with State CEQA *Guidelines* §15064.3, subdivision (b).	None required.	LS	LS
Impact 3.11.2: The Project could conflict with the City of Livermore General Plan for a connector road to Redwood Road and Springtown Boulevard and the plans for a Private High School north of the Project Site.	None required.	LS	LS
Impact 3.11.3: The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	None required.	LS	LS
3.12 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS			
Impact 3.12.1: The Project could require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, which could cause significant environmental effects.	None required.	LS	LS
Impact 3.12.2: The Project could have water demands greater than water supplies.	None required.	LS	LS
Impact 3.12.3: The Project could have an impact on a wastewater treatment provider.	None required.	LS	LS
Impact 3.12.4: The Project could generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure and would comply with federal, state and local management statutes and regulations related to solid waste.	None required.	LS	LS

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TABLE ES-1. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES (Continued)

Impact	Mitigation Measure	Impact Significance	
		Before Mitigation	After Mitigation
3.13 ENERGY			
Impact 3.13.1: Project construction or operation could result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.	None required.	LS	LS
Impact 3.13.2: The Project could conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	None required.	LS	LS

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CHAPTER 1
INTRODUCTION

1.1 PROJECT OVERVIEW AND BACKGROUND

1.1.1 PROJECT OVERVIEW

The proposed Monte Vistas Memorial Gardens (MVMG) would provide memorial services for the Tri-Valley region where there are over 1,200 deaths per year with about 750 cremations and 300 burials done locally. The mission of the MVMG is to provide services for the final needs of the present and future Tri-Valley residents. MVMG would be the first cemetery developed in Alameda County in over 110 years and would accommodate the needs of several multi-cultural communities. The cemetery would include an area specifically designed for the Jewish community, with appropriate burial services, practices, and artwork for Jewish residents. The Environmental Impact Report (EIR) has been prepared for the County to evaluate the environmental effects of construction and operation of the MVMG (the "Project"). The Project requires a Conditional Use Permit (CUP) from Alameda County, among other approvals. County approval of the CUP is a discretionary approval triggering California Environmental Quality Act (CEQA) review. The Alameda County Planning Department has reviewed the proposed Project and determined that the Project may have significant adverse impacts on the physical environment, thus requiring an EIR to be prepared to meet CEQA requirements.

1.1.2 HISTORY AND BACKGROUND OF THE PROJECT

Monte Vista Memorial Investment Group, LLC (MVMIC) was founded in 2009 by local investors to develop a multi-cultural cemetery in Northern California's Tri Valley (San Ramon/Dublin/ Livermore) region. MVMG is a proposed memorial park project that would include a funeral home, interment areas and associated services, including a crematorium and mortuary.

1.2 EIR PREPARATION

This EIR has been prepared in conformance with CEQA (Public Resources Code sections 21000, et seq.), and the CEQA Guidelines for Implementing the California Environmental Quality Act (California Code of Regulations, Title 14 sections 15000 et seq.). As described in CEQA Guidelines section 15121(a), an EIR is a public information document that objectively assesses and discloses potential environmental effects of a proposed project, and identifies mitigation measures and alternatives to the project, which would reduce or avoid adverse environmental impacts. CEQA requires that lead, responsible, and trustee agencies consider the environmental consequences of projects over which they have discretionary authority.

Alameda County would be the Lead Agency for the preparation of the EIR and has discretionary approval of the Project. The intent of this EIR is to enable the County, responsible agencies, and other interested parties to understand the potential environmental effects of the Project, determine whether any feasible mitigation measures are necessary and available to reduce potentially significant environmental impacts, and to approve, modify, or deny approval of the Project. This EIR will need to be certified by the County as complete and adequate prior to other agency approvals.

As required under CEQA, the goals of this EIR are:

- To inform the public and governmental decision makers about the potential, significant environmental effects of the Project, and to solicit input on its potential environmental effects.
- To identify the ways that environmental damage can be avoided or significantly reduced.
- To prevent significant, avoidable damage to the environment by requiring changes in the Project using alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- To disclose to the public the reasons why a governmental agency approved the Project in the manner the agency chose, if significant environmental effects are involved.
- To provide the Alameda County Planning Commission and Alameda County Board of Supervisors with a technically and legally adequate environmental document to be used as one basis for the decision-making processes for the Project; and to provide responsible regulatory agencies with environmental information necessary for issuing permits for the Project.

1.3 SCOPE AND ORGANIZATION OF THE EIR

Based on a preliminary review of potential Project impacts, the County determined that an EIR would be the appropriate level of environmental review for the Project. In June 2020, the County prepared and circulated a Notice of Preparation (NOP) for this EIR (**Appendix A**), in accordance with CEQA Guidelines §15082, to seek comments from affected agencies and the public regarding the scope of the EIR. To avoid a public gathering during the COVID-19 crisis, the County held a virtual scoping meeting via Zoom Webinar on July 20, 2020. Several comment letters were received during the 30-day NOP scoping period from interested governmental agencies and a neighbor that owns a parcel that abuts the Project site (See **Appendix B**).

Based on the scoping process, key issues that will be evaluated in this EIR include:

- Aesthetics
- Air Quality/Greenhouse Gasses
- Biological Resources
- Geology and Soils
- Cultural Resources/Tribal Cultural Resources
- Hazards/Hazardous Materials/Wildfire
- Hydrology/Water Quality
- Land Use, Planning, and Agriculture
- Noise
- Transportation
- Public Services and Utilities
- Cumulative Impacts

This EIR is organized in the following manner:

Chapter 1 – Introduction: This chapter describes the project background, scope and organization of the EIR and details of the EIR review process.

Chapter 2 – Project Description: This chapter provides a description of the Project, site location, general existing conditions, project objectives, and the use of this document and future approvals required for the Project.

Chapter 3 – Environmental Setting, Impacts and Mitigation Measures: This chapter describes, for each environmental topic: existing conditions (settings); potential environmental impacts and their level of significance; and mitigation measures recommended to mitigate identified impacts.

Chapter 4 – Other CEQA Topics and Impact Overview: This chapter addresses CEQA mandated topics of growth-inducing impacts, cumulative impacts, unavoidable significant adverse impacts, significant irreversible environmental changes, and effects found not to be significant.

Chapter 5 – Alternatives: This chapter provides an evaluation Project Alternatives, including the CEQA-required No Project Alternative.

Chapter 6 – EIR Authors, Persons and Organizations Contacted: This chapter provides a list of persons who authored this document and supporting technical reports.

Chapter 7 – Acronyms: This chapter lists acronyms and abbreviations used in the EIR.

Appendices: Appendices include the NOP, NOP Comment Letters and Technical Appendices (information) for many of the resource areas analyzed in Chapter 3.

1.3.1 APPROACH TO ANALYSIS

CEQA Guidelines § 15125(a) addresses how a lead agency should establish the baseline conditions against which potential environmental impacts of a project are measured, as follows:

"(1) Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record.

(2) A lead agency may use projected future conditions (beyond the date of project operations) baseline as the sole baseline for analysis only if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision-makers and the public. Use of projected future conditions

as the only baseline must be supported by reliable projections based on substantial evidence in the record.

(3) An existing conditions baseline shall not include hypothetical conditions, such as those that might be allowed, but have never actually occurred, under existing permits or plans, as the baseline."

1.4 THE EIR PROCESS

The County will circulate this Draft EIR for review by public agencies and interested persons and organizations for a 45-day public review period, in accordance with CEQA Guidelines §15105. Written comments will be accepted at the Alameda County Community Development Agency until 4:30 p.m. on February 28, 2022, the closing day of the Draft EIR review period. Oral and written comments will be accepted at a Planning Commission hearing on the Draft EIR prior to the close of the review period. Details for written comments and the public hearing for comments on the Draft EIR are included in the Notice of Availability at the front of this Draft EIR. The Notice of Availability will also be posted on the County's website at:

www.acgov.org/cda/planning/landuseprojects/currentprojects.htm

Written comments should be emailed to albert.lopez@acgov.org or submitted by February 28, 2022 at 4:30 p.m. to:

Albert Lopez, Planning Director
ATTN: Monte Vista Memorial Gardens Project EIR
Alameda County Community Development Agency
224 W. Winton Avenue, Room 111
Hayward, CA 94544

At the close of the public review period, the County will evaluate the comments received on the environmental issues and prepare written responses, as required by CEQA Guidelines §15088. The comments and responses will be included in the Final EIR as a separate chapter, along with any revised EIR text necessitated by the response to comments.

1.5 REFERENCES

Alameda County. 2020. *Notice of Preparation Environmental Impact Report (EIR) & Notice of Public Scoping Meeting*. June 29, 2020.

CHAPTER 2
PROJECT DESCRIPTION

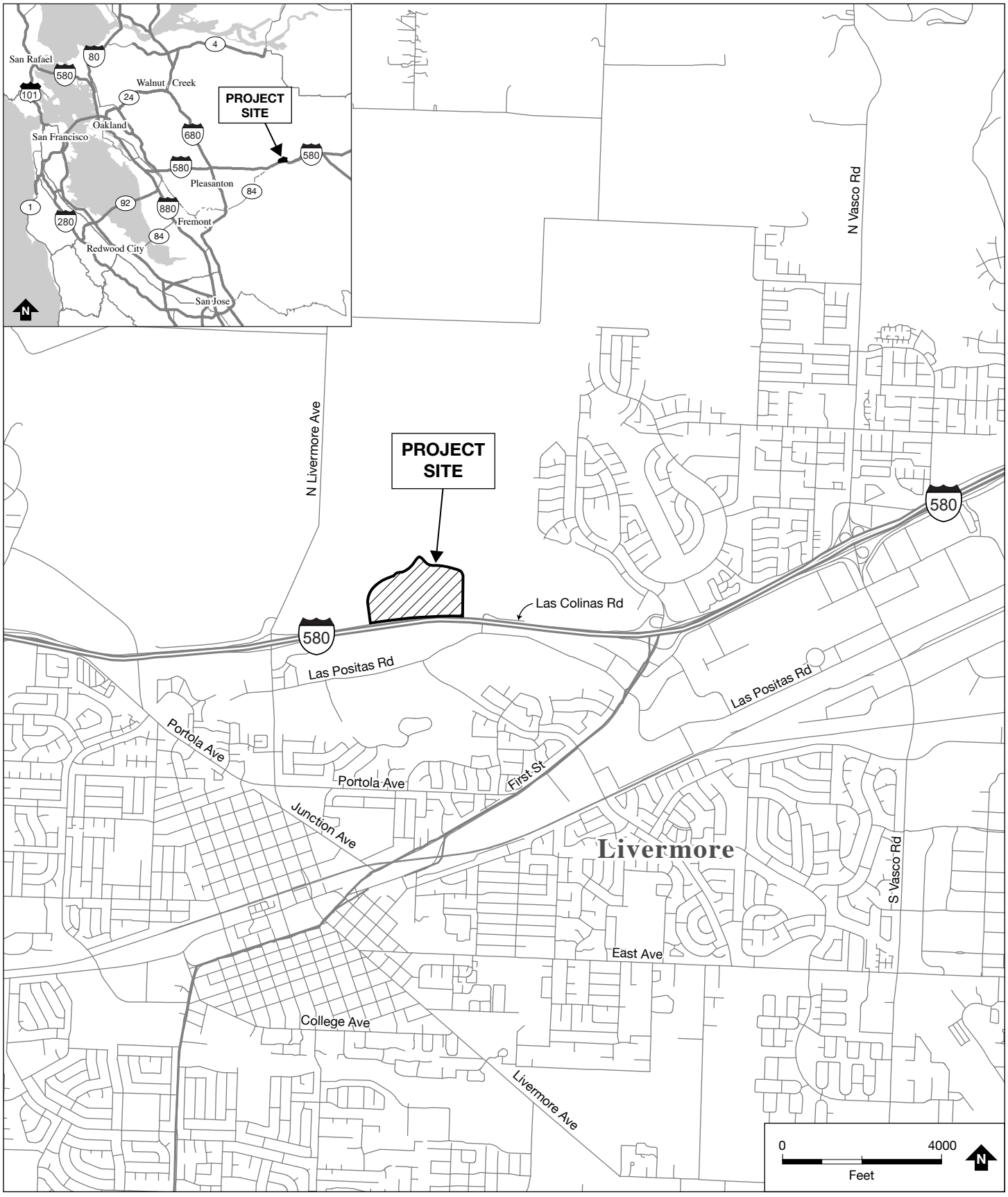
2.1 INTRODUCTION

Monte Vista Memorial Investment Group, LLC (MVMIC) was founded in 2009 by local investors to develop a multi-cultural cemetery in Northern California's Tri Valley (San Ramon/Dublin/Livermore) region. Monte Vista Memorial Gardens (MVMG) is a proposed memorial park project that would include a funeral home, interment areas and associated services, including a crematorium and mortuary.

The proposed MVMG would provide memorial services for the Tri-Valley region where there are over 1,200 deaths per year with about 750 cremations and 300 burials done locally. The mission of the MVMG is to provide services for the final needs of the present and future Tri-Valley residents. MVMG would be the first cemetery developed in Alameda County in over 110 years and would accommodate the needs of several multi-cultural communities. The cemetery would include an area specifically designed for the Jewish community, with appropriate burial services, practices, and artwork for Jewish residents. The EIR has been prepared for the County to evaluate the environmental effects of construction and operation of the MVMG (the "Project").

The Project site is in unincorporated Alameda County immediately north and adjacent to Interstate 580, between the North Livermore Avenue and the North First Street Exits (see **Figure 2-1**). Surrounding land uses include grazing land to the east, west and north. Interstate 580 is south of the Project site and land uses south of I-580 include commercial (car dealership and retail) and medical (Kaiser Permanente) development. A proposed Catholic High School Project site, in the City of Livermore, is just northeast of the Project site. The Development Agreement for the Catholic High School Project was approved in 2005. No construction has started or is planned at the High School, but the City of Livermore recently extended the Development Agreement to December 14, 2025.

This chapter of the EIR presents a description of the Project that includes the Project location and existing site characteristics, Project features, and proposed construction activities. This chapter also provides a statement of Project objectives, the intended uses of the EIR, a list of public agencies that are expected to use this EIR, and a list of approvals and permits that may be required to implement the Project.



Source: RCH Group 2021

Figure 2-1
Regional Location

RCH GROUP
planning & environmental consulting

2.2 PROJECT OBJECTIVES

Pursuant to State CEQA *Guidelines* 15124(b), the Project Description includes this statement of the project objectives. The objectives are intended to demonstrate the purpose of the Project. The primary objectives of the Project include the following:

- Develop the Project site with a cemetery that would be considered a low-intensity traffic use consistent Alameda County Measure D.
- Provide a cemetery that is conveniently located for present and future Tri-Valley residents.
- Provide a Funeral Home building with full-service amenities and staff that support the cemetery mission, including an appropriate and peaceful space for religious ceremony and practices intended to accommodate a wide variety of religious and cultural standards or practices for Tri-Valley residents.
- A portion of the cemetery would be used to provide a cemetery area that would be exclusively for the Jewish Community. The Jewish community is an estimated 40,000 members in Alameda County, with approximately 10,000 members in the Tri-Valley area. This cemetery would provide services for Judaism's three major groups (Orthodox, Conservative and Reform) and accommodate religious restrictions unique to each of the major groups.

The Project would be developed at 3656 Las Colinas Road, Livermore, CA in unincorporated Alameda County. Development of the Project would occur on approximately 47 acres in the southern portion of the ±104-acre parcel (Assessor's Parcel Number 099-0015-016-03) just north of the City of Livermore between the North Livermore Avenue and North First Street exits (see **Figure 2-1**). Project development would occur in two phases. Outside of Phase I and Phase II, the Project applicant would volunteer dedication of ridgetop open space conservation land in the study area, to be determined, consistent with the goals of the East County Conservation Strategy.

The Project site topography consists of a relatively flat lowland valley area to the southeast and gently sloping hills and valleys to the north and west. The valleys in the western portion of the Project site drain toward Arroyo Las Positas, which flows in a southwesterly direction.

The property bordering the Project site to the east of Arroyo Las Positas supports an existing residence and several roadways, while the area west of Arroyo Las Positas is undeveloped and is currently used for grazing. The Project site is accessed on the southeastern corner of the property from Las Colinas Road that connects with Las Positas Road (south of I-580). North of I-580, via legally recorded easements, an Alameda County road connects Las Colinas Road to the Project site.

2.3 PROJECT FACILITIES AND OPERATIONS

2.3.1 PROJECT OVERVIEW AND PHASING

The Project would include a funeral home with crematorium, interment (burial lots), an entry plaza, internal roadways, parking, landscaping, new wetlands, lakes, and other associated infrastructure and improvements (see **Figure 2-2**). **Table 2-1** shows the major Project facilities

and the corresponding coverage areas. The Project would provide cemetery and mortuary products and services to a wide range of multi-cultural members of the Tri-Valley. These include online memorial service broadcasts, intimate areas for private discussions amongst family members, selection of music, private salons, a children's playroom, ADA accessibility, a chapel for religious services, professional services of director and staff, caskets, vaults and urns, remembrance products, digital photographs and slideshows, deceased body transportation and storage, obituary services, cremation services, public viewings, private family visitations, catering, graveside services, markers and memorials, and various other services that would be provided to all clients. The Project would also have the capability to operate off-grid in the event of a power outage/shutdown.

TABLE 2-1. PROJECT FACILITIES

Project Facilities	Coverage Area (acres)
Buildings	1.0
Road (decomposed granite)	5.1
Parking Lot (decomposed granite)	1.7
Landscaping	9.0
Entry Plaza (permeable pavers)	0.9
Burial Lots	24.0
New Wetlands	2.9
Lakes	2.5
Total Coverage Area	**47.1**

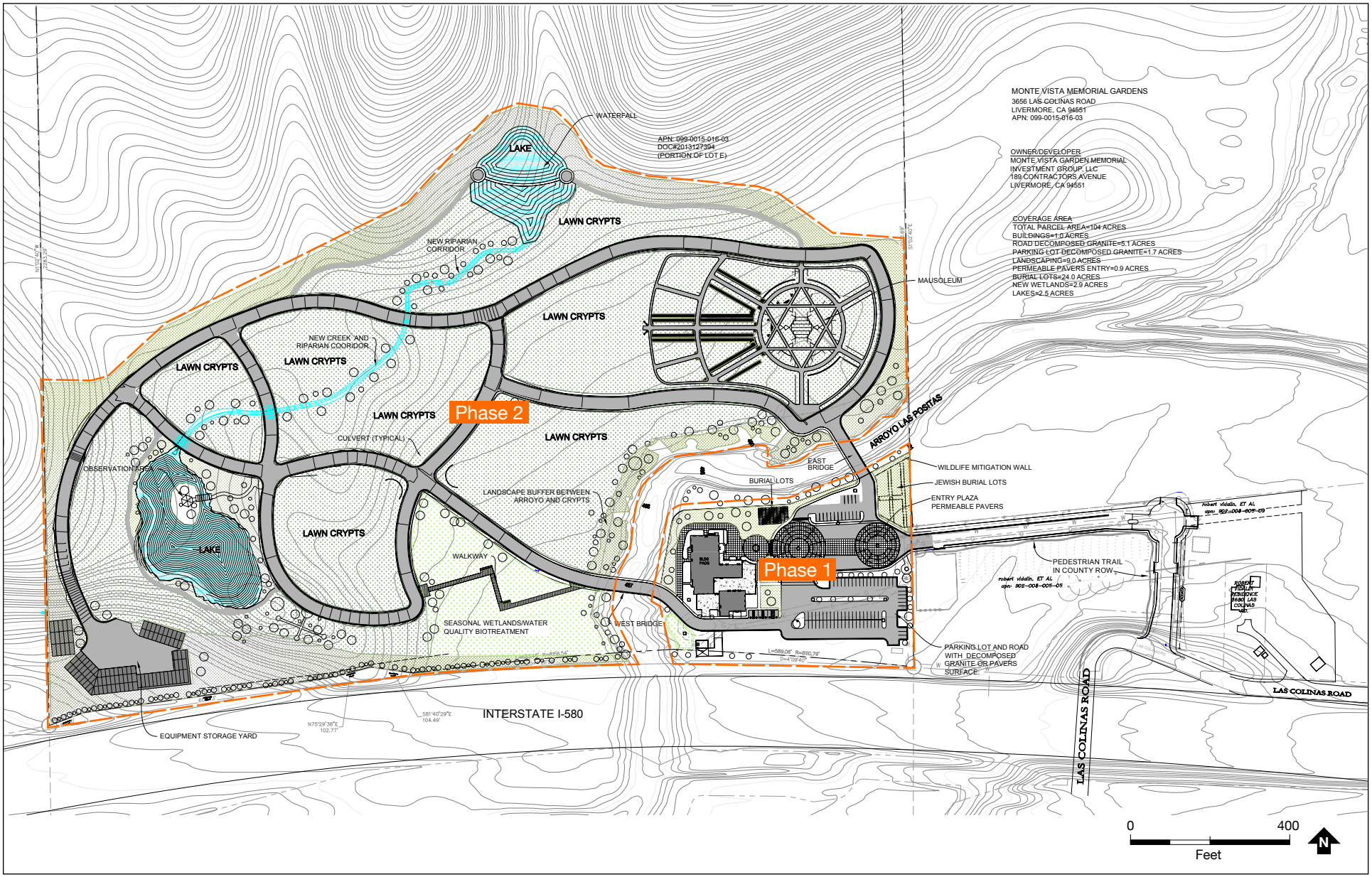
As discussed in more detail below, the Project would be constructed in two phases (see **Figure 2-2**). Phase I includes all development east of Arroyo Las Positas, and Phase II includes development west of Arroyo Las Positas. Once approved, the Phase I buildout of the Project would occur over approximately 5 years. Phase II buildout would occur over approximately 100 years.

Phase I Development

Phase I development would be on the 6.8 acres of the Project site east of Arroyo Las Positas. Development on Phase I would include construction and operation of the funeral home and entry plaza, the single-story "Pavilion" building, the access road, the parking lot, two interment areas (burial lots), and landscaping.

Phase II Development

Phase II development would be on the 40.3 acres of the Project site west of Arroyo Las Positas. Development during Phase II would include construction and operation of the remaining interment areas (burial lots) and roads, new wetland features, lakes, and landscaping. Phase II would be developed in subphases based on future demand and other development and regulatory factors. Permitting would begin for Phase II following approval of the Conditional Use Permit from Alameda County.



Source: ENGEO 2020; Hogan Land Services 2021

Figure 2-2
Site Plan

RCH GROUP
planning & environmental consulting

2.3.2 SITE ACCESS AND PARKING

Currently an unimproved County Road provides access to the Project site. The Project applicant is open to improving the current County road to serve as the access to the Project site. The necessary improvement would be identified in Conditions of Approval by the County and would meet either City or County road standards. **Figure 2-3** shows the general concept for the improvements of the access road.

This County-owned property lies between two private properties in County jurisdiction (see **Figure 2-4**) that are subject to an active Clean-Up and Abatement Order No. R2-2017-1021 issued by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). A representative of the Project applicant has been named in said Order as a "discharger" due to unauthorized fill placed into jurisdictional waters on these sites (wetlands). Resolution of the Order would be required by the County prior to their project approval and issuance of any grading, building, or other construction-related permits. Participants subject to the Abatement Order submitted a plan to the SFBRWQCB on August 2, 2021, to address the issues in the Abatement Order. The plan would not affect the location of the access road shown in **Figure 2-3**. **Figure 2-5** shows the County ownership of the access road and the location of the Abatement Order wetlands.

Improvements to the access road (i.e., curbs, gutters, and lighting) could affect some areas of the adjacent wetlands. The loss of any wetlands would require mitigation.

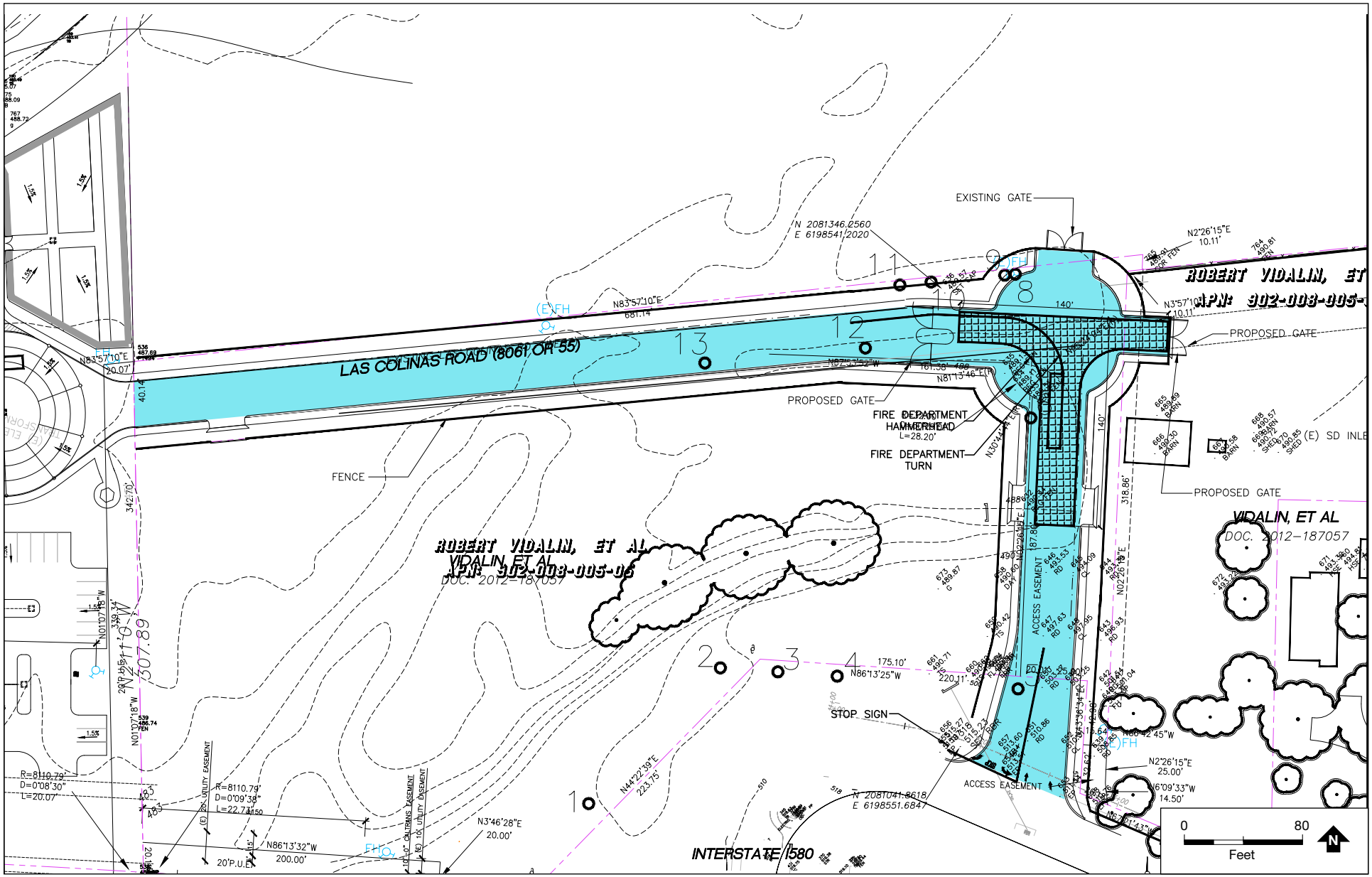
The parking at the Project site would consist of 91 total parking spaces (6 handicap ADA spaces, 30 EV charging stalls and 55 standards parking spaces).

The parking area would be constructed of pervious paving materials and include underground cisterns for collection of water run-off. Entrapped sediments would settle out in the cisterns and the waters would then pass through a natural bio filter system before discharging east to the creek.

2.3.3 FUNERAL HOME AND PAVILION BUILDINGS

As described above, the Funeral Home and Pavilion Buildings would occur during implementation of Phase I. The two-story Funeral Home building (Building A) would house the morgue, crematorium, sales offices, staff offices, chapel, garage, a receiving area, preparation room, family preparation room, reception area, guest lounge, and associated storage and sanitary facilities. The exterior of the building would be 'Tuscan' in design, with courtyards and gardens. The building would include a chapel accommodating approximately 120-140 guests. A viewing room also is planned for those individuals who request witnessed cremation.

The single-story Pavilion building (Building B) would have table seating for approximately 120-130 guests, kitchens, and associated storage and sanitary facilities. **Table 2-2** shows the building footprints, areas, and heights.



Source: ACS Consulting Engineers, 2020

Figure 2-3
Proposed Access Roadway Improvements

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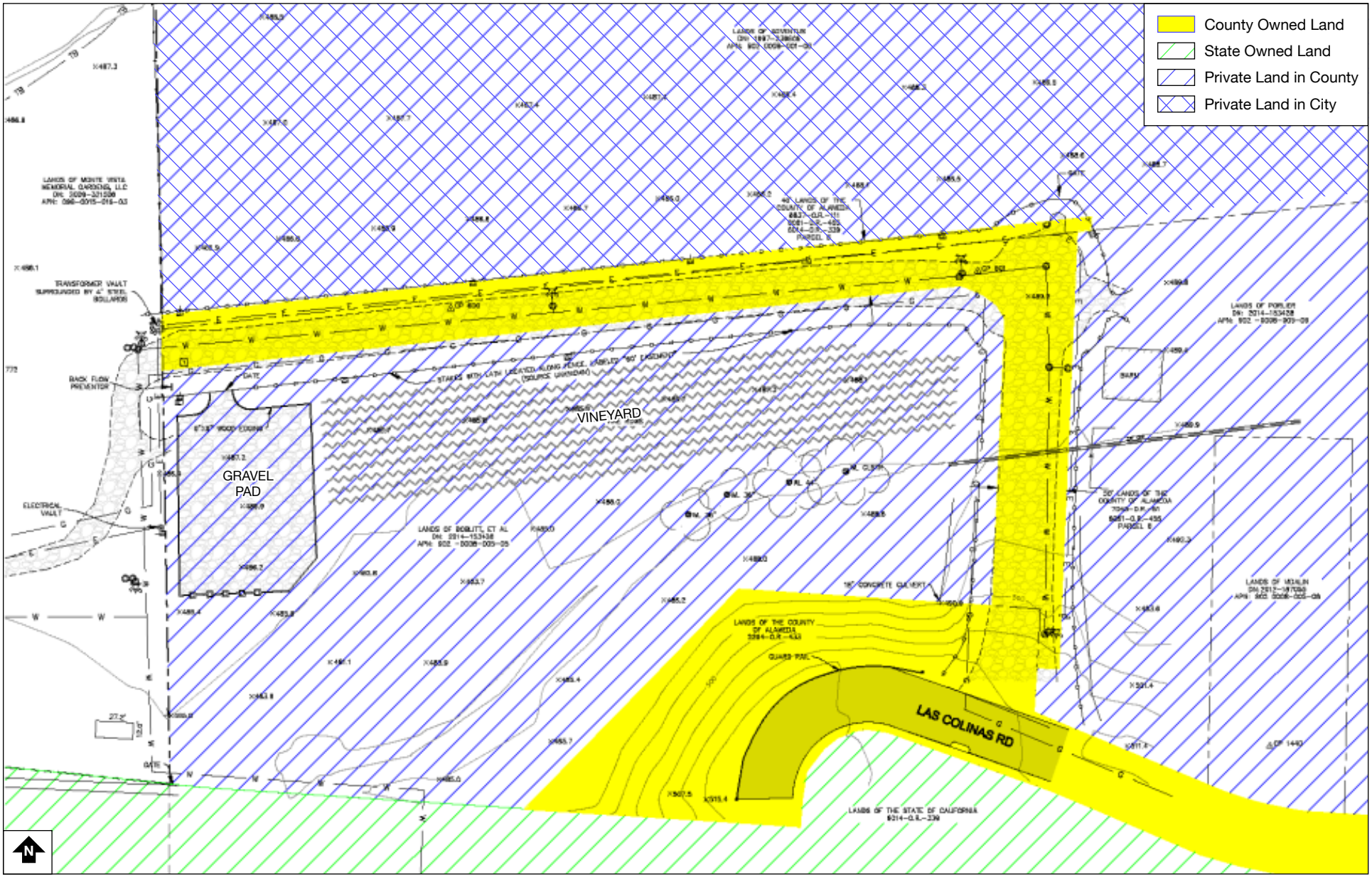

Source: Hogan and RCH Group 2020

Figure 2-4
Ownership Map

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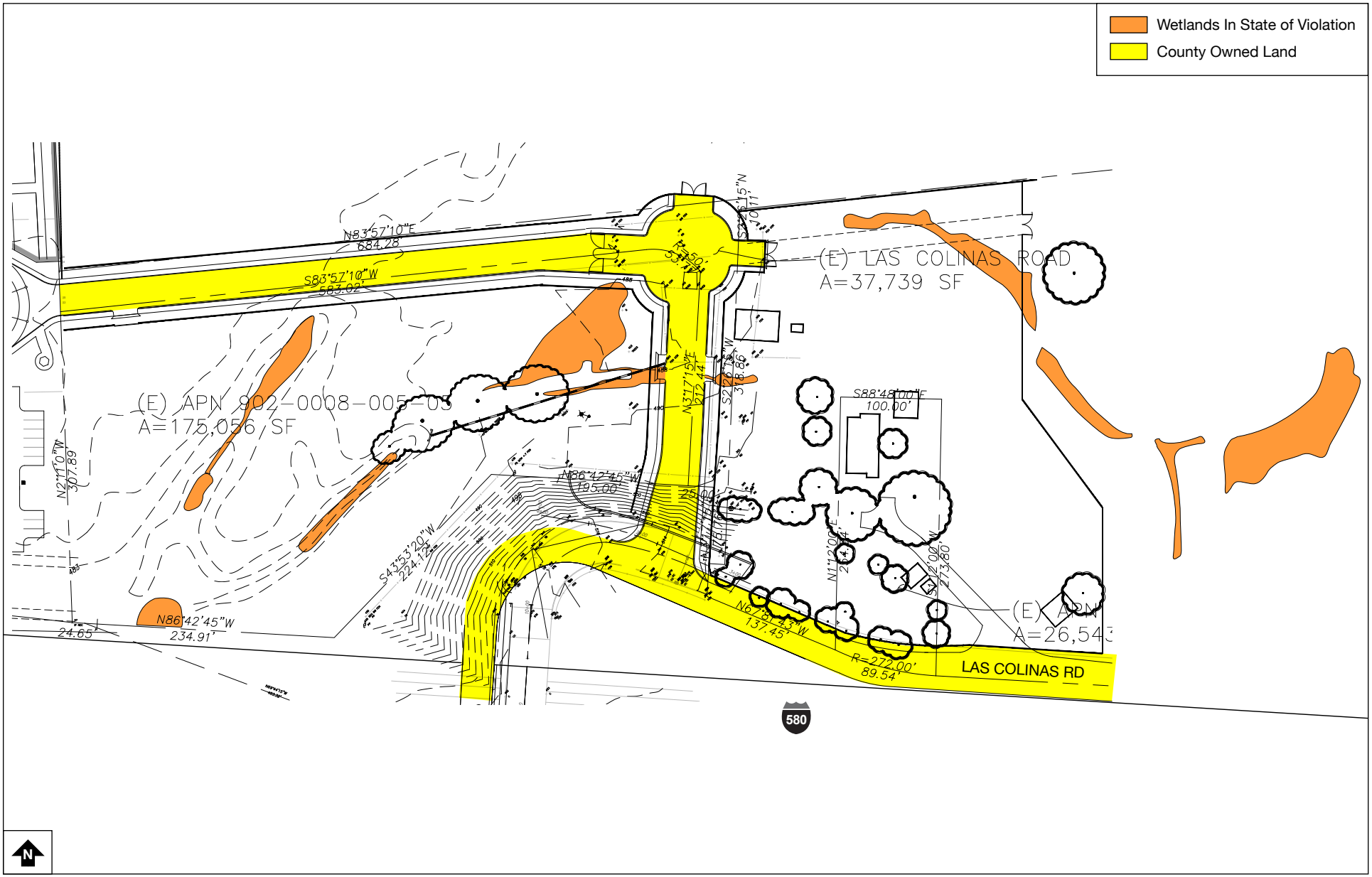

Source: ACS Consulting Engineers 2020

Figure 2-5

Wetlands Areas in State of Violation

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TABLE 2-2. BUILDING SPECIFICATIONS

Building	Building Footprint (square feet)	Total Building Area (square feet)	Building Height (feet}
Building A – Main Funeral Home (Two-Story Building)	12,115	16,181	40
Building B – Pavilion (Single-Story Building)	3,442	3,442	40
Total	**15,557**	**19,623**	**N/A**

The Funeral Home building would have the capacity for two cremation retorts, an embalming room and refrigeration unit capable of holding 100 bodies. In addition to the main body preparation room, there would be a separate family preparation room, for those cultures that must ritualistically cleanse and dress the body.

The Funeral Home building would have adequate office space for funeral directors, cemetery managers, administration, and sales. It would house the limousines and hearses and would include storage space for inventory.

Funeral Home operations would use approximately 300 gallons per day of potable water from a municipal supply. An on-site septic system would dispose of blackwater. Stormwater runoff from impervious areas such as rooftops and surrounding parking areas would be treated in a bioretention area near the Arroyo prior to discharge, in conformance with local standards.

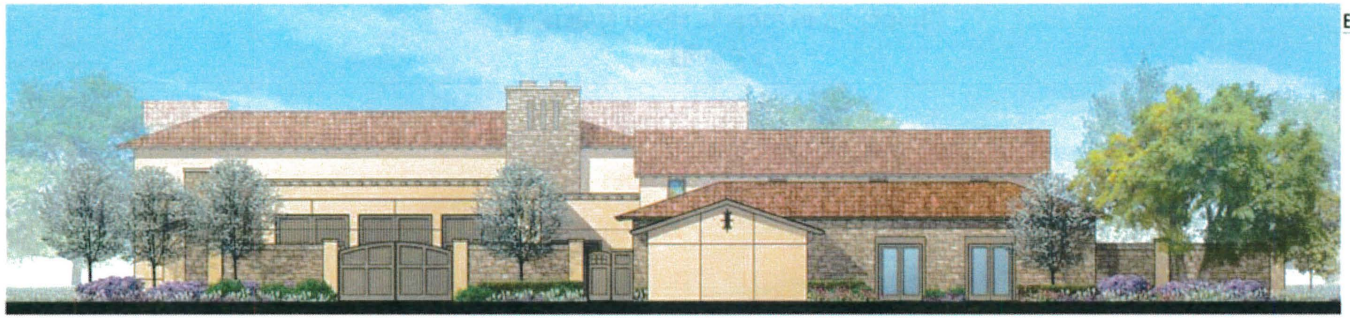
Conceptual building elevations of the Funeral Home building are shown in **Figures 2-6 and 2-7**.

2.3.4 CEMETERY GROUNDS

As shown in **Figure 2-2**, most of the cemetery grounds would be in Phase II. The approximately 47-acre cemetery grounds, of which approximately 24 acres would consist of various memorial monuments and burial gardens, would be accessed by a crushed/decomposed granite internal roadway on the western side of Arroyo Las Positas. All utilities would be installed underground.

The main cemetery with lakes, a flowing waterway, and monuments to the west of Arroyo Las Positas, would be accessed from the Funeral Home via two 24-foot-wide clear-span bridges designed for both pedestrian and vehicle use. These bridges would provide freeboard of at least one foot above the 500-year flood plain.

Phase II also includes two proposed “lakes” or ponds connected by a perennial linear waterway (i.e., creek) that would be the primary landscape feature of the cemetery (see **Figure 2-2**). A proposed wetland feature is also planned on the south side of the cemetery grounds near the southern property boundary on the north side of I-580. The burial area itself would have an extensive sub-drainage system draining to the lower lake feature to maximize onsite water re-use.



Exterior Materials

Roof:	High Barrel Concrete Tile by Eagle Roofing
	Santa Barbara & Santa Cruz (50/50 Blend)
Fascia:	Copper Gutter o/ 6x8 Rafter Tails
Barge:	6x8 Rake Board
Walls:	Smooth Trowel Finish Stucco
	Mineret Bluffstone Veneer by Eldorado Stone
Windows:	Insulated Metal Frame w/ Dual Pane Glass
Doors:	Insulated Metal Frame w/ Dual Pane Glass
	Insulated Metal
Garage Door:	Insulated Metal Roll-up
Accents:	Stone Wall Cap & Frieze Block
	Metal Expansion Joints W/ 1" Reveal @ Stucco
	Copper Leaders & Downspouts
	Fabricated Metal Trellis & Arbors
	Stucco Finished Pilaster @ Garden Walls
	Composite Timber & Wood Gates

South Elevation

East Elevation

0 40

Feet

Source: Edward C. Novak, Architect 2018

Figure 2-6

South and East Conceptual Elevations

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Exterior Materials

Roof:	High Barrel Concrete Tile by Eagle Roofing
	Santa Barbara & Santa Cruz (50/50 Blend)
Fascia:	Copper Gutter o/ 6x8 Rafter Tails
Barge:	6x8 Rake Board
Walls:	Smooth Trowel Finish Stucco
	Mineret Bluffstone Veneer by Eldorado Stone
Windows:	Insulated Metal Frame w/ Dual Pane Glass
Doors:	Insulated Metal Frame w/ Dual Pane Glass
	Insulated Metal
Garage Door:	Insulated Metal Roll-up
Accents:	Stone Wall Cap & Frieze Block
	Metal Expansion Joints W/ 1" Reveal @ Stucco
	Copper Leaders & Downspouts
	Fabricated Metal Trellis & Arbors
	Stucco Finished Pilaster @ Garden Walls
	Composite Timber & Wood Gates

North Elevation

West Elevation

0 40

Feet

Source: Edward C. Novak, Architect 2018

Figure 2-7

North and West Conceptual Elevations

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The two lakes would be connected by a man-made perennial creek that would drain from the upper lake to the lower lake. The water would be re-circulated back to the upper lake via by a water pump. During summer months, an onsite groundwater well would supplement water in the upper lake's pool, and during winter months the lakes would capture precipitation as surface water runoff from the remainder of the Project site west of the creek.

In addition to the proposed man-made lakes, the Project proposes to install a 2.6-acre seasonal wetland area west of Arroyo Las Positas, along the southern boundary of the central portion of the site. Water in this wetland area would come from direct precipitation. The wetland would be designed to only receive supplemental surface runoff in the event of very large storm events, along with discharge from the lower lake during storm events. The water would be detained in this wetlands area and then discharged at 10-year and 100-year predevelopment flows via a stabilized outfall structure into Arroyo Las Positas.

2.4 PROJECT EMPLOYMENT

MVMG would create temporary construction jobs and would also create permanent professional positions. The Project is expected to create more than 10 permanent professional positions to maintain Project operations. MVMG would aim to provide jobs to a qualified, professional group of staff members that would best implement the goals and mission of the Project. Key staff would include a mortuary manager, funeral directors/family service counselors, a receptionist: a full-time drive, sales staff, a cemetery manager, service personnel/grounds crew, a business manager, a crematory operator, a social media/IT director, and a bookkeeper.

2.5 HOURS OF OPERATION

MVMG would initially be open Monday-Friday from 9:00 a.m. to 4:00 p.m. and once fully operational MVMG would be open 7 days a week. MVMG cemetery burials and funeral services would occur Monday-Friday. Weekend burials and funerals would be available upon request with applicable weekend/holiday fees.

The Magen David Memorial Gardens Cemetery (Jewish section of the cemetery) would be open Sunday-Friday from 9:00 a.m. to 4:00 p.m. Admittance to the cemetery is prohibited on the Sabbath (Saturday) or any other Jewish holiday when the cemetery is closed. On Friday night and on Jewish holidays the cemetery must be closed two hours before sundown. Burials and funeral services at the Magen David Memorial Gardens Cemetery would only take place during regularly scheduled cemetery hours. No burials or other work would occur on the Sabbath or any other Jewish holidays when the cemetery is closed for interments.

2.6 CONSTRUCTION

2.6.1 PHASE I CONSTRUCTION

Table 2-3 provides the estimated duration of construction and the estimated number of working days required for Phase I. As seen on **Table 2-3**, Phase I construction would include 6 phases and would occur over a period of approximately 480 days, starting in January 2023. Construction

could occur 7:00 a.m. to 7:00 p.m. Monday through Fridays and 8:00 a.m. to 5:00 p.m. on weekends, consistent with Alameda County Code Section 6.60.070.

TABLE 2-3. PHASE I CONSTRUCTION DESCRIPTION

Phase	Phase I Development Description	Working Days (Approximate)
1	Site Preparation	30
2	Grading	90
3	Utilities/Trenching	30
4	Building Interment, columbarium, mausoleum construction	270
5	Paving (Pavers and decomposed granite	30
6	Architectural Coating	30

2.6.2 PHASE II CONSTRUCTION

Table 2-4 provides the estimated duration of construction and the estimated number of working days required for Phase II. As seen on **Table 2-4**, Phase II construction would include 6 phases and would occur over a period of approximately 690 days. Phase II. Construction could occur 7:00 a.m. to 7:00 p.m. Monday through Fridays and 8:00 a.m. to 5:00 p.m. on weekends, consistent with Alameda County Code Section 6.60.070. Although the working day estimates indicate Phase II construction could occur over a period of approximately 690 days, full development of Phase II would likely occur over several decades due to the nature of the Project.

TABLE 2-4. PHASE II CONSTRUCTION DESCRIPTION

Phase	Phase I Development Description	Working Days (Approximate)
1	Site Preparation	60
2	Grading	180
3	Utilities/Trenching	60
4	Building Interment, columbarium, mausoleum construction	270
5	Paving (Pavers and decomposed granite	60
6	Architectural Coating	60

2.7 REGULATORY REQUIREMENTS, PERMITS AND APPROVALS

Alameda County would be required to approve the Project prior to development of the Project. Alameda County would use information contained in this EIR during the decision-making process. Permits and approvals from other agencies would be necessary prior to the development of the Project. Known entitlements, permits, and approvals required for the Project are identified below.

Alameda County:

- Certification of Final EIR;

- Adoption of a Mitigation Monitoring and Reporting Plan (MMRP), Findings, and Statement of Overriding Considerations (if necessary);
- Approval of the Site Plan; Other County permits such as Building and Grading Permits.
- Approval of the Conditional Use Permit
- Approval of an On-site Wastewater Treatment Systems (OWTS) Permit.

Other Governmental Agency Approvals:

- The Bay Area Air Quality Management District (BAAQMD) requires an Authority to Construct/ Permit to Operate (ATC/PTO) for equipment that emits air pollution related to the operation of the project.
- The San Francisco Bay Regional Water Quality Control Board (RWQCB) requires a Stormwater Discharge Permit and a Construction Stormwater Permit.
- Section 401 Water Quality Certification Permit from the Regional Water Quality Control Board.
- Section 1602 Lakebed and Streambed Alteration Permit from the California Department of Fish and Wildlife (CDFW).
- Section 404 Permit from the United States Army Corps of Engineers (USACE).

2.8 REFERENCES

Alameda County. 1994. *East County Area Plan, Volume 1 Goals, Policies and Programs.* May 1994.

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CHAPTER 3

ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1 AESTHETICS

3.1.1 SETTING

This Section describes the regulatory framework and existing conditions of the Project related to aesthetics, evaluates the potential impacts of the Project on aesthetics and visual resources, and Mitigation Measures needed to reduce significant impacts, as necessary.

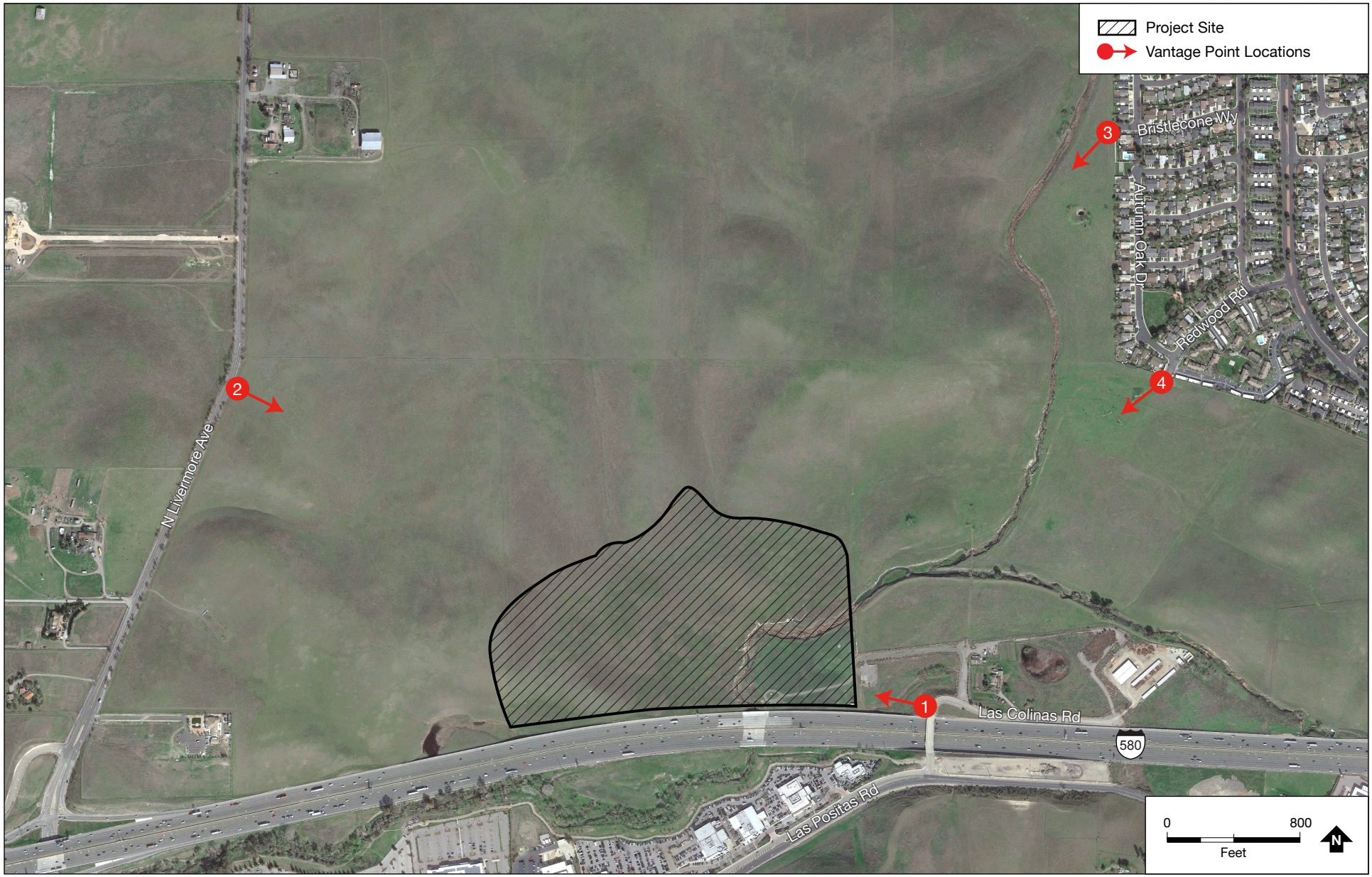
Visual Character of the Region and Project Vicinity

The Project site is in a rural agricultural area within unincorporated Alameda County. The Project site is on a flat area covered with seasonal grasses and is surrounded by rolling hillsides to the north, east and west. Interstate 580 is located to the south of the Project site. The nearest residence is approximately 800 feet east of the Project site. The Springtown residential community in the City of Livermore is approximately ½ mile northeast of the Project site. **Figure 3.1-1** identifies four vantage points of nearby views. **Figure 3.1-2** (Vantage Points 1 & 2) and **Figure 3.1-3** (Vantage Points 3 & 4) present existing views toward the Project site. Vantage Points 2-4 are publicly available viewpoints; however, the Project site is not visible from these Vantage Points due to existing landscape and topography. Vantage Point 1 is the only public view with clear views of the Project site.

Regulatory Setting

State

The California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), protects State scenic highway corridors from diminishing the aesthetic value of lands adjacent to highways. The Scenic Highway Mapping System identifies the portion of Interstate 580 that is directly south of the Project site as eligible for designation as a State Scenic Highway, however, that portion of Interstate 580 is not an officially designated State Scenic Highway (Caltrans, 2021). The nearest officially designated State Scenic Highway is Interstate 680, approximately 9 miles west of the Project site. The Project site is not visible from Interstate 680.



Source: RCH Group 2021; Google Earth 2021

Figure 3.1-1
Vantage Point Location Map

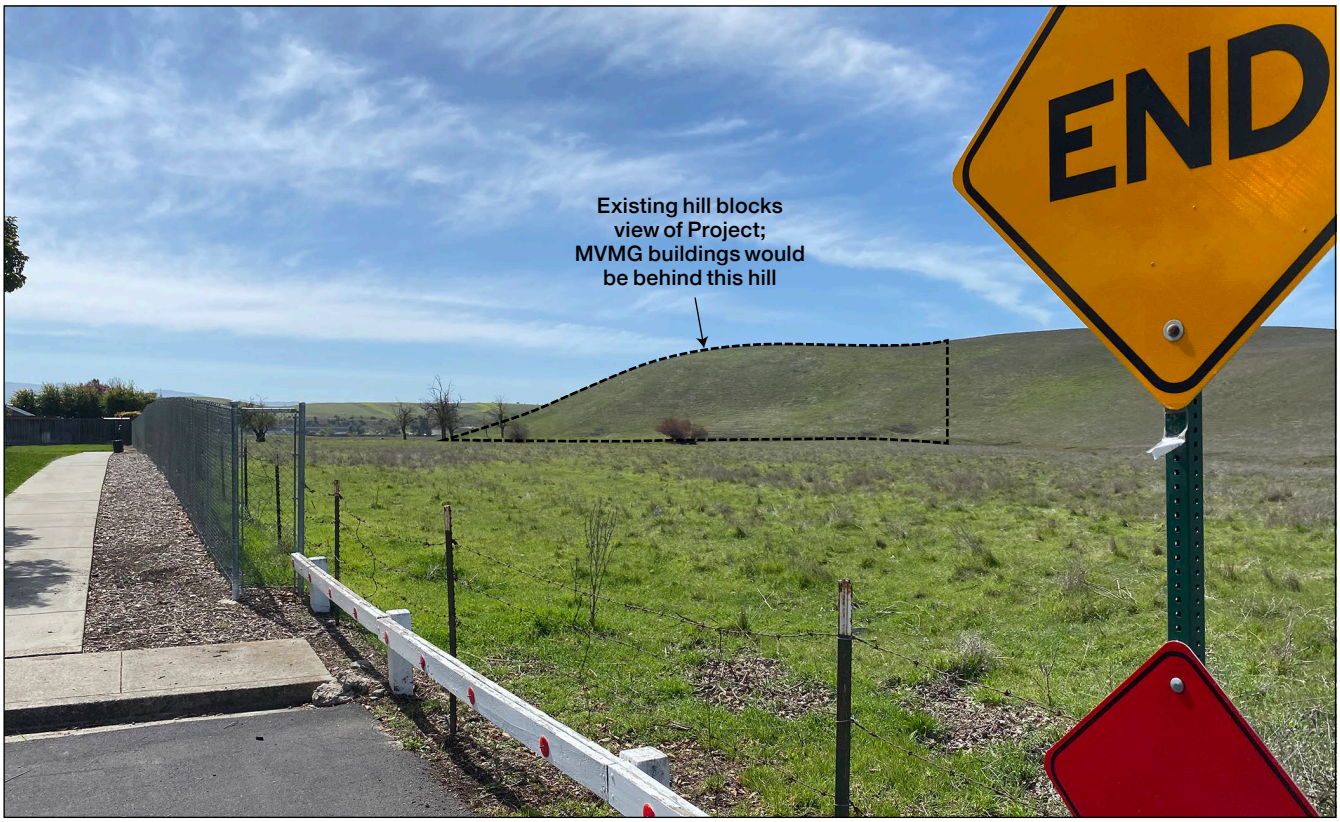
RCH GROUP
planning & environmental consulting

Vantage Point 1: Las Positas Bridge

Vantage Point 2: North Livermore Avenue

Source: RCH Group 2021

Figure 3.1-2
Existing Views from Vantage Points 1 and 2



Vantage Point 3: Bristlecone Way in Springtown Neighborhood

Vantage Point 4: Redwood Road in Springtown Neighborhood

Source: RCH Group 2021

Figure 3.1-3
Existing Views from Vantage Points 3 and 4

Local

Alameda County General Plan

Alameda County adopted the Scenic Route Element in May 1966. The Scenic Route Element defines a scenic road as a highway, road, drive, or street, that in addition to its transportation function, provides opportunities for outstanding views and enjoyment of natural features and man-made scenic resources and development. The Scenic Route Element identifies Interstate 580 directly south of the Project site as a Scenic Route. Scenic corridors provide outstanding views of natural landscapes and are areas that extend beyond a scenic route right-of-way and are of sufficient scenic quality to be acquired by state or local jurisdiction, or areas to which development controls should be applied to preserve and enhance nearby views or maintain unobstructed distant views along a scenic route and provide a pleasant route of travel. The Scenic Route Element defines the three types of scenic routes within the County as (1) Scenic Freeways and Expressways, (2) Scenic Thoroughfares, and (3) Scenic Rural-Recreation Routes.

The element includes the following policies and development standards pertaining to Aesthetics are relevant to the Project:

- To conserve, enhance, and protect scenic views from observable scenic routes.

- *Provide for Normal Uses of Land and Protect Against Unsightly Features.* In both urban and rural areas, normally permitted uses of land should be allowed in scenic corridors, except that panoramic views and vistas should be preserved and enhanced through supplemental normal zoning regulations with special height, area, and sideyard regulations; through providing architectural and site design review; through prohibition and removal of billboards, signs not relevant to the main use of the property, obtrusive signs, automobile wrecking and junk yards, and similar unsightly development or use of land. Design and location of all signs should be regulated to prevent conglomerations of unsightly signs along roadsides.

- *Underground Utility Distribution Lines When Feasible; Make Overhead Lines Inconspicuous.* New, relocated or existing utility distribution lines should be placed underground whenever feasible. When it is not feasible to place lines underground, they should be located so as to be inconspicuous from the scenic route. Poles of an improved design should be used wherever possible. Combined or adjacent rights-of-way and common poles should be used wherever feasible.

- *Establish Architectural and Site Design Review.* Architectural and site design review by the appropriate local jurisdiction should be provided for each site and for all new or altered structures so that particular consideration will be given to appearances that will enhance scenic qualities from the scenic routes. Originality in landscape and construction design should be encouraged. Such designs should be in keeping with cityscape and natural skyline and reflect the density, movement and activities of the population.

- In corridors along scenic routes with outstanding distant views above the roadbed, no building structure of more than one story in height should be permitted where it would obstruct views, excepting within and immediately adjacent to central business district locations. On lots where the building structure is higher than the roadbed in corridors along routes with outstanding distant views, the combined width of sideyards should equal or exceed the width of the building structure as measured parallel to the roadbed.

East County Area Plan

In addition to the Alameda County General Plan's Scenic Route Element, the East County Area Plan (ECAP) is the governing general plan for the Project area. The ECAP contains goals, policies, and implementation programs intended to provide for the protection and preservation of visual resources in eastern Alameda County. The following policies pertaining to Aesthetics are relevant to the Project:

Policy 105: The County shall preserve the following major visually-sensitive ridgelines largely in open space use:

1. The ridgelines of Pleasanton, Main, and Sunol Ridges west of Pleasanton;
2. The ridgelines of Schafer, Shell, Skyline, Oak and Divide Ridges west of Dublin and the ridgelines above Doolan Canyon east of Dublin;
3. The ridgelines above Collier Canyon and Vasco Road and the ridgelines surrounding Brushy Peak north of Livermore;
4. The ridgelines above the vineyards south of Livermore;
5. The ridgelines above Happy Valley south of Pleasanton.

Policy 106: Structures may not be located on ridgelines or hilltops or where they will project above a ridgeline or hilltop as viewed from public roads, trails, parks and other public viewpoint unless there is no other site on the parcel for the structure or on a contiguous parcel in common ownership on or subsequent to the date this ordinance becomes effective. New parcels may not be created that have no building site other than a ridgeline or hilltop, or that would cause a structure to protrude above a ridgeline or hilltop, unless there is no other possible configuration.

Policy 107: The County shall permit no structure (e.g., housing unit, barn, or other building with four walls) that projects above a visually-sensitive major ridgeline.

Policy 108: To the extent possible, including by clustering if necessary, structures shall be located on that part of a parcel on contiguous parcels in common ownership on or subsequent to the date this ordinance becomes effective, where the development is least visible to persons on public roads, trails, parks and other public viewpoints. This policy does not apply to agricultural structures to the extent it is necessary for agricultural purposes that they be located in more visible areas.

Policy 112: The County shall require development to maximize views of the following prominent visual features: (1) the major ridgelines listed in Policy 105, (2) Brushy Peak, Donlan Peak, and Mount Diablo, and (3) Cresta Blanca, near Arroyo Road South of Livermore.

Policy 114: The County shall require the use of landscaping in both rural and urban areas to enhance the scenic quality of the area and to screen undesirable views. Choice of plants should be based on compatibility with surrounding vegetation, drought-tolerance, and suitability to site conditions; and in rural areas, habitat value and fire retardance.

Policy 115: In all cases appropriate building materials, landscaping and screening shall be required to minimize the visual impact of development. Development shall blend with and be

subordinate to the environment and character of the area where located, so as to be as unobtrusive as possible and not detract from the natural, open space or visual qualities of the area. To the maximum extent practicable, all exterior lighting must be located, designed, and shielded so as to confine direct rays to the parcel where the lighting is located.

Policy 116: To the maximum extent possible, development shall be located and designed to conform with rather than change natural landforms. The alteration of natural topography, vegetation, and other characteristics by grading, excavating, filling, of other development activity shall be minimized. To the extent feasible, access roads shall be consolidated and located where they are least visible from public viewpoints.

Policy 117: The County shall require that where grading is necessary, the off-site visibility of cut and fill slopes and drainage improvements is minimized. Graded slopes shall be designed to simulate natural contours and support vegetation to blend with surrounding undisturbed slopes.

Policy 118: The County shall require that grading avoid areas containing large stands or mature, healthy vegetation, scenic natural formations, or natural watercourses.

Policy 119: The County shall require that access roads be sited and designed to minimize grading.

Policy 120: The County shall require that utility lines be placed underground when feasible. When located above ground, utility lines and supporting structures shall be sited to minimize their visual impact.

City of Livermore General Plan

The Project site lies within unincorporated Alameda County; however, Livermore's city limits are directly east, northeast, and south of the Project site. The City of Livermore's Community Character Element provides goals, objectives, policies and actions that guide private individuals and government officials in preserving and enhancing Livermore's character and unique physical identity. The following policies pertaining to Aesthetics are relevant to the Project:

Goal CC-1: Preserve and enhance Livermore's natural setting.

(Goal CC-1): Policy P1: The city shall allow no structural development in hillside areas involving skylines, ridgelines, or silhouettes.

(Goal CC-1): Policy P8: New development shall be designed to preserve views from existing neighborhoods to the greatest extent feasible.

Goal CC-1.3: Minimize obtrusive glare and wasted energy from excessive night-time lighting and preserve views of the nighttime sky.

Goal CC-4: Protect and enhance public views within and from established scenic routes, including views of arroyos.

Objective CC-4.1: Protect public views from scenic routes and corridors.

(Goal CC-4) Policy P1: Development shall not be allowed to obscure, detract from, or negatively affect the quality of views from designated scenic routes.

(Goal CC-4) Policy P3: The City shall permit no development to wholly obstruct or significantly detract from views of any scenic area as viewed from a scenic route.

Objective CC-4.16: Preserve and enhance natural scenic qualities in areas beyond scenic routes.

(Objective CC-4.16) Policy P2: Development of lands adjacent to scenic routes should not obstruct views of scenic areas, and development should be visually compatible with the natural scenic qualities.

Existing Conditions

As discussed above, the portion of Interstate 580 directly south of the Project site is a County-designated Scenic Route, however, it is not an officially designated State Scenic Highway. The nearest Scenic Rural-Recreation Route is North Livermore Avenue that is located approximately ½ mile west of the Project Site. As shown is **Figure 3.1-2**, the Project site is not visible from North Livermore Avenue (Vantage Point 2) due to the existing hillsides that block any public views of the Project site.

Scenic vistas are generally interpreted as long-range views of a specific scenic feature. Public views are those which can be seen from vantage points that are publicly accessible, such as streets, freeways, parks, and vista points. The ECAP and the Scenic Route Element designate major visually sensitive ridgelines. The nearest visually-sensitive ridgelines that are designated by the ECAP (Policy 105) are Collier Canyon Road, Vasco Road, Doolan Canyon and Brushy Peak. The Project site is located on a flat area that is dominated by agricultural uses and would not be located on a major visually-sensitive ridgeline. Furthermore, the Project site is dominated by nearby rolling hillsides that block any long-range views of any major visually-sensitive ridgeline. Therefore, the Project site would not block any distinctive long-range views of any major visually-sensitive ridgelines.

3.1.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the California Environmental Quality Act (CEQA) *Guidelines* states that a Project would result in a significant impact to Aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the Project is an urbanized area, the Project conflicts with applicable zoning and other regulations governing scenic quality; or,
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Topics with No Impact

Phase I and Phase II

Phase I and Phase II do not include visual resources such as trees, rock outcroppings, or historic buildings on the Project site visible from Interstate 580. Therefore, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway and the Project would have no impact. All exterior lighting would be located, designed, and shielded to confine direct rays (light) to the parcel where the lighting is located (consistent with ECAP Policy 115). Therefore, the Project would not create a new substantial source of light or glare which would adversely affect day or nighttime views in the area. These topics are not further discussed in this analysis.

Impact Analysis

Impact 3.1.1: The Project would not affect any scenic vista. (Less than Significant)

Phase I

As discussed above, scenic vistas can be interpreted as long-range views of a specific scenic feature. The ECAP and the Scenic Route Element designate major visually-sensitive ridgelines. The nearest visually-sensitive ridgelines that are designated by the ECAP (Policy 105) are Collier Canyon Road, Vasco Road, Doolan Canyon and Brushy Peak.

The Project site is on a flat area that is dominated by nearby rolling hillsides that block any long-range views of nearby major visually-sensitive ridgelines from Interstate 580. Therefore, development of the Project would not block or obstruct distinctive long-range views from Interstate 580 of any major visually-sensitive ridgelines or other natural features that could be considered scenic vistas due to the existing natural hillsides surrounding the Project site from Interstate 580. Therefore, impacts to scenic vistas from Phase I would be less than significant.

Phase II

The impact discussion for Phase I would also apply to Phase II of the Project. Therefore, impacts to scenic vistas would be less than significant.

Mitigation Measures

None required.

Impact 3.1.2: The Project would alter the existing visual character of the Project site and its surroundings. (Less than Significant)

Phase I

The main public views of the Project buildings would be westbound traffic on Interstate 580. **Figure 3.1-4** presents simulations of the view of the current Project site and the location of

proposed Phase I buildings. The top frame is from the overpass directly to the west of the Project Site (above Interstate 580). This is a publicly available view but currently it has minimal use (low traffic volume on the overpass). The view from westbound traffic on Interstate 580 would be similar but vehicles would be lower and some of the view would be restricted by the concrete barriers at the north boundary of Interstate 580. The view of the Phase I buildings from vehicles traveling on westbound Interstate 580 would be for about 10-15 seconds. The top frame shows the public view from the overpass. Vantage Point 1 (Existing View) shows the flat area surrounded by agricultural land, rolling hillsides and agricultural buildings that are visible to vehicles commuting primarily westbound on Interstate 580. Eastbound traffic is farther removed from the Project site and focused looking east (not towards the Project site). The bottom frame (Proposed View) shows the proposed Phase I buildings (i.e., the main funeral home and the Pavilion). As shown in **Figure 3.1-4**, the proposed Phase I buildings would alter the natural characteristics of the area. Phase I buildings would be "Tuscan" in design. As shown in the bottom frame, there is a proposed tree line that would further screen Phase I buildings from public views (in addition to the concrete wall on the north side of Interstate 580) from westbound traffic on Interstate 580. Development of Phase I would include the use of appropriate building materials, landscaping, and screening to minimize the visual impact of development (consistent with ECAP Policy 115).

Development of Phase I would alter the existing visual character of the Project site, however, with implementation of the proposed exterior building design and use of landscape screening techniques, Phase I would not substantially degrade the existing visual character. Therefore, impacts to the existing visual character from Phase I would be less than significant.

Phase II

Figure 3.1-4 presents a simulation of the proposed roadways in the burial areas that would be developed during Phase II. The simulation shows that burial area would be developed into the rolling hillsides west of the Project that are mainly visible to vehicles commuting westbound on Interstate 580. Development of the mausoleum, columbarium, burial lots, lakes, and wetland features would occur during Phase II. Development of Phase II would also include the use of appropriate building materials, landscaping, and screening to minimize the visual impact of development (consistent with ECAP Policy 115). The lakes and perennial creek are included as an aesthetic enhancement of the Phase II area. Therefore, although development of Phase II would alter the existing visual character of the Project site, with implementation of appropriate exterior building design and use of landscape screening, Phase II of the Project would not substantially degrade the existing visual character. Therefore, impacts to the existing visual character from Phase II would be less than significant.

Mitigation Measures

None required.

Existing View

Proposed View

Source: RCH Group

Figure 3.1-4
Existing and Proposed View

3.1.3 REFERENCES

Alameda County. 1966. *Alameda County General Plan Scenic Route Element.* May 5, 1966.

Alameda County. 1994. *East County Area Plan, Volume 1 Goals, Policies and Programs.* May 1994.

Caltrans. 2018. *California State Scenic Highway Scenic Highway System Map* https://www.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983. Accessed March 15, 2021.

3.2 AIR QUALITY

This section evaluates the potential for the Project to cause air quality impacts and has been prepared using methods and assumptions recommended in the Bay Area Air Quality Management District's (BAAQMD's) *California Environmental Quality Act Air Quality Guidelines* (*CEQA Guidelines)* (BAAQMD, 2017a).

3.2.1 SETTING

The Project site is located within the San Francisco Bay Area Air Basin (Air Basin), which encompasses Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, and Napa Counties, and the southern portions of Solano and Sonoma Counties.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and San Francisco Bay), determine the effect of air pollutant emissions on local air quality.

The climate of the Air Basin, including Alameda County, is a Mediterranean-type climate characterized by warm, dry summers and mild, wet winters. The climate is determined largely by a high-pressure system that is often present over the eastern Pacific Ocean off the West Coast of North America. In winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the region. During summer and fall, air emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are favorable to the formation of photochemical pollutants, such as ozone and secondary particulates, such as sulfates and nitrates.

Along Alameda County's western coast, temperatures are moderated by the bay, which can act as a heat source during cold weather, or cool the air by evaporation during warm weather. It is generally sunnier farther from the coast, although partly cloudy skies are common throughout the summer. Average summer temperatures are mild overnight and moderate during the day. Winter temperatures are cool overnight and mild during the day. Highest temperatures are more common inland. Wind speeds vary throughout Alameda County, with the strongest gusts along the western coast, often aided by dominant westerly winds and a bay-breeze effect. Rainfall totals average about 14 to 23 inches per year (BAAQMD, 2019).

Ambient Air Quality Standards

Regulation of air pollutants is achieved through both national and state ambient air quality standards (AAQS) and emissions limits for individual sources. Regulations implementing the federal Clean Air Act and its subsequent amendments established national ambient air quality

standards (NAAQS) for the six criteria pollutants.[1] California has adopted more stringent California ambient air quality standards (CAAQS) for most of the criteria air pollutants. In addition, California has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because of the meteorological conditions in the state, there is considerable difference between state and federal standards in California.

The AAQS are intended to protect the public health and welfare, and they incorporate an adequate margin of safety. They are designed to protect those segments of the public most susceptible to respiratory distress, known as sensitive receptors, including asthmatics, the very young, elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Under amendments to the federal Clean Air Act, United States Environmental Protection Agency (U.S. EPA) has classified air basins or portions thereof, as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. The California Clean Air Act, which is patterned after the federal Clean Air Act, also requires areas to be designated as "attainment" or "non-attainment" for the CAAQS. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the NAAQS and one set with respect to the CAAQS.

Based upon the Bay Area's attainment status (discussed below), pollutants of concern include criteria pollutant emissions such as nitrogen oxides (NO_x)[2], volatile organic compounds (VOC) as reactive organic gases (ROG)[3], particulate matter less than 10 micrometers (coarse or PM10), and particulate matter less than 2.5 micrometers (fine or PM2.5).[4]

The Bay Area is currently designated "non-attainment" for 1-hour and 8-hour ozone CAAQS, the 8-hour ozone NAAQS, the PM10 CAAQS (annual and 24-hour), and the PM2.5 CAAQS (annual) and NAAQS (24-hour). The Bay Area is "attainment" or "unclassified" with respect to the other ambient air quality standards. **Table 3.2-1** shows the attainment status of the Bay Area with respect to the NAAQS and CAAQS for different criteria pollutants and also summarizes the related health effects and principal sources for each pollutant.

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1 Criteria air pollutants refer to those air pollutants for which the U.S. EPA and California Air Resources Board (CARB) has established NAAQS and CAAQS under the Federal Clean Air Act and California Clean Air Act.

2 When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen (NO_X). Nitric oxide (NO) and NO_2 are the most significant air pollutants generally referred to as NOx. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2 and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema.

3 VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG are any reactive compounds of carbon, excluding methane, CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

4 PM10 and PM2.5 consists of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

TABLE 3.2-1. AMBIENT AIR QUALITY STANDARDS AND BAY AREA ATTAINMENT STATUS

Pollutant	Averaging Time	CAAQS	Bay Area Attainment Status for CAAQS	NAAQS	Bay Area Attainment Status for NAAQS	Major Pollutant Sources
Ozone	8 hour	0.070 ppm	Non-Attainment	0.070 ppm	Non-Attainment	Formed when ROG and NOx react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/ industrial mobile equipment.
	1 hour	0.09 ppm	Non-Attainment	---	---	
Carbon Monoxide	8 hour	9.0 ppm	Attainment	9 ppm	Attainment	Internal combustion engines, primarily gasoline-powered motor vehicles
	1 Hour	20 ppm	Attainment	35 ppm	Attainment	
Nitrogen Dioxide	Annual Average	0.030 ppm	---	0.053 ppm	Attainment	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads
	1 Hour	0.18 ppm	Attainment	0.100 ppm	Attainment	
Sulfur Dioxide	Annual Average	---	---	0.030 ppm	---	Fuel combustion, chemical plants, sulfur recovery plants and metal processing
	24 Hour	0.04 ppm	Attainment	0.14 ppm	---	
	1 Hour	0.25 ppm	Attainment	0.075 ppm	---	
Particulate Matter (PM10)	Annual Arithmetic Mean	20 $\mu g/m^3$	Non-Attainment	---	---	Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays)
	24 hour	50 $\mu g/m^3$	Non-Attainment	150 $\mu g/m^3$	Unclassified	
Particulate Matter (PM2.5)	Annual Arithmetic Mean	12 $\mu g/m^3$	Non-Attainment	12 $\mu g/m^3$	Unclassified/Attainment	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.
	24 hour	---	---	35 $\mu g/m^3$	Non-Attainment	
Lead	Calendar Quarter	---	---	1.5 $\mu g/m^3$	Attainment	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	30 Day Average	1.5 $\mu g/m^3$	Attainment	---	---	

NOTE: ppm = parts per million; and $\mu g/m^3$ = micrograms per cubic meter

SOURCE: BAAQMD. 2017b. Air Quality Standards and Attainment Status. January 2017. https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status, Accessed July 19, 2021.

Toxic Air Contaminants

Toxic air contaminants (TACs) are regulated under both state and federal laws. Federal laws use the term "Hazardous Air Pollutants" (HAPs) to refer to the same types of compounds that are referred to as TACs under state law. Both terms encompass essentially the same compounds. Under the 1990 Federal Clean Air Act Amendments, 189 substances are regulated as HAPs.

With respect to state law, in 1983 the California legislature adopted Assembly Bill 1807 (AB 1807), which establishes a process for identifying TACs and provides the authority for developing retrofit air toxics control measures on a statewide basis. Air toxics in California may also be regulated because of another state law, the Air Toxics "Hot Spots" Information and Assessment Act of 1987, or Assembly Bill 2588 (AB 2588). Under AB 2588, TACs from individual facilities must be quantified and reported to the local air pollution control agency. The facilities are then prioritized by the local agencies based on the quantity and toxicity of these emissions, and on their proximity to areas where the public may be exposed. In establishing priorities, the air districts are to consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the air district determines may indicate that the facility may pose a significant risk. High priority facilities are required to perform a Health Risk Screening Assessment (HRSA), and if specific risk thresholds are exceeded, they are required to communicate the results to the public in the form of notices and public meetings. Depending on the health risk levels, emitting facilities can be required to implement varying levels of risk reduction measures. California Air Resources Board (CARB) identified approximately 200 TACs, including the 189 federal HAPs, under AB 2588.

BAAQMD is responsible for administering federal and state regulations related to TACs. Under federal law, these regulations include National Emission Standards for Hazardous Air Pollutants (NESHAPs) and Maximum Achievable Control Technology (MACT) for affected sources. BAAQMD also administers the state regulations AB1807 and AB2588 which were discussed above. In addition, the agency requires that new or modified facilities that emit TACs perform air toxics screening analyses as part of the permit application. TAC emissions from new and modified sources are limited through the air toxics new source review program, which superseded the BAAQMD Risk Management Policy, in BAAQMD Regulation 2, Rule 5 for New Source Review of Toxic Air Contaminants. Sources must use the Best Available Control Technology for Toxics (T-BACT) if an individual source cancer risk of greater than 1 in a million, or a chronic hazard index greater than 0.20, is identified in health risk modeling.

The CARB adopted the *Air Quality and Land Use Handbook* (CARB, 2005) to provide guidance to planning agencies and air districts for considering potential impacts to sensitive land uses proposed in proximity to TACs emission source(s). The goal of the guidance document is to protect sensitive receptors, such as children, seniors, and acutely ill and chronically ill persons, from exposure to TACs emissions. CARB's siting guidelines recommend the following: (1) avoid siting sensitive receptors within 500 feet of freeways and high-traffic roads (i.e., roads within urbanized areas carrying more than 100,000 vehicles per day); (2) avoid siting sensitive receptors within 1,000 feet of an applicable distribution center; and (3) avoid siting sensitive receptors within 300 feet of a dry cleaning facility that use the chemical perchloroethylene. The recommendations

provided are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

In addition, reducing diesel particulate matter (DPM) is one of the CARB's highest public health priorities and the focus of a comprehensive statewide control program that is reducing DPM emissions each year. In 1998, the CARB classified DPM as a TAC, citing its potential to cause cancer and other health problems. U.S. EPA concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects. The CARB's long-term goal is to reduce DPM emissions 85 percent by 2020.

Local Air Quality

The BAAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The monitoring station closest to the Project site is the Livermore Monitoring Station at 793 Rincon Avenue, approximately two miles southwest of the Project site. The Livermore Monitoring Station measures levels of ozone, PM2.5, and NO_2.

Table 3.2-2 summarizes the most recent three years of data (2017 through 2019) from the BAAQMD's Livermore Monitoring Station. The 1-hour ozone CAAQS was exceeded five times in 2017, two times in 2018, and four times in 2019. The 8-hour ozone CAAQS and NAAQS were exceeded six times in 2017, three times in 2018, and seven times in 2019. The 24-hour PM2.5 NAAQS was exceeded (estimated) two times in 2017, 15 times in 2018 (likely due to wildfires), and zero times in 2019. No other standards were exceeded at the Livermore Monitoring Station during the three-year period.

TABLE 3.2-2. SUMMARY OF ANNUAL MONITORING DATA OF AMBIENT AIR QUALITY

Pollutant	Standard	2017	2018	2019
Ozone				
Maximum Concentration (1-hour/8-hour average)	ppm	**0.109/0.086**	**0.099/0.078**	**0.105/0.078**
Number of days State standard exceeded (1-hour/8-hour)	0.09/0.070	5/6	2/3	4/7
Number of days National standard exceeded (8-hour)	0.070	6	3	7
Fine Particulate Matter (PM2.5)				
Maximum Concentration (24-hour)	µg/m^3	**41.5**	**172.6**	28.8
Number of days National standard exceeded (24-hour measured/estimated)	35	2/2	14/15	0/0
Annual Average (State/National standard)	12/12.0	8.4/8.4	11.3/11.2	6.4/6.3
Nitrogen Dioxide (NO_2)				
Maximum Concentration (24-hour)	ppm	0.045	0.056	0.048
Number of days State standard exceeded (24-hour)	0.18	0	0	0
Annual Average (State standard)	0.030	0.008	0.008	0.007

NOTES:
ppm = parts per million, µg/m^3 = micrograms per cubic meter
bold values exceeded the State and/or National standard
Ambient air concentrations from the Livermore Monitoring Station (approximately two miles southwest of the Project site)

SOURCE: CARB, *iADAM: Air Quality Data Statistics*, https://www.arb.ca.gov/adam, Accessed July 19, 2021.

Regional Air Quality Plans

The 1977 Clean Air Act amendments require that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 California Clean Air Act also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as State Implementation Plans.

Bay Area ozone levels have been greatly reduced in recent years, but the region still does not fully attain the CAAQS and NAAQS. The California Clean Air Act, as codified in the California Health & Safety Code, requires regional air districts that do not attain state ozone standards to prepare ozone plans. To that end, BAAQMD's 2017 Clean Air Plan serves to update the most recent Bay Area ozone plan, the 2010 Clean Air Plan. The Health & Safety Code requires that ozone plans propose a control strategy to reduce emissions of ozone precursors—ROG and NOx—and reduce transport of ozone and its precursors to neighboring air basins. The control strategy must either reduce emissions 5 percent or more per year, or include "all feasible control measures." Because reducing emissions of ozone precursors by 5 percent per year is not achievable, the control strategy for the 2017 Clean Air Plan is based on the "all feasible measures" approach.

2017 Clean Air Plan

The BAAQMD's *2017 Clean Air Plan* includes the Bay Area's first-ever comprehensive Regional Climate Protection Strategy, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG emissions in the Bay Area. Measures of the 2017 Clean Air Plan addressing the transportation sector are in direct support of Plan Bay Area 2040, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the region's transportation plan/ sustainable communities strategy. Highlights of the *2017 Clean Air Plan* control strategy include:

- *Limit Combustion*: Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- *Stop Methane Leaks*: Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- *Reduce Exposure to Toxics*: Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- *Put a Price on Driving*: Implement pricing measures to reduce travel demand.
- *Advance Electric Vehicles*: Accelerate the widespread adoption of electric vehicles.

- *Promote Clean Fuels*: Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- *Accelerate Low-Carbon Buildings*: Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- *Support More Energy Choices*: Support of community choice energy programs throughout the Bay Area.
- *Make Buildings More Efficient*: Promote energy efficiency in both new and existing buildings.
- *Make Space and Water Heating Cleaner*: Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

Sensitive Receptors

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. According to the BAAQMD, workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees. BAAQMD considers the relevant zone of influence for an assessment of air quality health impacts to be within 1,000 feet of a project site. Residential areas are located approximately 2,300 feet to the northeast and 1,700 feet to the southeast of the Project site. There is a residence on an agricultural parcel approximately 800 feet east of the Project site. No schools are within one-mile of the Project site.

Bay Area Air Quality Management District Rules and Regulations

Emissions sources subject to these rules are regulated through the BAAQMD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the BAAQMD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of a project would be subject to the BAAQMD Rules and Regulations. Both federal and state ozone plans rely upon stationary source control measures set forth in BAAQMD's Rules and Regulations.

With respect to the construction activities associated with Project development, applicable BAAQMD regulations would relate to portable equipment (e.g., gasoline- or diesel-powered engines used for power generation, pumps, compressors, and cranes), architectural coatings, and paving materials. Equipment used during Project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered Statewide Portable Equipment); BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings); and BAAQMD Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts). With respect to the operational phase of the Project, BAAQMD Regulation 2, *Permits,* would apply to any new or modified stationary sources, such as the natural gas fired incinerator and natural gas fired emergency generator.

Alameda County General Plan

The Alameda County General Plan (Conservation Element), adopted in 1975 (amended in 1994), provides the following goals and objectives related to air quality that apply to the Project:

> *Other Natural Resources Goal Policy Goal #1:* To insure and maintain the highest possible air quality in the County.
>
> *Other Natural Resources Goal Policy Goal #2*: To insure measures which conserve energy.
>
> *Other Natural Resources Objective #1*: In areas of critical air pollution to attempt to restore and prevent further degradation of air quality.
>
> *Other Natural Resources Objective #2*: To achieve coordination of air quality policies and regulations at the federal, state, regional and local level.
>
> *Other Natural Resources Objective #3*: To educate government, business and citizens to assist in reducing poor air quality through alternate means of travel or by reduced use of internal combustion engines.
>
> *Other Natural Resources Objective #4*: To investigate and implement measures to conserve energy.

East County Area Plan

In addition to the Alameda County General Plan's Conservation Element, the East County Area Plan (ECAP), which is the governing general plan for the Project area, contains goals, policies, and implementation programs related to air quality. The following policies pertaining to air quality are relevant to the Project:

> *Policy 291*: The County shall strive to meet federal and state air quality standards for local air pollutants of concern. In the event that standards are exceeded, the County shall require appropriate mitigation measures on new development.
>
> *Policy 294*: The County shall require new development projects to include traffic and air pollutant reduction measures to help attain air quality standards. For non-residential projects, these measures could include Transportation Demand Management programs such as

ridesharing and transit promotion; for residential projects, these measures could include site plan features to reduce traffic trip generation such as mixed use development and transit-oriented development.

Policy 296: The County shall review the cumulative impact of proposed projects for their potential effect on air quality conditions.

Policy 300: The County shall review proposed projects for their potential to generate hazardous air pollutants.

Policy 301: The County shall only approve new air pollution point sources such as manufacturing and extracting facilities when they are located away from residential areas and sensitive receptors.

3.2.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

For the purposes of the EIR, consistent with Appendix G of the CEQA *Guidelines*, impacts related to air quality would be considered significant if the Project would:

- conflict with or obstruct implementation of the applicable air quality plan;
- result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable NAAQS or CAAQS;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

As stated in Appendix G of the CEQA *Guidelines*, the significance criteria established by the applicable air quality district may be relied upon to make the above determinations. Thus, according to the BAAQMD's *CEQA Guidelines*, the Project would result in a significant impact to air quality if it would result in the following:

- Average daily construction exhaust emissions of 54 pounds per day of ROG, NO_x, or PM2.5 or 82 pounds per day of PM10;
- Average daily operation emissions of 54 pounds per day of ROG, NOx, or PM2.5 or 82 pounds per day of PM10; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or PM2.5 or 15 tons per year of PM10;
- Exposure of sensitive receptors to substantial levels of TAC resulting in (a) a cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers; or
- Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people.

Impact Analysis

Impact 3.2.1: The Project could conflict with the BAAQMD's 2017 Clean Air Plan. (Less than Significant)

As discussed previously, the BAAQMD's *2017 Clean Air Plan* is the applicable air quality plan to the Project. The BAAQMD considers a proposed project consistent with the *2017 Clean Air Plan* if it:

1. Supports the primary goals of the *2017 Clean Air Plan;*
2. Includes applicable control measures from the *2017 Clean Air Plan*; and
3. Does not disrupt or hinder implementation of any *2017 Clean Air Plan* control measures.

Supports the Primary Goals of the *2017 Clean Air Plan*

The primary goals of the *2017 Clean Air Plan* are to protect air quality and health at the regional and local scale and to protect the climate. Any project that would not support these goals would not be considered consistent with the *2017 Clean Air Plan*. The BAAQMD recommended measure for determining project support of these goals is consistency with the BAAQMD's thresholds of significance. As noted throughout this air quality analysis, the Project would not exceed BAAQMD's significance thresholds and all air quality impacts would be less than significant. Therefore, the Project supports the primary goals of the *2017 Clean Air Plan.*

Includes Applicable Control Measures from the *2017 Clean Air Plan*

The *2017 Clean Air Plan* contains 85 control strategies aimed at reducing air pollution and GHG emissions in the Bay Area. For consistency with climate planning efforts at the State level, the control strategies in the *2017 Clean Air Plan* are based on the same economic sector framework used by CARB, which encompass stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. None of the control strategies are applicable to individual development projects, such as the Project. However, the Project would include several features that benefit air quality, such as 30 electric vehicle (EV) charging stalls, photovoltaic (PV) solar panels, biodiesel or natural gas fueled tractors for burials, and all electric landscaping equipment (Kliment, 2021). Thus, the GP 2040 includes the applicable control measures from the *2017 Clean Air Plan*.

Does not Disrupt or Hinder Implementation of any *2017 Clean Air Plan* Control Measures

The Project does not include any component that would disrupt or hinder implementation of any of the *2017 Clean Air Plan* control measures. Furthermore, the Project would include several features that benefit air quality, such as 30 EV charging stalls, PV solar panels, biodiesel or natural gas fueled tractors for burials, and all electric landscaping equipment.

Conclusion

In conclusion, the Project would not conflict with the *2017 Clean Air Plan* since it supports primary goals of the *2017 Clean Air Plan*, includes applicable control measures from the *2017*

Clean Air Plan, and would not disrupt or hinder implementation of any *2017 Clean Air Plan* control measures. Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.2.2: Project construction activities could result in a cumulatively considerable net increase of emissions of criteria air pollutants and precursors. (Significant)

ROG, NOx, PM10, and PM2.5 are the criteria air pollutants of primary concern in this analysis since the BAAQMD is designated as nonattainment for NAAQS and/or CAAQS for ozone (ROG and NOx are ozone precursors), PM10, and PM2.5. Construction-related activities would generate emissions of ROG, NOx, PM10, and PM2.5 from off-road equipment used for site preparation, grading/excavation, trenching/utilities, paving, building construction/equipment installation and architectural coating associated with Project elements; on-road trucks used for material delivery and equipment hauling; and worker commute trips. Fugitive dust PM10 and PM2.5 emissions would also be generated by ground disturbance and would vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance.

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA, 2021). Phase I average daily construction exhaust emissions are summarized in **Table 3.2-3** and Phase II average daily construction exhaust emissions are summarized in **Table 3.2-4**. The average daily construction exhaust emissions (i.e., total construction phase emissions divided by the number of construction days) were compared to the BAAQMD's thresholds of significance. Detailed modeling assumptions and results are provided in **Appendix C**.

TABLE 3.2-3. PHASE I AVERAGE DAILY CONSTRUCTION EXHAUST EMISSIONS

Condition	ROG lbs/day	NOx lbs/day	PM10[2] lbs/day	PM2.5[2] lbs/day
Average Daily Construction Emissions[1]	2.1	13.3	0.6	0.5
BAAQMD Threshold of Significance	54	54	82	54
Potentially Significant?	No	No	No	No

NOTES:

[1] Emissions estimates conservatively assume that Phase I of the Project is constructed continuously over approximately 21 months. While buildout of Phase I of the Project will likely occur over five years and would likely result in lower emissions than displayed above. Values reflect rounding.

[2] PM10 and PM2.5 construction thresholds of significance apply to exhaust emission only. Fugitive PM10 and PM2.5 (fugitive dust) are considered to be less than significant if best management practices are implemented.

SOURCE: CAPCOA, 2021 & RCH Group, 2021

TABLE 3.2-4. PHASE II AVERAGE DAILY CONSTRUCTION EXHAUST EMISSIONS

Condition	ROG lbs/day	NOx lbs/day	PM10[2] lbs/day	PM2.5[2] lbs/day
Average Daily Construction Emissions[1]	20.1	21.4	0.8	0.7
BAAQMD Threshold of Significance	54	54	82	54
Potentially Significant?	No	No	No	No

NOTES:
[1] Emissions estimates conservatively assume that Phase II of the Project is constructed continuously over approximately 29 months. While buildout of Phase II of the Project will likely occur over 100 years and would likely result in lower average daily emissions than displayed above. Values reflect rounding.
[2] PM10 and PM2.5 construction thresholds of significance apply to exhaust emission only. Fugitive PM10 and PM2.5 (fugitive dust) are considered to be less than significant if best management practices are implemented.

SOURCE: CAPCOA, 2021 & RCH Group, 2021

Phase I

Phase I development would occur over 6.8 acres of the Project site. Phase I would include construction of the funeral home and entry plaza, the single-story "Pavilion" building, the access road, the parking lot, burial lots, and landscaping east of Arroyo Las Positas. Phase I grading of the Project site would be balanced and would not require soil import or export. Construction would require approximately 30 working days of site preparation, 90 working days of grading, 30 working days of utilities/trenching, 270 working days of building construction, 30 working days of paving, and 30 working days of architectural coating. While Phase I construction is expected to occur over five years, this air quality analysis assumes construction would commence in January 2023 and be complete by September 2024 (approximately 21 months). Phase I average daily construction exhaust emissions are summarized in **Table 3.2-3** and would not exceed BAAQMD's thresholds of significance.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the Project site and could result in nuisance-type impacts. The BAAQMD considers fugitive dust impacts to be significant unless best management practices are implemented. Therefore, this would be a significant impact of the Project.

Phase II

Phase II development would occur over 40.3 acres of the Project site. Phase II construction would include construction of the burial lots, new wetland features, lakes and landscaping west of Arroyo Las Positas. Phase II grading of the Project site would be balanced and would not require soil import or export. Construction would require approximately 60 working days of site preparation, 180 working days of grading, 60 working days of utilities/trenching, 270 working days of building construction, 60 working days of paving, and 60 working days of architectural coating). While Phase II construction is expected to occur over approximately 100 years, this air

quality analysis assumes construction would commence in January 2027 and be complete by June 2029 (approximately 29 months). Phase II average daily construction exhaust emissions are summarized in **Table 3.2-4** and would not exceed BAAQMD's threshold of significance.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM10 concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM10, but also larger particles, which would fall out of the atmosphere within several hundred feet of the Project site and could result in nuisance-type impacts. The BAAQMD considers fugitive dust impacts to be significant unless best management practices are implemented. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.2.2: The Applicant shall require the following BAAQMD recommended basic construction mitigation measures during Project construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Level of Significance After Mitigation

Mitigation Measure 3.2.2 would reduce the impact to less than significant.

Impact 3.2.3: Project operational activities could result in a cumulatively considerable net increase of emissions of criteria air pollutants and precursors. (Less than Significant)

ROG, NOx, PM10, and PM2.5 are the criteria air pollutants of primary concern in this analysis since the BAAQMD is designated as nonattainment for NAAQS and/or CAAQS for ozone (ROG and NOx are ozone precursors), PM10, and PM2.5. Project operations would generate emissions of ROG, NOx, PM10, and PM2.5 from motor vehicles, onsite equipment (biodiesel or natural gas

fueled tractors), landscaping equipment, area sources (e.g., solvents and cleaners), and energy use. Operational emissions would also be generated through use of the natural gas fired incinerator for the crematorium and the natural gas fired emergency generator. It was assumed that 1,000 bodies per year would be incinerated through the crematorium operations and that the emergency generator would be limited to 50 hours per year for testing per BAAQMD Rules and Regulations.

Project operational emissions were estimated using the CalEEMod Version 2020.4.0 (CAPCOA, 2021) and San Diego Air Pollution Control District emission factors for cremation (Environmental Permitting Specialists, 2021). Project operational emissions were conservatively analyzed for full buildout of the Project for operational year 2025. Project operational emissions are summarized in **Table 3.2-5** (daily) and **Table 3.2-6** (annual) and would not exceed BAAQMD's threshold of significance. Detailed modeling assumptions and results are provided in **Appendix C**.

TABLE 3.2-5. PROJECT DAILY OPERATIONAL EMISSIONS

Condition	ROG lbs/day	NOx lbs/day	PM10 lbs/day	PM2.5[2] lbs/day
Summer Operational Emissions[1]	2.6	1.5	0.5	1.5
Winter Operational Emissions[1]	2.6	1.6	0.5	1.5
BAAQMD Threshold of Significance	54	54	82	54
Potentially Significant?	No	No	No	No

NOTES:
[1] Emissions estimates conservatively assume that the Project will be fully operational by year 2025. Values reflect rounding.
[2] PM2.5 emissions include 1.34 lbs/day from the natural gas fired incinerator for crematorium operations (Environmental Permitting Specialists, 2021).

SOURCE: CAPCOA, 2021, RCH Group, 2021, & Environmental Permitting Specialists, 2021.

TABLE 3.2-6. PROJECT ANNUAL OPERATIONAL EMISSIONS

Source	ROG tons/year	NOx tons/year	PM10 tons/year	PM2.5[2] tons/year
Area	0.09	0.00	0.00	0.00
Energy	0.00	0.03	0.00	0.00
Mobile On Road	0.04	0.04	0.07	0.02
Mobile Off Road	0.01	0.13	0.00	0.00
Emergency Generator	0.04	0.00	0.00	0.00
Incinerator	0.00	0.00	0.00	0.24
Total Annual Operational Emissions[1]	**0.19**	**0.21**	**0.08**	**0.27**
BAAQMD Threshold of Significance	10	10	15	10
Potentially Significant?	No	No	No	No

NOTES:
[1] Emissions estimates conservatively assume that the Project will be fully operational by year 2025. Values reflect rounding
[2] PM2.5 emissions include 487.5 lbs/yr (0.24 tons/yr) from the natural gas fired incinerator for crematorium operations (Environmental Permitting Specialists, 2021).

SOURCE: CAPCOA, 2021, RCH Group, 2021, & Environmental Permitting Specialists, 2021.

As shown in **Table 3.2-5** and **Table 3.2-6,** Project operational emissions would be below BAAQMD's daily and annual thresholds of significance. Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.2.4: Project operational activities could expose sensitive receptors to substantial concentrations of TACs. (Less than Significant)

A health risk assessment (HRA) was prepared to evaluate the public health risks associated with the Project and is provided in **Appendix C** (Environmental Permitting Specialists, 2021). The HRA was prepared based on the California Office of Environmental Health Hazard Assessment (OEHHA)'s *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA, 2015) and BAAQMD's *CEQA Guidelines*. The HRA assumed up to 1,000 cremations per year using a natural gas fired incinerator with an afterburner to control emissions. The objective of the HRA was to determine if the Project would expose nearby sensitive receptors to significant health risks (levels above BAAQMD's health risk significance thresholds). The four types of risks that were evaluated in the HRA are:

- Individual Cancer Risk
- Chronic Non-Cancer Risk
- Acute Non-Cancer Risk
- Exposure to PM2.5 Concentration

Individual cancer risk refers to the increased probability that an individual would contract cancer after long-term exposure, typically 25 to 70 years. For residences, a 30-year exposure is recommended by OEHHA. The HRA determined that the maximum residential cancer risk would be 0.13 cancers per million and would occur at the residence on an agricultural parcel 800 feet east of the Project site. Therefore, cancer risk from the Project would be less than the BAAQMD's significance threshold of 10 per million.

The HRA also evaluated acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer. Acute and chronic health impacts unelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the Project to a reference exposure level (REL) that could cause adverse health effects. The maximum chronic HI would be 0.0148 and the maximum acute HI would be 0.0060. Therefore, the chronic HI would be less than the BAAQMD's significance threshold of 1.

The HRA also evaluated exposure to PM2.5 concentrations. Non-cancer residential health risks associated with exposure to concentration of PM-2.5 assume an exposure duration of 1 year to concentrations of PM-2.5 released from the crematory. The maximum annual PM2.5 concentration

would be 0.17 micrograms per cubic meter (ug/m^3). Therefore, PM2.5 concentrations would be less than the BAAQMD's significance threshold of 0.3 ug/m^3.

The HRA also evaluated cumulative cancer risk, which included sources of TACs within 1,000 feet of the Project site. There are no stationary sources of TACs within 1,000 feet of the Project site. However, portions of Interstate-580 are within 1,000 feet of the Project site. The maximum cumulative cancer risk would be 29.5 cancers per million and would occur at the residence on an agricultural parcel 800 feet east of the Project site. Therefore, cumulative cancer risk from the Project would be less than the BAAQMD's significance threshold of 100 per million.

The Project would not expose nearby sensitive receptors to significant health risks as cancer risk (including cumulative risk), non-cancer risk (acute and chronic), and PM2.5 exposure with the Project would be below BAAQMD's health risk significance thresholds. Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.2.5: Project operations could generate odors that could adversely affect a substantial number of people. (Less than Significant)

The occurrence and severity of odor impacts depend on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

The BAAQMD *CEQA Guidelines* provides screening distances for the following potential odor sources: wastewater treatment plants, wastewater pumping facilities, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing, fiberglass manufacturing, painting/coating operations, rendering plants, food processing facilities, confined animal facilities/feed lots/dairies, green waste and recycling operations, and coffee roasters. Cemeteries and crematoriums are not considered as potential odor sources by the BAAQMD.

One residence on an agricultural parcel is 800 feet east of the Project site. The next closest residences are approximately 1,800 feet to the southeast and approximately 2,400 feet to the northeast. Odors related to cremation are a result of incomplete combustion in the air. The natural gas fired incinerator would be equipped with an afterburner to control emissions from incomplete combustion including odors. The Project would not generate odors that could adversely affect a substantial number of people. Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

3.2.3 REFERENCES

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3.3 BIOLOGICAL RESOURCES

This section describes the environmental conditions of the Project area, analyzes potential impacts to biological resources, and provides Mitigation Measures to reduce potential biological impacts to a less-than-significant level.

3.3.1 SETTING

Regulatory Considerations

This section summarizes the federal and state regulations that may pertain to the proposed Project. This section also discusses pertinent local general plan policies and ordinances related to the protection and preservation of biological resources.

Federal Regulations

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), enacted in 1973, prohibits the taking, possession, sale, or transport of endangered species. Under the FESA, the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered. Both the National Marine Fisheries Service (NMFS) and the U.S. Fish & Wildlife Service (USFWS) administer FESA. NMFS is accountable for animals that are threatened or endangered (16 United States Code [USC] 1533[c]) and spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish such as Pacific salmon. The USFWS is accountable for all other federally listed plants and animals.

Pursuant to the requirements of FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the Study Area and whether the project will have a potentially significant impact on such species. In addition, federal agencies are required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]).

Projects that would result in a "take" of any federally listed threatened or endangered species are required to obtain authorization from NMFS and/or USFWS through either Section 7 (interagency consultation) or section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitat in non-federal activities.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations (CFR) Section 10.13. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50 CFR 20. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors).

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act regulates or prohibits taking, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit (16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3).

Federal Clean Water Act

The Clean Water Act (CWA) was passed by Congress in 1972 with a broad mandate "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The chief purpose of the CWA is to establish the basic structure for regulating discharges of pollutants into waters of the United States. The CWA authorizes the Environmental Protection Agency (EPA) to set national water quality standards and effluent limitations, and includes programs addressing both point-source and nonpoint-source pollution. Point-source pollution is pollution that originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Nonpoint-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. Aquatic resources present in the Project area would not likely be regulated under CWA Section 404 (described below).

Section 401: Water Quality Certification

The State Water Resources Control Board (SWRCB) has authority over wetlands through Section 401 of the CWA, as well as the Porter-Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy.

The CWA requires that an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain a certificate from the appropriate state agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the SWRCB to the nine regional boards. The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) is the appointed authority for Section 401 compliance in the project site. The SWRCB additionally requires additional Waste Discharge Requirements under Porter-Cologne to protect aquatic resources that are outside federal jurisdiction.

A request for certification or waiver is submitted to the Regional Board at the same time an application is filed with the United State Army Corps of Engineers (USACE). The regional board has 60 days to review the application and act on it. Because no USACE permit is valid under the CWA unless "certified" by the state, these boards may effectively veto or add conditions to any USACE permit.

Section 402: Permits for Stormwater Discharge

CWA Section 402 regulates construction-related storm water discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, administered by EPA. In California, the State Water Resources Control Board (State Water Board) is authorized by EPA to oversee the NPDES program through the regional water boards.

NPDES permits are required for projects that disturb more than 1 acre of land. The NPDES permitting process requires the applicant to file a public notice of intent to discharge storm water and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must include a site map, a description of proposed construction activities, and the best management practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, and cement) that could contaminate nearby water resources.

Because the Project would disturb more than 1 acre of land, preparation of a SWPPP and compliance with an NPDES permit would likely be required.

Section 404: Permits for Fill Placement in Waters of the United States (Including Wetlands)

Section 404 of the CWA identifies the USACE as the principal authority to regulate activity that could discharge fill or dredge material or otherwise adversely modify wetlands or Waters of the U.S. (WOUS). The USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function. U.S. Congress has authorized the Environmental Protection Agency (EPA) to have a specific oversight role over USACE's authority.

State Regulations

California Endangered Species Act

The CESA was enacted in 1984. Under the CESA, the California Fish and Wildlife Commission (CFWC) has the responsibility for maintaining a list of threatened and endangered species, while The California Department of Fish & Wildlife (CDFW) is responsible for enforcement. CDFW also maintains lists of species of special concern. A Species of Special Concern (CSC) is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered;

- meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

CESA prohibits the take of California listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions. Pursuant to the requirements of CESA, a State agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present in the site and determine whether the project would have a potentially significant impact on such species. In addition, CDFW encourages consultation on any project that could affect a listed or candidate species.

Fish and Game Code – Sections 1600-1616

Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the code as the "… bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit ..." (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

The CDFW also derives its authority to oversee activities that affect wetlands from state legislation. This authority includes Sections 1600-1616 of the Fish and Game Code (lake and streambed alteration agreements), Section 30411 of the California Coastal Act (CDFW becomes the lead agency for the study and identification of degraded wetlands within the Coastal Zone), CESA (protection of state listed species and their habitats - which could include wetlands), and the Keene-Nejedly California Wetlands Preservation Act of 1976 (states a need for an affirmative and sustained public policy program directed at wetlands preservation, restoration, and enhancement). In general, the CDFW asserts authority over wetlands within the state either through review and comment on USACE Section 404 permits, review and comment on CEQA documents, preservation of state listed species, or through stream and lakebed alteration agreements.

Fish and Game Code – Sections 1900-1913

These Sections embody the Native Plant Protection Act, which is intended to preserve, protect, and enhance endangered or rare native plants in the state. The act directs CDFW to establish criteria for determining what native plants are rare or endangered. Under Section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. Under the act, CDFW may adopt regulations governing the taking, possessing, propagation or sale of any endangered or rare native plant.

Section 1913 of that Act allows landowners in conducting certain activities to take actions that will destroy rare or endangered plants, provided that, where the Department of Fish and Game (DFG) has previously notified the owner "that rare or endangered plants are growing" on his or her land, the owner notifies CDFW "at least 10 days in advance of changing the land" to allow the state agency to come and "salvage" the plants. Subject to this requirement, section 1913 states that "the presence of rare or endangered plants" on a property shall not restrict (1) timber operations conducted pursuant to an approved timber harvest plan, (2) "required mining assessment work pursuant to federal or state mining laws," (3) "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, other right-of-way by the owner of the land or his agent," or (4) "the performance by a public agency or publicly or privately owned public utility of its obligation to provide service to the public."

Fish and Game Code – Sections 3503, 3503.5, 3513

Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act.

Fish and Game Code – Sections 3511, 4700, 5050, 5515

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code designate certain species as "fully protected." Fully protected species, or parts thereof, may not be taken or possessed at any time, and no provision of the CFWC or any other law may be construed to authorize the issuance of permits of licenses to take any fully protected species. No such permits or licenses heretofore issued may have any force or effect for any such purpose, except that the CFGC may authorize the collecting of such species for necessary scientific research. Legally imported and fully protected species or parts thereof may be possessed under a permit issued by CDFW. Porter-Cologne Water Quality Control Act.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the SWRCB and each Regional Water Quality Control Board (RWQCB) as the principal state agencies for coordinating and controlling water quality in California. Responsibility for the protection of water quality in California rests with the SWRCB and nine RWQCBs. The SWRCB establishes statewide policies and regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. Pursuant to the Act, each of California's nine regional boards must prepare and periodically update basin plans that set forth water quality standards for surface and groundwater, as well as actions to control point and non-point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to achieve wetlands protection through enforcement of water quality standards.

The Porter-Cologne Water Quality Control Act provides that "All discharges of waste into the waters of the State are privileges, not rights." Waters of the State are defined in Section 13050(e) of the Porter-Cologne Water Quality Control Act as "…any surface water or groundwater,

including saline waters, within the boundaries of the state." All dischargers are subject to regulation under the Porter-Cologne Water Quality Control Act, including both point and nonpoint source dischargers. The RWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction, which would include the project site. As noted above, the RWQCB is the appointed authority for Section 401 compliance in the project site. If the USACE determines that they have no regulatory authority on the project site and they also determine that a CWA Section 404 permit is not required, the project proponent could still be responsible for obtaining the appropriate CWA Section 401 permit or waiver from RWQCB for impacts to Waters of the State.

In 2019, the State Water Resource Control Board extended their water quality certification to include waste discharge requirements as adopted in the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State," which include elements of the Clean Water Act. These procedures also lay out the steps for the submission, review, and approval of applications for activities related to these activities.

Local Regulations

Alameda County General Plan

Alameda County has developed the following goals and objectives for natural resource conservation as part of the *Conservation Element of the Alameda County General Plan:*

- **Water Resources**

  Goal: To ensure and maintain a continuing supply of high water quality for the citizens of Alameda County.

  Objective: To reduce man-caused stream and ground water pollution and general resource denigration through cumulative impacts on surface and ground water systems.

  Objective: To define areas of periodic flooding and reduce loss through the application of sound land use planning.

  Objective: To maintain all water resources in their highest quality.

- **Vegetative and Wildlife Resources**

  Goal: To protect and enhance wildlife habitats and natural vegetation areas in Alameda County.

  Objective: To maintain and, if necessary, restore deteriorating environments to a level of diversity appropriate to this area of California.

- **Agriculture and Soils Resources Management**

  Goal: To protect and maintain soils in Alameda County in such a manner as to be beneficial to agricultural and open uses.

  Goal: To protect and maintain the soil resources in Alameda County in such a manner as to be beneficial to all land users.

East County Area Plan

The East County Area Plan (ECAP) includes the following goals and policies that are applicable to the Project:

> *Policy 122*: The County shall encourage that wetland mitigation be consolidated in areas that are relatively large and adjacent to or otherwise connected to open space. To the extent possible, these areas should be included in, adjacent to, or linked through open space corridors with lands designated as "Resource Management" that are managed specifically for the preservation and enhancement of biological resources.
>
> *Policy 124*: The County shall encourage the maintenance of biological diversity in East County by including a variety of plant communities and animal habitats in areas designated for open space.
>
> *Policy 125*: The County shall encourage preservation of areas known to support special-status species.
>
> *Policy 126*: The County shall encourage no net loss of riparian and seasonal wetlands.

Alameda County Code, Article II. Permit Requirements

Alameda County regulates construction, erosion repair, planting, and associated activities with the potential to affect watercourses or riparian zone (Section 13.12.020 of the General Ordinance Code of the County of Alameda). Those wanting to conduct any of the activities below must obtain a permit.

a. Discharge into or connect any pipe or channel to a watercourse;

b. Modify the natural flow of water in a watercourse;

c. Carry out development within a setback;

d. Deposit in, plant in, or remove any material from a watercourse including its banks, except as required for necessary maintenance;

e. Construct, alter, enlarge, connect to, change, or remove any structure in a watercourse; or

f. Place any loose or unconsolidated material along the side of or within a watercourse or so close to the side as to cause a diversion of the flow, or to cause a probability of such material being carried away by stormwaters passing through said watercourse.

East Alameda County Conservation Strategy (EACCS)

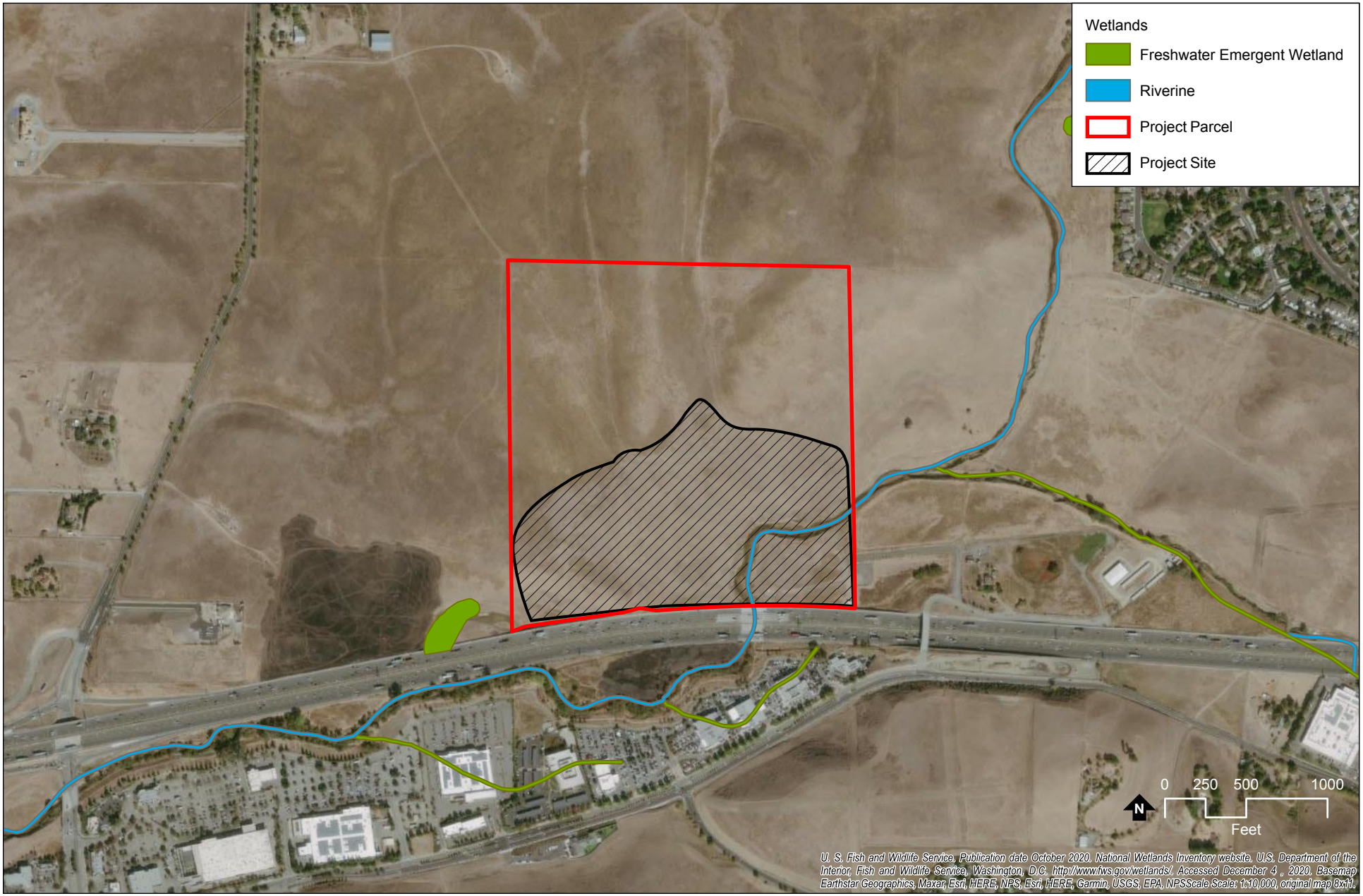
The EACCS is intended to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects (EACCS, 2010). The Project is located in Conservation Zone 4. Conservation Zone 4 is located in the north central part of the Conservation Strategy study area in the Livermore Valley (EACCS, 2010). The following priorities for Conservation Zone 4 are applicable to the Project:

- Protection and management of alkali meadow and scald, valley sink scrub, seasonal wetland, and perennial freshwater marsh in the Springtown Alkali Sink and surrounding watershed.
- Protection of the palmate-bracted bird's beak population.
- Protection of vernal pool and longhorn fairy shrimp habitat.
- Protection of designated critical habitat for vernal pool and longhorn fairy shrimp.
- Surveys for vernal pool and longhorn fairy shrimp and protection of documented occurrences.
- Protection of known occurrences of San Joaquin spearscale and surveys of other potential habitat.
- Protection of known occurrences of Congdon's tarplant and surveys of other potential habitat.
- Protection of designated critical habitat for California red-legged frog.
- Protection and restoration of Cayetano Creek, Arroyo Las Positas, and Altamont Creek.
- Protection of suitable habitat for Alameda whipsnake.
- Protection and enhancement of linkages across I-580 and Vasco Road for San Joaquin kit fox and American badger, including protection of lands on both sides of the roadways.

Methodology

Qualified Barnett Environmental biologists surveyed the Project site in October 2020 for special-status plant and wildlife species and their habitats that could be supported on-site. The survey included recorded observations of: (1) dominant plant communities, (2) plant and animal species (with emphasis on rare and endangered species) observed or their sign (nests, burrows, tracks, scat) and (3) the suitability of on-site habitats and those immediately adjoining the Study Area to support special-status plant or animal species. Barnett Environmental used generalized plant community classification schemes to classify on-site habitat types (Barnett Environmental, 2021) (See **Appendix D**).

Prior to Barnett's field surveys, Barnett Environmental queried the U.S. Fish & Wildlife Service's *National Wetland Inventory* (NWI) (**Figure 3.3-1**); National Resources Conservation Service (NRCS) Web Soil Survey (**Figure 3.3-2**); and Hydric Soil Map Units for Alameda County, California to determine whether any wetlands or "other waters of the U.S.", "waters of the State", or soils compatible with wetland resources had been historically recorded on or around, or are likely to occur on the site, as defined by the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and its 2008 Arid West Regional Supplement. (Barnett Environmental, 2021). Barnett Environmental also assessed potentially federal and/or state jurisdictional wetlands and "other waters of the U.S." in the Study Area in accordance with the 2014 Corps Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) for Non-perennial Streams in the Arid West Region of the Western United States.



Source: Barnett Environmental 2021

Figure 3.3-1
National Wetlands Inventory (NWI) Wetlands

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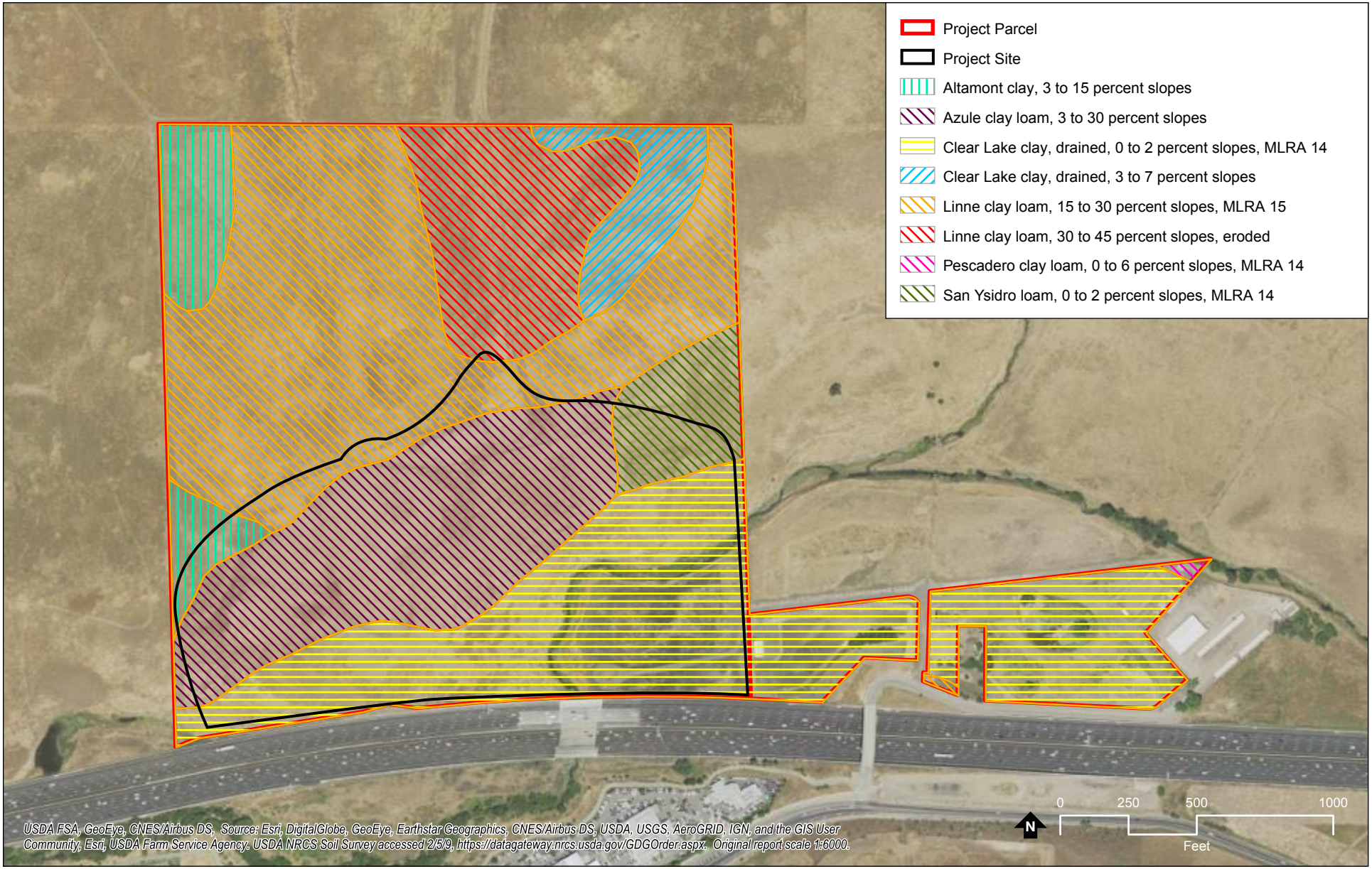

Source: Barnett Environmental 2021

Figure 3.3-2
Soils Map

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Barnett also queried EcoAtlas' *California Aquatic Resources Inventory* (CARI). A review of the National Wetlands Inventory and California Aquatic Resources Inventory map databases show very different scenarios for what is on the Project site. While the NWI accurately shows the Arroyo Las Positas in the SE corner of the parcel, the CARI map shows a number of other streams as well as a wide swath of vernal pools through the site (See **Appendix D**; **Figure 3**). These other steams and the wide swath of vernal pools are not consistent with the existing landscape for the Project site and vicinity.

To provide a vision of what potential biological resources may be present on the property, Barnett Environmental queried the following online sources for information on the Study Area's potential plant and wildlife communities (Barnett Environmental, 2021).

1. California Department of Fish & Wildlife's Natural Diversity Database (CNDDB) (RareFind 5) for observations of special-status plant and animal species within five miles of the Study Area (**Figure 3.3-3**).

2. U.S. Fish and Wildlife Service's Information for Planning and Consultation (iPac) Database of federally-listed special-status species in Alameda County.

3. The California Native Plan Society's Inventory of Rare & Endangered Plants in California.

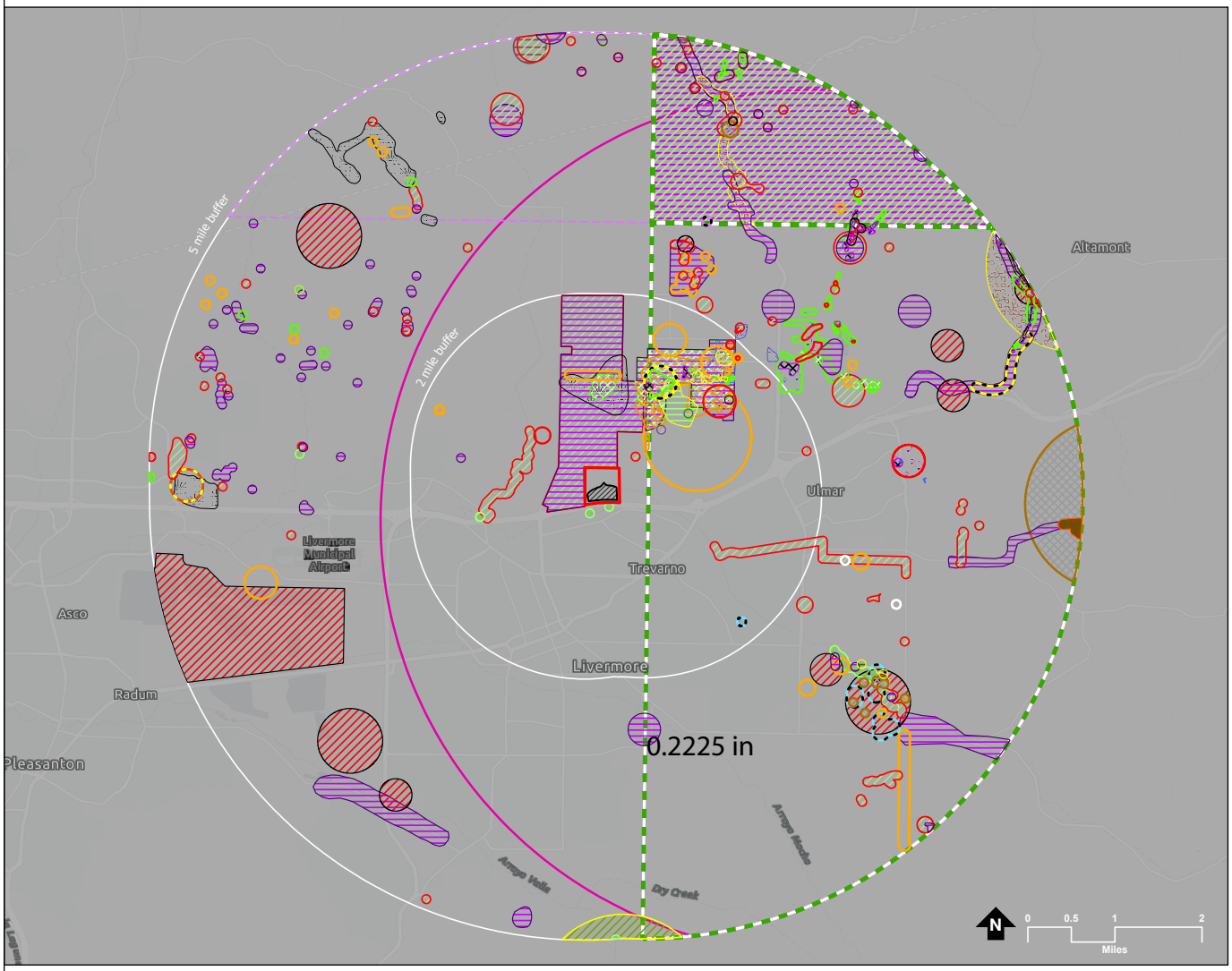
Existing Conditions

Soils

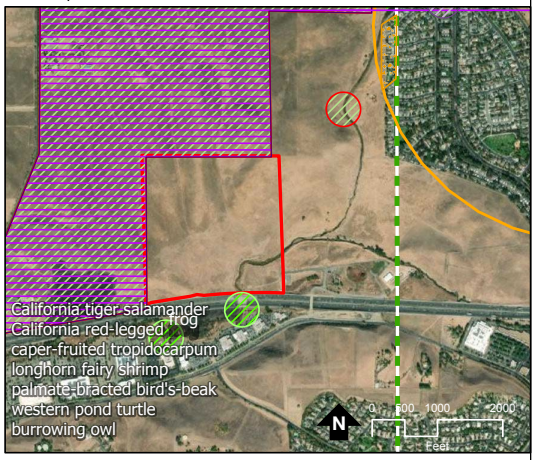
According to NRCS, the Study Area is comprised of eight soil types, two of which differ only by the steepness of slopes upon which they occur (Barnett Environmental, 2021) (See **Figure 3.3-2**).

1. Altamont clay, 3-15%;
2. Azule clay loam, 3-30%;
3. Clear Lake clay, 0-2%;
4. Clear Lake clay, 3-7%;
5. Linne clay loam, 15-30%;
6. Linne clay loam, 30-45%;
7. Pescadero clay loam, 0-6%; and
8. San Ysidro loam, 0-2%.

Altamont clay soils occur on foothills at elevation ranging from 700 – 1,700 feet above mean sea level (msl). The average annual precipitation of the environment where this soil profile occurs is approximately 16 inches. These soils are deep and well drained and have an approximately 26-inch surface layer consisting of dark brown clay. The subsoil is yellowish brown, calcareous clay that extends to a depth of 50 inches. The permeability is slow with a moderate run-off rate and a water holding capacity of five to nine inches.



Detail Map *(Species listed are within map extent)*



- Project Parcel
- Project Site
- Alameda whipsnake
- American badger
- American peregrine falcon
- California alkali grass
- California red-legged frog
- California tiger salamander
- Congdon's tarplant
- Livermore tarplant
- San Joaquin coachwhip
- San Joaquin kit fox
- San Joaquin spearscale
- Swainson's hawk
- brittlescale
- burrowing owl
- caper-fruited tropidocarpum
- foothill yellow-legged frog
- grasshopper sparrow
- heartscale
- hispid salty bird's-beak
- lesser saltscale
- loggerhead shrike
- long-styled sand-spurrey
- longhorn fairy shrimp
- palmate-bracted bird's-beak
- prostrate vernal pool navarretia
- saline clover
- tricolored blackbird
- vernal pool fairy shrimp
- western pond turtle
- western spadefoot
- white-tailed kite

CNDDB version 9/2020. Please Note: The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area California Department of Fish and Wildlife. https://www.wildlife.ca.gov/Data/CNDDB, September 29, 2020 USDA FSA, GeoEye, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA Scale 1:78,000 original report 11x17.

Source: Barnett Environmental 2021

Figure 3.3-3

California National Diversity Database (CNDDB)

Recorded Species Observations within Five Miles of the Project Area

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Azule clay soils are moderately deep, well drained soils that occur on foothills at elevations ranging from 300 to 1,500 feet above mean sea level (msl). This soils series occurs in areas which experience an average annual precipitation of 20 inches and a mean temperature of 57 degrees Fahrenheit. The surface layer is a grayish brown and slightly acidic clay loam approximately six inches thick. The subsoil is grayish brown to dark grayish brown that grades to a light yellowish brown a depth of 25 inches. The permeability is slow with a high run off rate and a water capacity of three to seven inches.

Clear Lake clay soils are very deep, poorly drained soils that form in alluvium in basins at elevations ranging from 10 to 900 feet above mean sea level (msl). Areas where this soils series occur have an average annual precipitation of 15 to 31 inches and a mean annual temperature of 57 to 61 degrees Fahrenheit. The surface layer is comprised of a very dark gray and moderately alkaline clay approximately 37 inches thick. The subsoil is dark gray, grayish brown clay, and silty clay to a depth of 60 inches. The permeability is slow with a rapid run off rate and a water holding capacity of seven to nine inches.

Linne clay loam soils are moderately deep, well drained soils that occur on mountain slopes at elevations ranging from 20 to 2,010 feet above mean sea level (msl). This soils series occurs in environments that have an annual mean precipitation of 12 to 22 inches and an average annual temperature of 57 to 63-degree Fahrenheit. The surface layer contains very dark gray clay loam approximately 29 inches deep. The subsoil is comprised of light gray to white fine sandy loam roughly 50 inches thick. Linne clay loam soils have a moderately slow permeability with a medium to rapid run off rate with a water holding capacity up to six inches.

Pescadero clay loams are very deep, poorly drained soils that occur on basin rims at elevations ranging from 140 to 760 feet above mean sea level (msl). The surface layer contains gray to dark gray clam loam up to 30 inches. The subsoil is made up of gray to light olive gray clay loam that reaches 70 inches in depth. The permeability is low with a low run off rate and a water holding capacity of four inches. This soil is slightly to strongly saline.

San Ysidro loams are very deep, moderately well drained soils that occur on valley floors, terraces, and alluvial fans at elevations ranging from 70 to 1,990 feet above mean sea level (msl). The environment where this soil series occurs have an average precipitation of 13 to 22 inches and a mean annual temperature of 59 to 61 degrees Fahrenheit. The surface layer is made up of light brownish gray to dark yellowish brown fine sandy loam approximately 28 inches thick. The subsoil is comprised of yellowish-brown sandy clay loam at depths of 68 inches. San Ysidro loam has a very low permeability with a moderate runoff rate with a water holding capacity of four inches.

Hydrology

The Project site sits at an elevation between 470 and 645 feet above mean sea level (msl) within the San Francisco Bay watershed (Hydrologic Unit Code 18050004). Topography on the northern side of the site is hilly and turns to flatter grasslands in the southern part of the parcel. Water flows generally from north to south/southeast on the property, where it enters an intermittent stream, Arroyo Las Positas, and then runs southwest off the property. This stream runs through

the southeast corner of the parcel, entering on the eastern side and exiting through the southern border as it drains underneath I-580. Considerable storm runoff from the westbound HOV lane of I-580 regularly floods portions of the Project site adjacent to the highway following heavy precipitation. No mitigation has to date been installed following construction of the HOV lanes to moderate or reduce this runoff (Barnett Environmental, 2021).

Wetlands and "Other Waters of the U.S." and "Waters of the State"

This latter mapping was not reflected by Barnett's (and earlier) wetland delineations of the site and clearly does not reflect current conditions (Barnett Environmental, 2021).

Barnett Environmental delineated a total of 2.1 acres of wetlands and "other waters of the U.S." within the Permit Area. These wetlands include 1.85 acre of the intermittent stream, Arroyo Las Positas, and 0.24 acre of seasonal wetland habitat, as shown in **Figure 3.3-4** and **Table 3.3-1**.

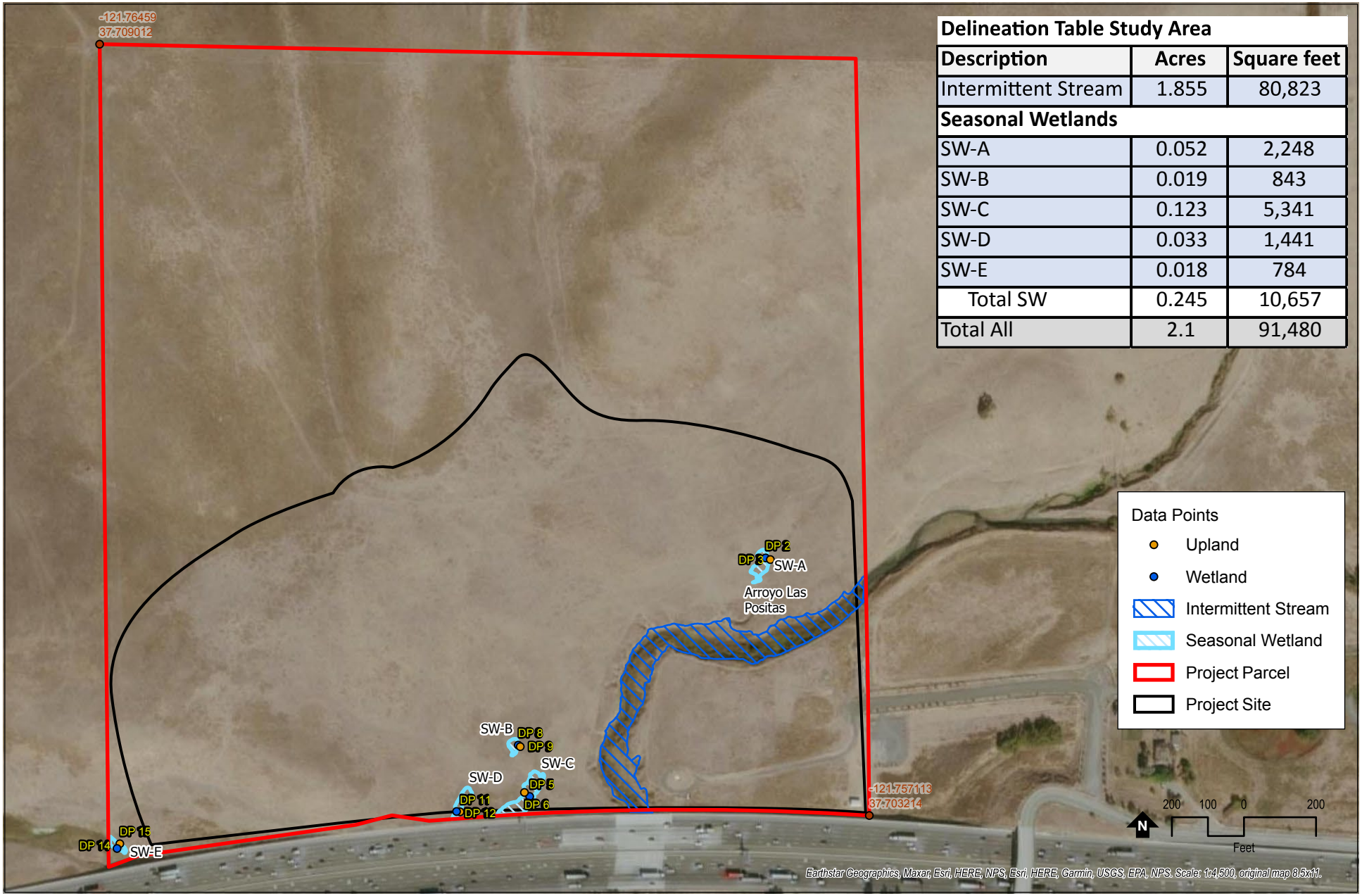
TABLE 3.3-1. WETLANDS AND OTHER WATERS OF THE STATE

Description	Area (SF)	Area (AC)
Arroyo Las Positas (Intermittent Stream)	80,823	1.85
Intermittent Stream Total	**80,823**	**1.85**
Seasonal Wetlands	10,657	0.24
Seasonal Wetlands Total	**10,657**	**0.24**
Grand Total	**91,480**	**2.1**

SOURCE: Barnett Environmental, 2021.

The low-gradient Arroyo Las Positas through the southeastern corner of the site is relatively wide and deeply incised, its banks are very steep and erodible, and the stream itself is almost 15 feet deeper than the surrounding terrain. The streambed is comprised of a variety of hardpan, cobbles, and fine sediment and contains portions of open water with periodic, dense, fringing perennial marsh vegetation. The arroyo was flowing at one to two cubic feet per second (cfs) during the Barnett Environmental October 2020 site visit, but was dry by the time a California Tiger Salamander (CTS) habitat assessment was completed in April of 2021, reflecting the very low seasonal precipitation experienced through the region over this past winter (Winter of 2020-2021) (Barnett Environmental, 2021).

There are five shallow seasonal wetlands on-site which can pond (with sufficient rainfall) during the wet season and support various species of wetland vegetation. The largest of these seasonal wetlands is 0.123 acre and is located just north of Arroyo Las Positas. There was no water in any of these wetland features during the October 2020 and spring 2021 CTS sampling site visits (Barnett Environmental, 2021).



Delineation Table Study Area

Description	Acres	Square feet
Intermittent Stream	1.855	80,823
Seasonal Wetlands		
SW-A	0.052	2,248
SW-B	0.019	843
SW-C	0.123	5,341
SW-D	0.033	1,441
SW-E	0.018	784
Total SW	0.245	10,657
Total All	2.1	91,480

Source: Barnett Environmental 2021

Figure 3.3-4

Project Area Wetlands and "Other Waters Of The U.S."

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Vegetation Communities

The Study Area supports the following vegetation communities (Barnett Environmental, 2021):

a. **Annual Grasslands**: The majority of the Study Area is dominated by annual grasslands containing wild oats (*Avena fatua*), softchess brome (*Bromus hordeacious*), and rose clover (*trifolium hirtum*). Other species observed within this community included great valley gumweed (*Grindelia camporum*), purple star thistle (*Centaurea calcitrapa*), bristly ox tongue (*Helminthotheca echioides*), and turkey-mullein (*Croton setiger*). The annual grassland of the Study Area appears to be lightly grazed by cattle and contained low amounts of thatch at the time of the field survey.

b. **Disturbed Grasslands**: The majority of the southeastern portion of the Study Area consists of a ruderal, disturbed vegetation community containing non-native species such as bull thistle (*Cirsium vulgare),* stinkwort (*Dittrichia graveolens*), sweet fennel (*Foeniculum vulgare*), and great valley gumweed. This community is regularly disturbed by either mowing or disking. A disked field comprising the south-central portion of the Study Area has been historically disked for vegetation management for many years and had been recently disked at the time of the October 2020 site visit contained no vegetation.

c. **Arroyo Las Positas**: This perennial stream flows from northeast to southwest through the southeastern portion of the Study Area. Its banks are moderately vegetated by annual grasses and forbs similar to the wild oats and annual brome grasslands with the addition of mugwort (*Artemisia douglasiana*), deer grass (*Muhenbergia rigens*), and tree tobacco (*Nicotiana glauca*). The bed of the stream contains portions of open water and dense perennial marsh vegetation including broad-leaved cattail (*Typha latifolia*), broadfruit bur reed (*Sparganium eurycarpum*), and common tule (*Schoenoplectus acutus var. occidentalis*). A small arroyo willow thicket along the Arroyo las Positas in the southeastern portion of the Study Area is dominated by large arroyo willows (*Salix lasiolepis*) and an understory of several vegetation species including: bull thistle (*Cirsium vulgare*), stinkwort (*Dittrichia graveolens*), sweet fennel (*Foeniculum vulgare*), and great valley gumweed (*Grindelia camporum*).

d. **Seasonal Wetlands**: There are several small seasonal wetlands within the wild oats and annual brome grassland in the southernmost portion of the Study Area along I-580. These small shallow features tend to pond water during a healthy rainy season and include a variety of wetland plant species such as Italian ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum*), and common tarweed (*Centromadia pungens subsp. pungens*).

e. **Salt Grass**: There is a small salt grass (*Distichlis spicata*) flat in the far southwestern corner of the Study Area dominated by this species and Mexican rush (*Juncus mexicanus),* seaside heliotrope (*Heliotropium curassavicum var. oculatum*), and alkali heath (*Frankenia salina*). Two small blue elderberry shrubs (*Sambucus nigra subsp. caerulea)* occur immediately south of this community, along the I-580 sound wall. None of the stems of these shrubs contained exit holes of the valley elderberry longhorn beetle (VELB) at the time of the spring 2021 survey of this area. There is another seasonal wetland/marsh within this salt grass flat that supports broad-leaved cattail (*Ty-pha latifolia*), Mexican rush, annual rabbit's-foot grass (*Polypogon monspleinsis*), salt grass (*Distichlis spi-cata*), and alkali mallow (*Malvella leprosa*).

f. **Agricultural**: The farthest southeastern portion of the Study Area contains an old vineyard that appears to have been fallow for a long time and is now overrun with ruderal and annual grassland plant species. This area is adjacent to the Project site but off the Project site just to the east of the Phase I area.

Wildlife

Barnett Environmental biologists observed many common wildlife species on-site during their autumn 2020 and spring 2021 field surveys, including: western fence lizards (*Sceloporus occidentali*), wild turkey (*Meleagris gallopav*), great egret (*Ardea alba*), red-tailed hawk (*Buteo jamaicensis*), Great-horned owl (*Bubo virginianu*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), Northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), western scrub jay (*Aphelocoma californica*), rock pigeon (*Columba Iivia*), Black-tailed jackrabbit (*Lepus californicus*), California vole (*Microtus californicus*), Colombian black-tailed deer (*Odocoileus hemionus columbianus*), California ground-squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*).

Special-Status Species

Special-status species refers to plant, animal, and fish species that are legally protected under the FESA, California ESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species include species, subspecies, or varieties that meet one or more of the following criteria.

- Species listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 [listed plants]; 50 CFR 17.11 [listed animals]; various notices in the Federal Register (FR) [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under ESA (81 FR 87246 December 2, 2016).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5).
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Plants that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines Section 15380[b], [c], and [d]). Plants that may meet this definition consist of the following:
  - Plants considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern:
    - CRPR 1A – Plants presumed to be extinct in California,
    - CRPR 1B – Plants that are rare, threatened, or endangered in California and elsewhere,
    - CRPR 2A – Plants presumed to be extinct in California, but more common elsewhere,
    - CRPR 2B – Plants that are rare, threatened, or endangered in California but more common elsewhere, and
    - Plants that may warrant consideration on the basis of local significance or recent biological information (State CEQA Guidelines 15380[d]), which may include plants

rated CRPR 3 (Review List; plants about which more information is needed to determine their status) and CRPR 4 (Watch List: plants of limited distribution).

- Animal species that may warrant consideration on the basis of local significance or recent biological information (State CEQA Guidelines 15380[d])

- Species that are considered locally significant, that is, a species that is not rare from a statewide perspective but is rare or unique in a local context such as within a county or region (State CEQA Guidelines Section 15125 [c]) or is so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines, Appendix G).

- Animal species of special concern to CDFW, as identified and defined in the CNDDB.

- Animals fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], and 5050 [amphibians and reptiles]).

CNDDB, California Native Plant Society (CNPS) Inventory, and U.S. Fish & Wildlife Service (FWS) iPAC database for special-status species potentially occurring within the Project vicinity (i.e., five-mile radius) (Barnett Environmental, 2021). While there may be a number of plant and animal species occurring within five miles of the Study Area, Barnett Environmental refined the list of those species with any real potential of occurring in the Study Area by filtering the query for relevant on-site habitats, locations, and elevations. A summary of the results of this query can be found in **Table 3.3-2**.

Special-Status Plants and Wildlife

Special-Status Plants

As shown in **Table 3.3-2**, there are three special-status plants species that have some potential (Low) to occur within the Study Area (Barnett Environmental, 2021).

1. Heartscale (*Atriplex cordulata*). This species is listed as a rare plant 1B.2 by the state of California. This annual herb is as likely to occur in wetlands as in non-wetlands. It thrives in communities such as shadescale scrub, valley grassland, and wetland-riparian. There have been five CNDDB occurrences reported within five miles; the closest was 0.61 miles to the northwest and the most recent was in 2005. It has a low potential to occur in the Study Area. However, no heartscale was observed within existing irrigation ditches during the Barnett Environmental October 2020 field survey.

2. Long-style sand-spurrey (*Spergularia macrotheca var. longistyla*). This species is listed as a rare plant 1B.2 by the state of California. It is a perennial herb producing a narrow stem up to 15.7 inches long with a woody, thickened base and taproot. They may grow erect or prostrate across the ground. It is covered in sticky glandular hairs, especially in the inflorescence. The stems are lined with fleshy linear leaves, sometimes tipped with spines. The leaves are accompanied by triangular stipules up to a centimeter long each. Flowers occur in clusters at the end of the stem as well as in leaf axils. There have been two CNDDB occurrences reported within five miles; the closest was 0.91 miles to the northeast, and the most recent was in 1993. It has a low potential to occur in the Study Area. No long-style sand-spurrey were observed within existing irrigation ditches during the Barnett Environmental October 2020 field survey.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA

Species	Status[a] Federal/State/ CNPS	Habitat	Potential for Occurrence in Study Area	Rational for Assessing Potential of Occurrence
PLANTS				
California Alkalai grass *Puccinellia simplex*	–/–/1B.2	Typically grows in mineral springs and other moist, saline-soil habitats within the Central Valley	None	The Study Area contains no saline soil habitat and thus presents no suitable habitat for this species. There have been four CNDDB reported occurrences within five miles, the closest 0.53 miles to the northwest and the most recent in 2018. There was no sign of this species during the Barnett Environmental October 2020 site visit.
Congdon's tarplant *Centromadia parryi ssp. Congonni*	–/–/1B.1	Found at elevations between 0 and 754 feet above sea level, this annual tarplant is found in valley and foothill grasslands (alkaline).	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There have been six CNDDB reported occurrences within five miles. The closest was 0.61miles to the north, and the latest in 2019. There was no sign of this species during the Barnett Environmental October 2020 site visit.
Livermore Tarplant *Deinandra bacigalupil*	–/–/1B.1	This annual plant occurs only within 0.5 miles of the City of Livermore in Alameda County, CA. The plant grows in poorly-drained, seasonally-dry, alkaline meadows, and appears to be restricted to Solano fine sandy loam soil.	None	The Study Area contains no alkali meadows or Solano fine sandy loam on-site and thus presents no suit-able habitat for this species. There have been four CNDDB reported occurrence within five miles, the closest occurred 1.32 miles to the southwest. There was no sign of this species during the Barnett Environmental October 2020 site visit.
San Joaquin spearscale *Altriplex joaquiniana*	–/–/1B.2	This species typically occurs in alkali grasslands and alkali meadows or on the margin of alkali scrub.	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There have been 11 CNDDB occurrences reported within five miles, the closest was 0.88 miles to the northwest. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Brittlescale *Altriplex depressa*	–/–/1B.2	Occurs in playas and shadescale scrub, valley grassland, alkali sink, and wetland riparian.	None	The Study Area contains no alkali soil and thus presents no suitable habitat for this species. There have been five CNDDB occurrences reported within five miles, the closest was 0.51 miles to the northwest and the latest was in 2003. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Caper-fruited tropidocarpum *Tropidocarmpum Capparideum*	–/–/1B.1	This annual herb has habitat in valley grasslands and foothill grasslands (alkaline).	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There has been one sole CNDDB occurrence reported within five miles. The closest was 0.88 miles to the northeast. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Heartscale *Atriplex cordulata*	–/–/1B.2	This annual herb is as likely to occur in wetlands and non-wetlands. It thrives in communities such as shadescale scrub, valley grassland, and wetland-riparian.	Low	The wetland-riparian zone and grasslands provide a suitable habitat in the Study Area for this species. There have been five CNDDB occurrences reported within five miles, the closest was 0.61 miles to the northwest and the most recent was in 2005. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Hispid Salty Bird's Beak *Cordylanthus mollis ssp. Hispidus*	–/SSC	Occurs in wetlands, meadows, playas, in alkali sink, valley grassland, and wetland-riparian communities.	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There has been one sole CNDDB occurrences reported within five miles, 0.79 to the northeast in 2003. No sign of this species was observed during the Barnett Environmental October 2020 site visit.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA (Continued)

Species	Status[a] Federal/State/ CNPS	Habitat	Potential for Occurrence in Study Area	Rational for Assessing Potential of Occurrence
PLANTS (cont.)				
Lesser Saltscale *Altriplex miniscula*	–/–/1B.1	Usually occurs in non-wetlands in playas in shadescale scrub, valley grassland, and alkali sink communities	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There have been eight CNDDB occurrences reported within five miles, the closest was 0.94 miles to the northwest and the most recent in 2018. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Long-style sand-spurrey *Spergularia macrotheca var. longistyla*	–/–/1B.2	Occurs in wetlands and non-wetlands in wetland-riparian communities.	Low	There is marginal habitat on-site for this species. There have been two CNDDB occurrences reported within five miles; the closest was 0.91 miles to the northeast, and the most recent was in 1993. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Palmate-bracted bird's beak *Chloropyron palmatum*	–/–/1B.1	This species grows in saline-alkaline soils in seasonally-flooded lowland plains and basins at elevations of less than 500 feet	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There has been one sole CNDDB occurrence reported within five miles, the 0.36 miles to the northeast. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Saline Clover *Trifolium hydrophilium*	–/–/1B.2	This annual herb is found in marshes and swamps, valley and foothill grassland (alkaline) and vernal pools.	None	The Study Area contains no alkali grasslands and thus presents no suitable habitat for this species. There has been one CNDDB occurrence reported within five miles, 1.39 miles to the northeast in 2018. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Prostrate Vernal Pool Naverettia *Navarettia prostrata*	–/–/1B.1	This annual herb is found at elevations between 10 and 3969 feet in coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools.	Low	There is marginal habitat on-site for this species. There was only one CNDDB reported occurrence within five miles. This occurred 4.38 to the east in 2010. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
INVERTEBRATES				
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	FT/None/NA	Habitat is grassland vernal pools or similar seasonal wetlands. They require cool water with low alkalinity and low total dissolved solids and tend to be found in smaller pools about six inches (15 centimeters) deep that stay flooded for relatively short amounts of time.	Very Low	The shallow depressional seasonal wetlands within the Study Area represent suitable habitat for vernal pool fairy shrimp. However, there have been no CNDDB occurrences reported within five miles. There was no sign of this species during the Barnett Environmental October 2020 site visit.
Conservancy Fairy Shrimp *Branchinecta conservatio*	FE/None/NA	This species lives in ephemeral or temporary pools of fresh water (vernal pools) that form in the cool, wet months of the year. Fairy shrimp are not known to occur in permanent bodies of water, and are dependent upon seasonal fluctuations in their habitat, such as absence or presence of water during specific times of the year.	None	Turbid playa vernal pools are not present within the Study Area, and thus there is no habitat present for this species. There have been no CNDDB occurrences reported within five miles. No sign of this species was observed during the Barnett Environmental October 2020 site visit.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA (Continued)

Species	Status[a] Federal/State/ CNPS	Habitat	Potential for Occurrence in Study Area	Rational for Assessing Potential of Occurrence
INVERTEBRATES (cont.)				
Longhorn Fairy Shrimp *Branchinecta longiantenna*	FE/–/–	This species inhabits clear to rather turbid vernal pools. These include clear-water depressions in sand-stone outcroppings near Tracy, grass-bottomed pools in Merced County and claypan pools around Soda Lake in San Luis Obispo County.	Low	The shallow depressional seasonal wetlands within the Study Area represent suitable habitat for vernal pool fairy shrimp. There have been five CNDDB occurrences reported within five miles. The closest was 2.84 miles to the northeast. There was no sign of this species during the Barnett Environmental October 2020 site visit.
INSECTS				
Valley Elderberry Longhorn Beetle *Demoscerus californicus dimorphus*	FE/–/NA	Habitat requirements for this species is Sambucus sp. To serve as habitat, the shrubs must have stems 2.5 m (1 in) or greater in diameter at ground level.	Low	There is one elderberry plant on-site that could provide habitat for this species. However, no holes in the stems were found to indicate the species were present. In addition, there are no reported CNDDB occurrences reported within five miles. Barnett Environmental observed no sign of this species during the October 2020 site visit.
San Bruno Elfin Butterfly *Callophrys mossibayensis*	FE/–/NA	This species inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco peninsula. The San Bruno Elfin is restricted to a few small populations, the largest which occurs on San Bruno mountain.	None	Rocky outcrops with extensive populations of broad-leaf stonecrop do not occur within the Study Area. In addition, there have been no CNDDB occurrences reported within five miles. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
AMPHIBIANS AND REPTILES				
California red legged frog *Rana draytonii*	FT/NA/NA	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. This includes wetlands, marshes, natural ponds, artificial flowing waters such as diversion canals and artificial standing waters such as dams and impoundments.	High	Arroyo Las Positas and the on-site emergent marsh represents suitable aquatic habitat for the species. There have been 75 CNDDB occurrences reported within five miles, and the most recent in 2016. There was no sign of this species during the Barnett Environmental October 2020 site visit.
Western Pond Turtle *Emys marmorota*	FT/CT/NA	The western pond turtle is found in permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, irrigation ditches and reservoirs. The western pond turtle basks on land or near water on logs, branches or boulders.	Low	There is suitable habitat on-site for this species. There have been nine CNDDB occurrences reported within five miles, and the most recent was in 2017. However, no sign of this species was observed during the Barnett Environmental October 2020 site visit.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA (Continued)

Species	Status[a] Federal/State/ CNPS	Habitat	Potential for Occurrence in Study Area	Rational for Assessing Potential of Occurrence
AMPHIBIANS AND REPTILES (cont.)				
California Tiger Salamander *Ambystoma californiense*	FT/CT/NA	Habitat for this species are vernal pools and other seasonal ponds and stock ponds for reproduction; its habitat is limited to the vicinity of large, fishless vernal pools or similar water bodies.	High	The Study Area contain moderate amounts of California ground squirrel burrows that represent suitable upland habitat/refugia for the species. There is additional suitable breeding habitat is located within a seasonal wetland approximately 0.1-mile west of the Study Area. The grasslands within the Study Area contain moderate amounts of California ground squirrel burrows that represent suitable upland habitat/refugia for the species. There have been 51 CNDDB occurrences reported within five miles. The most recent observance was in 2015. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Western Spadefoot *Spea hammondii*	NA/SSC/NA	This species is found in a variety of habitats including coastal sage scrub, chaparral, oak woodlands, grasslands, washes, and floodplains along the California coast, central valley, and Sierra Nevada foothills.	Moderate	The on-site emergent marsh represents marginal aquatic habitat for the species. There is a potential breeding aquatic habitat immediately southwest of the Study Area. There have been two CNDDB occurrences reported within five miles, the closest 3.05 miles to the southeast. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
San Joaquin coachwhip *Coluber flagellum ssp. ruddocki*	FT/CT/NA	Enjoys open, hot, dry areas as well as grasslands, chapparal communities, and pastures. It is thought to lay eggs in rodent burrows.	Moderate	The Study Area contains suitable habitat for the species within the on-site grasslands. There has been one sole CNDDB occurrence reported within five miles, 3.69 miles to the southeast in 2000. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Alameda Whipsnake *Masticophis lateralis euryxanthus*	FE/CE/NA	Found in habitats of the coast, desert, and foothills of California	None	The Study Area is not located on the coast, desert, or foothills of California. There have been two CNDDB occurrences reported within five miles, the closest 2.82 miles to the north and the latest was in 2004. In addition, there was no sign of this species during the Barnett Environmental October 2020 site visit.
BIRDS				
Tricolored blackbird *Agelaius tricolor*	None/CE/NA	Freshwater marsh, swamp, wetlands, and most numerous in Central Valley and vicinity. Requires open water, protected nesting substrates, & foraging area with insect prey within a few km of the colony.	Low	The emergent marsh vegetation and arroyo willows along Arroyo Las Positas and the emergent marsh represent suitable nesting habitat for tricolored blackbird. No shrub or tree vegetation to support these colonies. The annual grasslands within the Study Area represent potential foraging habitat for the species. There have been 12 CNDDB occurrences reported within five miles. The closest was 2.6 miles to the southeast, and the most recent was in 2014. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Burrowing owl *Athene cunicularia*	None/CSC/NA	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. The species sis a subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	High	Many ground squirrel burrows were observed within the grasslands; these represent suitable nesting habitat. Burrowing owl pellets observed on-site on a fencepost along the northern boundary. There have been 20 CNDDB occurrences reported within five miles, the most recent in 2017 and the closest was 1.01 miles to the north. No sign of this species was observed during the Barnett Environmental October 2020 site visit.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA (Continued)

Species	Status[a] Federal/State/ CNPS	Habitat	Potential for Occurrence in Study Area	Rational for Assessing Potential of Occurrence
BIRDS (cont.)				
Swainson's hawk *Buteo swainsoni*	None/CT/NA	Great Basin grassland, riparian forest and woodlands, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, savannahs, & agricultural or ranch lands with groves or lines of trees.	Moderate	There is marginal foraging grassland habitat within the Study Area, and there has been one sole recorded CNDDB occurrence within five miles 1.7 miles to the southeast. No Swainson's hawks were observed during the Barnett Environmental October 2020 site visit.
Grasshopper Sparrow *Ammodramus svannarum*	None/SSC/NA	This species thrives in native grasslands of California.	Moderate	The grasslands throughout the Study Area represent suitable nesting and foraging habitat. However, there has been only one CNDDB occurrence reported within five miles, 2.96 miles to the northwest in 2016. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
White-tailed kite *Elanus leucurus*	None/CFP/NA	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	Moderate	The large arroyo willows within the Study Area provide suitable nesting habitat, and the annual grasslands represent suitable foraging habitat. There have been two CNDDB occurrences reported within five miles, the closest was 2.33 miles to the southeast. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
Loggerhead Shrike *Lanius ludovicianus*	None/CE/–	Inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses and cemeteries.	Moderate	Shrubs and trees near the Arroyo Las Positas and the ranch house represent suitable nesting habitat, and the grasslands throughout the Study Area represent suitable foraging habitat. There has been a sole CNDDB occurrence reported within five miles, the closest was 3.17 miles to the southwest. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
American Peregrine Falcon *Falco peregrinus anatum*	FE/CE/NA	This species prefers to nest on cliffs, often overlooking rivers and lakes, coastal areas, and mountain valleys. This species also nests in the stick nests of other species, on the ground, and on manmade structures.	None	There are no cliff ledges or other suitable nesting habitat is present within the Study Area. One sole CNDDB sighting 2.82 miles. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
MAMMALS				
San Joaquin kit fox *Vuples macrotis mutica*	FE/CE/NA	This species is endemic to California and inhabits grasslands and scrublands, even those than have been extensively modified.	Low	The grasslands throughout the Study Area represent suitable habitat for this species. There has been only one recorded CNDDB occurrence which occurred 0.73 miles to the east. No sign of this species was observed during the Barnett Environmental October 2020 site visit.
American badger *Taxidea taxus*	None/SSC/NA	Badgers prefer to live in dry, open grasslands, meadows, and grassy bald spots on high ridge tops.	Low	The on-site grasslands throughout the Study Area represent suitable habitat for this species. There have been three CNDDB occurrences; the most recent was in 2009 and the closest was 3.2 miles to the southeast. No sign of this species was observed during the Barnett Environmental October 2020 site visit.

TABLE 3.3-2. SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE STUDY AREA (Continued)

STATUS EXPLANATIONS:

Federal

FE = Federally Endangered.
FT = Federally Threatened.
– = no listing.

State

CFP = California Fully Protected
CT = California Threatened
SCT = State Candidate California Threatened
SCE = State Candidate California Endangered
– = no listing.

CNPS

1B = Rare or Threatened in CA and elsewhere
2B = Rare, Threatened, or Endangered in CA, but more common elsewhere.
– = no listing.

Potential for Occurrence Codes

None = No suitable habitat for the special-status species within the Study Area
Very Low = Either the special-status species is known to occur within five miles and there is marginal suitable habitat that exists in the Study Area, or the Study Area provides suitable habitat, but the species is not known to occur within a five-mile radius
Low = Marginally suitable habitat exists in the Study Area and the special-status species occurs within five miles but surrounding urban land use conditions and regularity of human activity make it unlikely that the species occurs in the Study Area.
Moderate = The special-status species is known to occur within a five-mile radius and the Study Area contains suitable habitat, however, surrounding urban land use conditions and on-site disturbance reduce the likelihood of occurrence.
High = The Study Area provides suitable habitat and there is either documentation of species occurrence within a five-mile radius or evidence gathered by a professional surveyor during an on-site field assessment.
Present = Species known to occur within the Study Area based on record search and/or evidence collected during on-site field surveys.

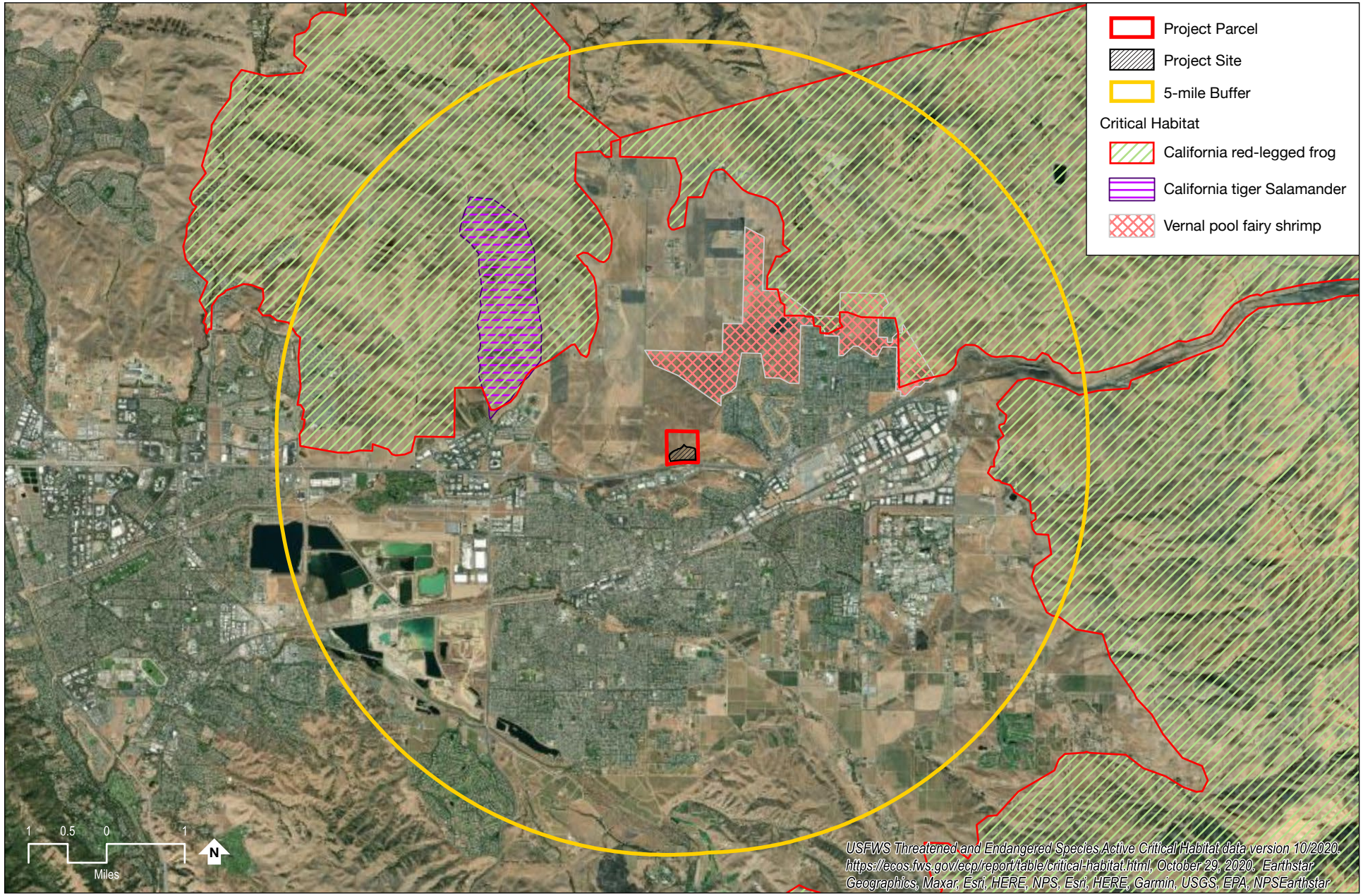
3. Prostrate vernal-pool navarettia (*Navarettia prostrata*). This species is listed as a rare plant 1B.2 by the state of California. It is a petite annual herb sitting prostrate on the ground with a central stem and flower head and radiating stem branches bearing more heads. The hairless leaves are divided into many threadlike lobes. The inflorescence is a cluster of flowers surrounded by leaflike bracts. The flowers are just under half an inch long, their blue or white corollas divided into narrow lobes. This annual herb is found at elevations between 10 and 3969 feet in coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools. The grasslands on-site provide suitable habitat for this species. There was only one CNDDB reported occurrence within five miles. This occurred 4.38 to the east in 2010. No prostrate vermal-pool navarettia were observed during the Barnett Environmental October 2020 field survey. It has a low potential to occur in the Study Area.

Special-Status Wildlife and Critical Habitat

As shown in **Table 3.3-2**, there are eight federally listed animals that have some potential to occur within the Study Area (Barnett Environmental, 2021). Critical Habitat for Special-Status Wildlife is shown in **Figure 3.3-5**. The Federal Endangered Species Act (FESA) requires the federal government to designate critical habitat for any listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. While there is no designated critical habitat within the Study Area, there is critical habitat for the California red-legged frog, the California tiger salamander, and the vernal pool fairy shrimp within five miles of the Study Area.

1. Vernal pool fairy shrimp (*Branchinecta lynchi).* This species is listed as threatened by the U.S. Fish and Wildlife Service. It is a slender, translucent crustacean generally less than one inch in length. They swim on their back by slowly moving their 11 pairs of swimming legs. Habitat is grassland vernal pools or similar seasonal wetlands. They require cool water with low alkalinity and low total dissolved solids and tend to be found in smaller pools about six inches (fifteen centimeters) deep that stay flooded for relatively short amounts of time. Vernal pool fairy shrimp typically hatch when the first rains of the year fill vernal pools. Adult fairy shrimp live for only one season while there is water in the pools. The shallow depressional seasonal wetlands within the Study Area represent suitable habitat for vernal pool fairy shrimp. However, there have been no CNDDB occurrences reported within five miles. No vernal pool fairy shrimp were observed during the Barnett Environmental October 2020 field survey. This species has very low potential to occur in the Study Area due to the absence of vernal pools or seasonal wetlands of sufficient ponding duration.

2. Longhorn fairy shrimp (*Branchinecta longiantenna).* This species is listed as endangered by the U.S. Fish and Wildlife Service. It ranges in size from 0.5 to 0.8 inches long. They have delicate elongate bodies, large, stalked compound eyes, no carapaces, and 11 pairs of swimming legs. They glide gracefully upside down, swimming by beating their legs in a complex, wavelike movement that passes from front to back. The shrimp feed on algae, bacteria, protozoa, rotifers and bits of detritus. The shallow depressional seasonal wetlands within the Study Area represent suitable habitat for vernal pool fairy shrimp. There have been three CNDDB occurrences reported within five miles; the closest was 2.84 miles to the northeast. No longhorn fairy shrimp were observed during the Barnett Environmental October 2020 field survey. This species has low potential to occur in the Study Area due to the absence of vernal pools or seasonal wetlands of sufficient depth and ponding duration.



Source: Barnett Environmental 2021

Figure 3.3-5
Critical Habitat

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3. Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus).* This beetle is federally listed as threatened under the endangered species act. This species is stout-bodied, measuring between ½-1 inch. Adult males have red-orange wing covers with four elongate spots. Habitat requirements for this species is Sambucus sp. To serve as habitat, the shrubs must have stems 2.5 cm (1in) or greater in diameter at ground level. There is one elderberry plant on-site that could provide habitat for this species. However, no holes in the stems were found to indicate the species were present. In addition, there are no reported CNDDB occurrences reported within five miles. Barnett Environmental observed no sign of this species during the October 2020 site visit. There is a low potential for this species to occur on the Study Area.

4. California red-legged from (*Rana draytonii).* The California red-legged frog is federally listed as threatened under the endangered species act. It is the largest native frog in the western United States, ranging from 1.75 to 5.25 inches in length. From above, this frog can appear brown, grey, olive, red, or orange, often with a pattern of dark specks or spots. The hind legs are well-developed with large, webbed feet. The undersides of adult California red-legged frogs are white, usually with patches of bright red or orange on the abdomen and hind legs. This species inhabits aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dunes, and lagoons. Arroyo Las Positas and the on-site emergent marsh represents suitable aquatic habitat for this species. There have been 75 CNDDB occurrences reported within five miles, and the most recent in 2016. There was no sign of this species during the Barnett Environmental October 2020 site visit. This species has a high potential to occur on the property.

5. Western pond turtle (*Emys marmorota)*. This species is listed as threatened by the U.S. Fish and Wildlife Service and by the state of California. It is a small to medium sized turtle in the Emydidae family, reaching between seven and nine inches. Its dorsal color is usually dark brown or dull olive with or without streaking. Adult turtles have a yellowish belly, with dark blotches and black spots or lines on top of their heads. The western pond turtle is found in permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, irrigation ditches and reservoirs. They bask on land or near water on logs, branches or boulders. The Western pond turtle has a low potential for occurrence given the open grassland on this site. There have been nine CNDDB occurrences reported within five miles. The most recent was in 2017. However, no western pond turtles were observed during the Barnett Environmental October 2020 site visit. This species has a low potential to occur in the Arroyo Las Positas within the Study Area.

6. California tiger salamander (*Ambystoma californiense).* This species is listed as threatened by the U.S. Fish and Wildlife Service and by the state of California. This is a large, stocky salamander, with a broad, rounded snout. Its small eyes, with black irises, protrude from its head. Adult males are approximately 8 inches long, and females are approximately 7 inches in length. “Tiger” comes from the white or yellow bars on California tiger salamanders. The background color is black. The belly varies from almost uniform white or pale yellow to a variegated pattern of white or pale yellow and black. Habitat for this species are vernal pools and other seasonal ponds and stock ponds for reproduction; its habitat is limited to the vicinity of large, fishless vernal pools or similar water bodies. The Study Area contain moderate amounts of California ground squirrel burrows that represent suitable upland habitat/refugia for the species. There is additional suitable breeding habitat is located within a seasonal wetland approximately 0.1-mile west of the Study Area. The grasslands within the Study Area contain moderate amounts of California ground squirrel burrows that represent suitable upland habitat/refugia for the species. There have been 51 CNDDB occurrences

reported within five miles. The most recent observance was in 2015. However, no California Tiger Salamander were observed during the Barnett Environmental October 2020 site visit.

Madrone Ecological Consulting performed a habitat assessment in 2021 in accordance with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife in the Interim Guidance on-site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (USFW and CDFW 2003). Conducted protocol surveys in the seasonal wetlands in winter 2021 and found no sign of this species. During this habitat assessment, only one of six aquatic features on the Study Area and six offsite features within 1.24 miles had potential habitat for the California tiger salamander. Due to private property concerns, only the one on-site feature and two offsite features were surveyed. No California Tiger Salamander eggs, larvae, or adults were observed during the 2021 surveys. The biologists suggested that California Tiger Salamander may have chosen to forgo breeding this season due to the abnormally dry winter. There was only 5.62 inches of precipitation between November 2020 and May 2021 as compared to the average 12.25 inches for this time period. As a result, Madrone recommended additional surveys including one upland drift fence/pitfall trap survey and an additional larvae survey in order to determine the presence or presumed absence of this species in the Study Area.

7. San Joaquin coachwhip (*Coluber flagellum ssp. ruddockis).* This whipsnake species is listed as threatened by the U.S. Fish and Wildlife Service and by the state of California. This is a slender and fast-moving snake with smooth scales, a large head and eyes, and a long thin tail. Adults are between 36 – 66 inches long, while hatchlings are only 13 inches long. The San Joaquin coachwhip is tan, olive brown, or yellowish brown. This species enjoys open, hot, dry areas as well as grasslands, chapparal communities, and pastures and lays eggs in rodent burrows. The Study Area contains suitable habitat for the species within the on-site grasslands. There has been one sole CNDDB occurrence reported within five miles, 3.69 endangered by the U.S. Fish and Wildlife Service. This species has a moderate potential to occur in the Study Area.

8. San Joaquin kit fox (*Vuples macrotis mutica).* This species is listed as endangered by the U.S. Fish and Wildlife Service and threatened by the state of California. The San Joaquin Kit Fox is the smallest candid species in North America. The legs are long, the body slim, the ears are close set together, and the nose is slim and pointed. Summer coats are tan and winter coats are greyed. The undersides vary from buff to white. The male weighs about five pounds, and the female is smaller. This species is endemic to California and inhabits grasslands and scrublands, even those than have been extensively modified. The grasslands throughout the Study Area represent suitable habitat for this species, however, there has been only one recorded CNDDB occurrence within a five-mile radius which occurred 0.73 miles to the east. No San Joaquin kit fox were observed during the Barnett Environmental October 2020 field survey. It has a low potential to occur in the Study Area.

State-Listed Species

1. Swainson's hawk (*Buteo swainsoni).* This raptor is listed as threatened by the state of California. Its habitat is great basin grassland, riparian forest and woodlands, valley and foothill grassland. Swainson's hawk breeds in grasslands with scattered trees, juniper-sage flats, savannahs, and agricultural or ranch lands with groves or lines of trees. The Swainson's hawk has a moderate potential for occurrence given the open grassland on this site that is appropriate foraging habitat, and there have been nine recorded CNDDB occurrences within

five miles of the Study Area, with the nearest occurrence 1.7 miles to the east. No Swainson's hawks were observed during the October 2020 field survey.

2. Loggerhead shrike (*Lanius iudovicianus).* This species is listed as a species of special concern by the state of California. It inhabits open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses and cemeteries. Shrubs and trees near the Arroyo Las Positas and the ranch house represent suitable nesting habitat, and the grasslands throughout the Study Area represent suitable foraging habitat. There has been a sole CNDDB occurrence reported within five miles, the closest was 3.17 miles to the southwest. No loggerhead shrikes were observed during the October 2020 field survey.

3. Tricolored blackbird (*Agelauis tricolor).* The tricolored blackbird is a California endangered species. Male Tricolored blackbirds are entirely black with a bright red shoulder patch bordered below by a white to cream-colored band. Females are dark gray-brown overall with streaked bellies and backs and a cream-colored eyebrow. Immature male birds are brownish black overall with some gray mottling depending on their age. This species nests in colonies in the vicinity of freshwater marshes or ponds and prefer heavy growths of cattails, tules, or willows. Their breeding requirements include open accessible water, a protected nesting substrate, and a foraging area with insect pray located within a few kilometers of their colony. There have been 12 CNDDB occurrences reported within five miles. The closest was 2.6 miles to the southeast, and the most recent was in 2014. No sign of this species was observed during the Barnett Environmental October 2020 site visit.

California Species of Special Concern (CEQA)

1. Western burrowing owl (*Athene cunicularia).* The western burrowing owl is a species of special concern in California. It is a small, long-legged owl, ranging from seven to 10 inches in height. They have a round head, white eyebrows, yellow eyes, and long heads. Burrowing owls can be found in grasslands, rangelands, agricultural areas, deserts, or any other open dry area with low vegetation. They nest and roost in burrows, such as those excavated by prairie dogs. In the Study Area, many ground squirrel burrows were observed within the grasslands; these represent suitable nesting habitat. There have been 20 CNDDB occurrences reported within five miles, the most recent in 2017 and the closest was 1.01 miles to the north. Burrowing owl pellets were observed on-site on a fencepost along the northern boundary. This species has a high potential to occur within the Study Area. However, no western burrowing owls were observed during the Barnett Environmental October 2020 field survey.

2. Grasshopper sparrow (*Ammodramus savannarum).* This California Species of Special Concern is a small, flat-headed sparrow with a deep bill and has an unstreaked and buffy underside and rusty spotting or streaking on the back. This species thrives in native grasslands of California. There has been only one CNDDB occurrence reported within five miles, 2.96 miles to the northwest in 2016. It has a moderate potential to occur in short-grass grasslands within the Study Area. No grasshopper sparrows were observed during the Barnett Environmental October 2020 field survey.

3. Western spadefoot (*Spea hammondii).* A species of special concern in California, the western spadefoot is a small, stout-bodied toad with short legs and warty skin. It is greenish, brown, cream, or gray above, and unmarked and whitish below. This species is found in a variety of habitats including coastal sage scrub, chapparal, oak woodlands, grasslands, washes, and

floodplains along the California coast, central valley, and Sierra Nevada foothills. This California Species of Special Concern has a moderate potential to occur within the emergent marsh in the Study Area. There have been two CNDDB occurrences reported within five miles, the closest 3.05 miles to the southeast. However, no western spadefoots were observed during the Barnett Environmental October 2020 field survey.

4. American Badger (*Taxidea taxus).* The American badger has a flat body with short legs and a triangular face with a long, pointed, tipped up nose. This species has long brown or black fur with white stripes on its cheeks and one stripe running from its nose to the back of its head. It has small ears on the side of its head and long, sharp front claws. Badgers prefer to live in dry, open grasslands, meadows, and grassy bald spots on high ridge tops. There have been three CNDDB reported occurrences within five miles; the most recent was in 2009 and the closest was 3.2 miles to the southeast. This California Species of Special Concern has a low potential to occur in short-grass grasslands within the Study Area. No American badgers were observed during the Barnett Environmental October 2020 field survey.

3.3.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the California Environmental Quality Act (CEQA) *Guidelines* states that a Project would result in a significant impact to Biological Resources if it would:

- 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.

- 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.

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means.

- 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.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Topics with No Impact

Phase I

Phase I would not interfere with the movement of native fish or wildlife in the area. The Phase I area has reduced wildlife minimal wildlife habitat value due to on-going discing and the southern boundary, which is a concrete wall separating Phase I from Interstate 580. Phase I would also not impede the use of native wildlife nursery sites.

Phase II

Phase II has more habitat value than Phase I, but construction and operation of Phase II also would not interfere with the movement of native fish or wildlife corridors in the area. Phase II would also not impede the use of native wildlife nursery sites.

Impact Analysis

Impact 3.3.1: The Project could impact animal species identified as a candidate, sensitive, or special status, either directly or through habitat modification. (Significant)

The Federal Endangered Species Act (FESA) requires the federal government to designate critical habitat for any listed species. Critical habitat is defined as: (1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. While there is no designated critical habitat within the Study Area, there is critical habitat for the California red-legged frog, the California tiger salamander, and the vernal pool fairy shrimp within five miles of the Study Area (see **Figure 3.3-5**).

Phase I

Phase I is the land east of Arroyo Las Positas is regularly disked for fire protection and not used for grazing. Because Phase I is regularly disced, there is no natural habitat, no special-sensitive species were identified on Phase I during surveys and there would be no direct impact on any candidate, sensitive, or special-status animal species from Phase I development (Barnett, 2021). Regardless, Phase I construction could result in impacts to special-status animal species that locate to Phase I prior to construction or Phase I construction could result in impacts to nearby nesting raptors and other nesting birds. These impacts would be significant.

Phase II

The Phase II land west of Arroyo Las Positas is used for cattle grazing. Construction of Phase II would eliminate potential habitat for several special-status animal species. **Table 3.3-2** identifies special-status species with potential to occur in the Study Area and the species that have potential to occur on the Project Site, specifically Phase II.

According to the summary in **Appendix D Biological Resources Assessment (BRA)**, there are eight federal special wildlife species (San Joaquin kit fox, San Joaquin coachwhip, vernal pool fairy shrimp, longhorn fairy shrimp, California red-legged frog, the valley elderberry longhorn beetle, the western pond turtle, and the California tiger salamander), four special status state species (loggerhead shrike, white-tailed kite, Swainson's hawk, and tricolored blackbird), and four species of special concern (western burrowing owl, western spadefoot, grasshopper sparrow, and the American badger) that have the potential to occur on site. Protocol surveys for the California tiger salamander were conducted of one wetland in the Study Area in 2021 and found no sign of this species.

Project construction could potentially cause injury or mortality to these special-status species if they are on the Project site during construction. Potential impacts to these species from Phase II development would be significant.

Mitigation Measures

Mitigation Measure 3.3.1a: Pre-Construction Surveys

The Project applicant/construction contractor shall retain a qualified biologist to confirm presence or absence of species of special concern within two weeks of planned construction.

Mitigation Measure 3.3.1b: Construction Employee Environmental Awareness Training

The Project applicant/construction contractor shall retain a qualified biologist to conduct environmental awareness training for construction crews before project implementation. The awareness training shall be provided to all construction personnel and shall brief personnel on the need to avoid effects on sensitive biological resources (i.e., special status animal and plant species, wetlands and other waters, and active bird nests). The education program shall include a brief review of the special-status species with the potential to occur in the Project area (including their life history, habitat requirements, and photographs of the species). The training shall identify the portions of the Project area in which the species may occur, as well as their legal status and protection. The program also shall cover the relevant permit conditions and mitigation measures that must be followed by all construction personnel to reduce or avoid effects on these resources during project implementation through completion. The training shall emphasize the role that the construction crew plays in identifying and reporting any special-status species observations to the on-site biologist. Training shall identify the steps to be taken if a special-status species is found within the construction area (i.e., notifying the crew foreman, who would call the designated biologist).

An environmental awareness handout that describes and illustrates sensitive resources to be avoided during project construction and identifies all relevant permit conditions shall be provided to each crew member. The crew foreman shall be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs shall be conducted for appropriate new personnel as they are brought on the job.

Mitigation Measure 3.3.1c: San Joaquin Kit Fox

An intensive survey for active San Joaquin kit fox dens will be conducted by a qualified biologist within and surrounding the proposed construction area no less than 14 days and no more than 30 days prior to construction. The USFWS and the CDFW would be immediately contacted if this/these survey(s) determine that the San Joaquin kit fox does occupy

construction areas or within the vicinity (200 feet) of ground disturbing activities, either by direct observation or identification of active den site(s). In addition, all ground disturbing work within 200 feet of any active den(s) shall be postponed until the USFWS and/or CDFW provide guidance regarding how to proceed.

Mitigation Measure 3.3.1d: San Joaquin Coachwhip and other Special-Status Reptiles and Amphibians

The MVMG Project area will be intensively surveyed for evidence of these reptile species within 30 days prior to construction. As appropriate, based on survey results, temporary fencing designed to prevent the entry of San Joaquin coachwhip shall be installed around the perimeter of all areas proposed for construction. The exclusion fencing shall be installed so that its bottom is buried into the ground 12" and 24" is exposed above ground. Following installation of this temporary fencing, a qualified biologist shall conduct a pre-ground disturbing activities survey to locate any San Joaquin coachwhip within the enclosed area. Any special-status reptiles or amphibians encountered within the fenced area would be captured and trans-located by the qualified biologist to similar suitable habitat on the Project site, in areas not adversely affected by Project activities.

Mitigation Measure 3.3.1e: Vernal Pool fairy shrimp and longhorn fairy shrimp

Prior to construction, U.S. Fish & Wildlife Service protocol-level (dry- and wet-season) vernal pool crustacean surveys shall be conducted by a qualified biologist to definitively determine presence or absence of these listed large branchiopods on-site. If no listed large branchiopods are found on-site, and this conclusion is confirmed by the USFWS, no further mitigation would be required. If, however, listed large branchiopods are found, assumed to be present (without surveys), or determined by the USFWS to be on-site, the Project applicant shall mitigate the loss of potential habitat in coordination with the USFWS as part of a Clean Water Act, Section 404 permitting process to provide for preservation of off-site lands that provide habitat for listed large branchiopods according to USFWS required mitigation ratio requirements.

Mitigation Measure 3.3.1f: California Red-Legged Frog

A qualified biologist shall conduct California red-legged frog protocol surveys to determine presence/absence of the species if concluded necessary by the USFWS, in accordance with the USFWS guidance (*USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog*), which requires up to eight surveys within potential habitat – six surveys within the breeding season (October 1 – June 30) and two surveys during the non-breeding season (July 1 – September 30).

A qualified biologist shall conduct presence/absence surveys prior to ground-disturbing activities during the species' active season (October 1 – June 30). The Project shall immediately notify the USFWS, CDFW and Alameda County if any individuals or their signs are observed during these surveys.

If found on-site, impacts to this species would be minimized and mitigated by erecting temporary exclusion fencing – with the bottom edge buried into the ground around all proposed work area. A qualified biologist (approved by the USFWS and California Department of Fish and Game [CDFG]) shall then relocate California red-legged frogs from within work areas to approved relocation areas.

Mitigation Measure 3.3.1g: California Tiger Salamander

A qualified biologist shall conduct presence/absence surveys prior to ground-disturbing activities and during construction during the species' active/breeding season – starting October 15 or when rain occurs. The Project would immediately notify the USFWS, CDFW and Alameda County if any individuals or their sign are observed during these surveys. If surveys conducted determined the species to be present, mitigation shall be implemented to meet State and Federal resource agency requirements. This mitigation could be achieved through the purchase of credits at a USFWS-approved mitigation bank, or through the placement of a conservation easement over occupied California tiger salamander habitat. The Natural Resources Conservation District, through the Alameda County Conservation Partnership, provides opportunities for in-lieu fee payments to fund restoration/preservation of California tiger salamander habitat in Alameda County.

Mitigation Measure 3.3.1h: Swainson's hawk

A preconstruction nesting bird survey shall be conducted on-site within 15 days prior to construction if construction associated with the Project would commence between March 1st and September 1st ("the nesting season"). The survey shall include all on-site trees and trees with ¼ mile of the Project site. If disturbance associated with the Project would occur outside of the nesting season, no surveys shall be required.

If Swainson's hawk are identified as nesting on or near the Project site, a non-disturbance buffer of 250-feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with painted orange lath or via the installation of orange construction fencing. Disturbance within the buffer shall be postponed until a qualified ornithologist has determined that the young have attained sufficient flight skills to leave the area or that the nesting cycle has otherwise completed.

Mitigation Measure 3.3.1i: Special-Status Bird Species

A qualified biologist would conduct nesting bird surveys within 30 days of initiation of ground disturbing activities within suitable habitat (and within the appropriate nesting season) throughout the Project site to avoid impacts to nesting birds associated with construction. If an active nest is located, all clearing and construction within a buffer as designated appropriate by a biological monitor, shall be postponed until the nest is vacated and juveniles have fledged, and there is no evidence of a second attempt at nesting, as determined by a qualified biologist.

Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel should be instructed on the sensitivity of the area. Additional surveys would then be conducted if ground-disturbing activities are delayed due to active bird nesting, until the qualified biologist determines that the young associated with an active nest have fledged.

Mitigation Measure 3.3.1j: Burrowing Owl

There are numerous mammal burrows that can act as habitat for this species within the Study Area. A pre-construction burrowing owl survey is recommended within 14-days prior to any site disturbance to ensure no subsequent occupation of, or adverse impacts to potential habitat on the parcel. Therefore, prior to issuance of grading permits, it is recommended that:

A preconstruction survey by a qualified biologist is conducted. If possible, a winter survey should be conducted between December 1 and January 31 (when wintering owls are most

likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are preferable. The survey techniques shall be consistent with the CDFW Staff Report survey protocol and include a 260-foot-wide (buffer) zone surrounding the Study Area. Repeat surveys shall also be conducted not more than 30 days prior to initial ground disturbance to inspect for re-occupation and the need for additional protection measures. If no burrowing owls are detected during preconstruction surveys, then no further mitigation is required.

If active burrowing owl burrows are identified, Project activities shall not disturb the burrow during the nesting season (February 1–August 31) or until a qualified biologist has determined that the young have fledged, or the burrow has been abandoned. A no disturbance buffer zone of 160-feet is required to be established around each burrow with an active nest until the young have fledged the burrow as determined by a qualified biologist.

If destruction of the occupied burrow is unavoidable during the non-breeding season, September 1– January 31, passive relocation of the burrowing owls shall be conducted. Passive relocation involves installing a one-way door at the burrow entrance, encouraging owls to move from the occupied burrow. No permit is required to conduct passive relocation; however, this process shall be conducted by a qualified biologist and in accordance with CDFW guidelines. In addition, to offset the loss of foraging and burrow habitat on the Project site, a minimum of 6.5 acres of foraging habitat (calculated on a 300-ft foraging radius around the burrow) per pair or unpaired resident bird, shall be acquired and permanently protected at a location acceptable to the CDFW.

Mitigation Measure 3.3.1k: Western Spadefoot Toad

A qualified biologist shall survey areas of suitable habitat for western spadefoot toad on the Project site, including ruts or small pools within on-site grassland, as well seasonal depressions. The survey shall be conducted during the active season of western spadefoot toad (which corresponds with the rainy season). The survey results shall be submitted to the CDFW and Alameda County prior to construction.

If surveys result in the observation of western spadefoot toad within Project impact areas in on-site grassland, observed individuals and/or eggs shall be removed from Project impact areas (with the prior approval of the CDFG) and be relocated to pre-determined suitable habitat in an appropriate area that would not be impacted.

Mitigation Measure 3.3.1l: American Badger

A qualified biologist shall conduct preconstruction surveys within on-site suitable habitat for American badger burrows within grassland habitat prior to any ground disturbing activities, including grading, construction, or site preparation activities within 30 days of proposed Project activities. If badgers are observed within Project impact areas in or within 200 feet of on-site grassland, observed individuals shall be captured, removed from Project impact areas through humane exclusion from burrows (with the prior approval of the CDFW), and relocated to suitable habitat in an appropriate area that will not be impacted. This relocation area would preferably be on-site but may also include off-site lands approved CDFW and Alameda County that contains suitable grassland habitat. All ground-disturbing work within 200 feet of the active burrow(s) shall be temporarily postponed if the American badger is observed breeding and denning on-site until direction from CDFW provides guidance regarding how to proceed.

Level of Significance After Mitigation

Mitigation Measures 3.3.1a, 3.3.1b, 3.3.1h, 3.3.1i, and 3.3.1j would reduce potentially significant impacts to special-status species animals and/or nesting raptors and birds to a less-than-significant level for Phase I.

Mitigation Measures 3.3.1a through 3.3.1l would reduce potentially significant impacts to special-status species animals and/or nesting raptors and birds to a less-than-significant level for Phase II.

Impact 3.3.2: The Project could impact plant species identified as a candidate, sensitive, or special status. (Significant)

As discussed in the Project setting above, there are three special-status plant species: heartscale, long-style sand spurrey, and prostrate vernal pool naverettia that have the potential to occur on the Project site. Construction and operation of the Project could potentially result in significant impacts to the special-status plant species discussed in detail above

Phase I

Phase I is the land east of Arroyo Las Positas is regularly disked for fire protection and not used for grazing. Because Phase I is regularly disked, there is no natural habitat, no special-sensitive species were identified on Phase I during surveys and there would be no direct impact on any candidate, sensitive, or special-status plant species from Phase I development (Barnett, 2021).

Phase II

The Phase II land west of Arroyo Las Positas is used for cattle grazing. Construction of Phase II could eliminate potential habitat for the special-status plant species. Therefore, without mitigation, impacts to special-status plant species would be potentially significant during Phase II.

Mitigation Measures

Mitigation Measure 3.3.2: During the appropriate blooming/flowering season prior to construction, a qualified botanist shall conduct special-status plant species presence/absence surveys within areas proposed for grading or modification, in accordance with *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (California Department of Fish and Game 2009) to determine which special-status plants with the potential to occur on-site are evident and identifiable on-site. Survey results shall be submitted to the CDFW and Alameda County. If any sensitive plant species are observed during the presence/absence surveys, and it is determined that such plants would be impacted by Project activities, MVMG, CDFW, and the USFWS (if the species is also on the federal list of sensitive species) would be consulted to determine appropriate measures to ensure the protection of the species and its habitat. Such mitigation should include avoidance or, if avoidance is not possible, relocation of affected plants to a mitigation site located in similar habitat within the Project site, in an area where no impacts are expected to occur. The relocation site should be in an area that is protected from impacts through human disturbance by fencing during the season that special-status plant species would be evident and identifiable—i.e., during their blooming season.

Level of Significance After Mitigation

Mitigation Measures 3.3.2 would reduce potentially significant impacts to special-status plant species to a less-than-significant level for both Phase I and Phase II

Impact 3.3.3: The Project could impact wetlands and "other waters of the United States". (Significant)

Phase I

As shown in **Table 3.3-1** and **Figure 3.3-4**, there are a total of 2.1 acres of wetlands and "other waters of the United States" within the Project Site. These include 1.85 acres of Arroyo Las Positas (Intermittent Stream) and 0.24 acres of Seasonal Wetlands. Phase I is adjacent to the east bank of Arroyo Las Positas; there are no Seasonal Wetlands in Phase I. Phase II is adjacent to west bank of Arroyo Las Positas and all the Seasonal Wetlands (0.24 acres) are in the Phase II area of the Project. Construction and operational activities affecting wetland features would be a potentially significant impact.

Phase II

The impact discussion for Phase I would also apply to Phase II of the Project. Therefore, without mitigation, impacts to wetland features would be potentially significant during Phase II.

Mitigation Measures

Mitigation Measure 3.3.3a: The Project shall avoid all impacts to the 2.1 acres of on-site wetlands. This would include establishing appropriate development setbacks from Project uses and Arroyo Las Positas and the uses that could affect the seasonal wetlands.

Mitigation Measure 3.3.3b: A Section 404 permit from the U.S. Army Corps of Engineers and a Section 401 water quality certification from the Regional Water Quality Control Board may be required if there are any activities affecting wetlands. The Project shall communicate with the San Francisco Bay Regional Water Quality Control Board (RWQCB) to determine whether CA Dredge & Fill Procedures (aka Waste Discharge Requirement; WDR) permitting would be required and with the California Department of Fish & Wildlife to inquire about a possible 1602 Lake & Streambed Alteration Agreement (LSAA).

Any resource permitting with these agencies could also require mitigation of wetland habitat loss through purchase of equivalent wetland credits at an approved Mitigation Bank within the Project's service area.

Level of Significance After Mitigation

Mitigation Measures 3.3.3a or 3.3.3b and Mitigation Measures 3.1.1a (Pre-Construction Surveys) and 3.1.1b (Construction Employee Environmental Awareness Training) would reduce potentially significant impacts to wetlands and other waters of the United States to a less-than-significant level for both Phase I and Phase II

Impact 3.3.4: The Project could conflict with local policies or ordinances protecting biological resources. (Significant)

As discussed above, local policies from the County General Plan and the ECAP provide a framework intended to promote conservation of existing high-value biological resources in the county. The Project site is located within Conservation Zone 4 of the EACCS area. The EACCS prioritizes the protection of special-status animal and plants species and critical. No critical habitat exists at the Project site (see **Figure 3.3-5**) (Barnett Environmental, 2021).

Phase I

Phase I is the land east of Arroyo Las Positas is regularly disked for fire protection and not used for grazing. Because Phase I is regularly disced, there is no natural habitat, no special-sensitive species were identified on Phase I during surveys and there would be no direct impact on any candidate, sensitive, or special-status animal species from Phase I development (Barnett, 2021). Therefore, impacts to local policies and ordinances protecting biological resources during Phase I would be less than significant.

Phase II

The Phase II land west of Arroyo Las Positas is used for cattle grazing and construction of Phase II would eliminate potential habitat for the several special-status animal species (see Impact 3.3.1). Therefore, impacts to local policies and ordinances protecting biological resources during Phase II would be significant.

Mitigation Measures

None required for Phase I.

Implement Mitigation Measures for Phase II recommended for Impact 3.3.1, Impact 3.3.2, and Impact 3.3.3.

Level of Significance After Mitigation

Implementation of recommended Mitigation Measures for Impact 3.3.1, Impact 3.3.2, and Impact 3.3.3 would reduce conflicts with local policies protecting biological resources to less-than-significant level for Phase II.

3.3.3 REFERENCES

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3.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section describes the cultural resources and tribal cultural resources (TCRs) setting, evaluates potential impacts to cultural resources and TCRs, and recommends mitigation measures to reduce impacts of the Project to a less-than-significant level. Cultural resources include sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-era resources, and TCRs (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074). TCRs include site features, places, cultural landscapes, and sacred places or objects, which are of cultural value to a tribe.

A Cultural Resource Assessment for the Project Site was conducted by Peak & Associates in 2021. Melinda A. Peak, Senior Historian/Archeologist, served as principal investigator for the study, with Michael Lawson completing the on-site field survey (See **Appendix E**).

3.4.1 SETTING

Physical Setting

The Project site is hilly, with draws descending between them from north to south and draining into Arroyo Seco, which merges with Las Positas Creek to the east. Narrow terraces stretch away from the creek on both sides, with eroded ledges up to 12 feet high. The only vegetation present included short new-growth grasses on the terraces and slopes of the hills, and tule, small willow trees, and introduced bushes within the creek channel. The soil composition and color changes often throughout the Project site, with dark to medium brown silty or sandy loam on the terraces, sand and silt and cobbles within the creek channel, and medium to light tan clay loam on the slopes and hill tops (Peak & Associates, 2021).

Archeology

Early archeological work in the Bay Area concentrated on shell mounds around the shores of San Francisco Bay and San Pablo Bay. By the time archeological interest began to be directed toward the interior valleys, early urbanization and even earlier agricultural use of the land had destroyed or seriously altered much of the archeological record. It is only in relatively recent years that techniques of archeological analysis and the volume of excavation work done in the area, largely as a result of environmental laws, have allowed a synthesis of regional prehistory (Peak & Associates, 2021).

Major archeological projects by the Corps of Engineers (Walnut Creek area), the Department of Water Resources (Los Vaqueros Reservoir area) and others have greatly expanded our knowledge of the archeology of the East Bay interior. This has led to a fairly detailed description of the archeological sequences of coastal and most of interior Contra Costa and Alameda counties (Peak & Associates, 2021). For additional setting information related to Archeology refer to the Cultural Resources Assessment in **Appendix E**.

Cultural Setting

Ethnography

The Native Americans who occupied much of the San Francisco Bay area were known to early ethnographers as Costanoan. The designation "Costanoan" derives from the Spanish term for coastal people and was not used by the Indian people. Today, most of them prefer to be called Ohlone, after an important village in the San Francisco area. (Peak & Associates, 2021).

Ancestors of the Ohlone people moved into the San Francisco and Monterey Bay areas from the Delta of the San Joaquin and Sacramento rivers about 1,500 years ago. The Ohlone territory extended from the Carquinez Strait in the northeast to just south of Chalome Creek in the southeast and from San Francisco to the Sur River along the Coast. This vast territory was broken into eight different language-based zones. These eight branches of the Ohlone language family were separate languages, not dialects. The group that inhabited the Project vicinity were the Souyen tribelet of the Ohlone according to Milliken. This little-known group held a part of the far northern portion of Costanoan territory and were bordered by Coast Miwok speakers as well as other Ohlone tribelets (Peak & Associates, 2021). For additional setting information related to Ethnography refer to the Cultural Resources Assessment in **Appendix E**.

Regional History

The lands of the Project area were used until recently for the same purpose as they have since the earliest non-Native occupancy of the region: cattle grazing. To the south, the missions ran herds of cattle in the grassy valley and surrounding hills. Robert Livermore arrived in California in 1822, a young English sailor who deserted the trading ship, the Colonel Young. He traveled about, working for Spanish settlers. In 1834, he married Josefa Higuera. By 1835, he and William Gulnac lived in a house in what became identified as Livermore Valley. Gulnac petitioned the governor for Rancho Las Positas, but before the grant was made, Gulnac had turned over his rights to Livermore and José Noriega. In April 1839, Governor Juan Alvarado granted the land to them, a total of about 8,800 acres. Livermore later bought out Noriega's interest (Peak & Associates, 2021).

Winemaking began in the early 1880s in the Livermore Valley region and continues to be an important industry in the region. The area surrounding the City of Livermore remained agricultural in nature for several years. In 1942, former ranch land became the site of the Livermore Naval Air Station. This base was closed in 1946. In 1952, the federal government established the Lawrence Livermore National Laboratory was established on the site and became a major employer in Livermore. The growth of the Bay Area has led to an increasing demand for housing, with subsequent residential and industrial growth in the Livermore region, with decreasing agriculture use and most of the ranches now lie under subdivisions (Peak & Associates, 2021).

Results of the Literature and Records Search

A record search was conducted for the Project site and additional acreage no longer part of the Project to the east through the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) on January 29, 2021 (NWIC File No. 20-1349). The search included a check for the Project site and a quarter-mile radius.

The NWIC reported an off-site historical resource to the east of the Project site, the Juanita Vidalin House, also known as the Angelo Schenone House, recorded as P-01-011636. One survey covered the Project site, but the level of coverage appears to be less than complete coverage, with the overall survey of a large area focusing on visiting locations of historic sites in the North Livermore Master Plan Area. Numerous other surveys with negative results have been conducted in the Project vicinity.

Field Survey

Michael Lawson, an experienced field archeologist, conducted a complete survey of the Project site on March 8, 2021. During the field survey, the visibility was fair to good, depending on density of new grass-growth, accumulation of decaying previous-seasons grasses, and disturbed areas, such as cattle trails, ground squirrel burrowing and erosion. Due to known prehistoric and historical resources found along local creeks, close three- to five-meter parallel transects were used on the terraces and slopes within 200 meters of the stream channel, expanding to 15- to 20 meter width on steep slopes and hill tops at north side of survey area. Close, overlapping inspection occurred in areas of exceptional soil visibility and where soil color or types changed. Stone types observed included sandstone, quartzite, crypto crystalline silicates, schist, andesite, and unidentified fine-grained pebbles. No stone outcrops were observed. No cultural resources, historic period or prehistoric, were observed within the Project site. Peak and Associates concluded that the Project would not affect significant cultural resources (Peak & Associates, 2021).

Regulatory Setting

Federal Regulations

Antiquities Act of 1906

Antiquities Act of 1906, Title 16, United States Code, Sections 431, 432, and 433, and subsequent related legislation, policies, and enacting responsibilities allows for the protection of any historic or prehistoric ruin or monument, or any object of antiquity situated on lands owned or controlled by the Government of the United States.

National Historic Preservation Act

The National Historic Preservation Act (NHPA), Title 16, United States Code, Section 470, establishes a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States. The Secretary of the Interior is authorized to expand and maintain a National Register of Historic Places (NRHP) under the NHPA.

State Regulations

California Register of Historical Resources

The California Register of Historical Resources (CRHR) established a list of those properties which are to be protected from substantial adverse change (PRC Section 5024.1). A historical resource may be listed in the CRHR if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

- It is associated with the lives of persons important in California's past.

- It embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic value.

- It has yielded or is likely to yield information important in prehistory or history.

The CRHR includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the CRHR. These may include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office (SHPO) procedures, historic resources or districts designated under a local ordinance consistent with Commission procedures, and local landmarks or historic properties designated under local ordinance.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires public agencies to consider the effects of their actions on both "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" and PRC Section 21084.2, 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." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC, Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

- A resource listed in, or determined to be eligible by, the State Historical Resources Commission, for listing in the CRHR (PRC, Section 5024.1).

- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC, Section 5024.1), including the following:

  - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - Is associated with the lives of persons important in our past;
  - Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
  - Has yielded, or may be likely to yield, information important in prehistory or history.

- The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC) or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC, Section 21083.2, subdivision (g), states that unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect TCRs. PRC, Section 21074 states the following:

Tribal cultural resources are either of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - Included or determined to be eligible for inclusion in the CRHR.
  - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

- A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Health and Safety Code, Section 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California NAHC.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act applies to both State and private lands. The Act requires that upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons most likely to be descended from the Native American's remains. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resources Code, Section 5097

PRC, Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate pale ontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Assembly Bill 52

AB 52, signed by Governor Edmund G. Brown, Jr., in September of 2014, establishes a new class of resources under CEQA: "tribal cultural resources" (TCRs). AB 52, as codified in PRC Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once

the lead agency determines that the application for the project is complete, prior to the issuance of an NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. **[County should keep records of any offer of consultation related to AB 52 or records indicating that no tribes have requested consultation].** AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision would create a new category for TCRs. As defined in PRC Section 21074, to be considered a TCR, a resource must be either:

- listed or determined to be eligible for listing, on the national, state, or local register of historic resources; or

- a resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in PRC Section 50241(c). PRC Section 5024.1(c) provides that a resource meets criteria for listing as an historic resource in the California Register if any of the following apply:
  - It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
  - It is associated with the lives of persons important in our past.
  - It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
  - It has yielded, or may be likely to yield, information important in prehistory or history.

Local Regulations

East County Area Plan

The ECAP includes the following policies specific to cultural resources that are applicable to the Project:

> *Policy 136*: The County shall identify and preserve significant archaeological and historical resources, including structures and sites which contribute to the heritage of East County.
>
> *Policy 137*: The County shall require development to be designed to avoid cultural resources or, if avoidance is determined by the County to be infeasible, to include implement appropriate mitigation measures that offset the impacts.

3.4.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the *CEQA Guidelines* states that a project would result in a significant impact to Cultural Resources and TCRs if it would:

- Cause a substantial adverse change in significance of a historical resource pursuant to Section 15064.5;

- Cause a substantial adverse change in significance of an archaeological resource pursuant to Section 15064.5;

- Disturb any human remains, including those interred outside of formal cemeteries; or
- Cause a substantial adverse change in the significance of a TCR, as defined by PRC Section 21074, and that is:
  - Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined by PRC Section 5020.1(k), or
  - 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 the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Topics with No Impact

Phase I and Phase II

The Project site is not considered a historical resource pursuant to CEQA Section 15064.5. Additionally, the subject property is not recognized as a contributing building or historic landmark in Alameda County 2005-2008 Comprehensive Survey (Alameda County, 2008). There are no historical resources on the Project site, therefore, there would be no impact related to historical resources pursuant to *CEQA Guidelines* Section 15064.5. This issue is not further discussed in this section.

Impact Analysis

Impact 3.4.1: The Project could either directly or indirectly result in impacts to cultural resources or Tribal Cultural Resources. (Significant)

Phase I

Direct impacts are those which may result from the immediate disturbance of resources, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or alteration of the setting of a resource. Indirect impacts are those which may result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resources due to improved visibility or access.

Exposure of cultural resources during pre-construction site preparation or during construction excavation can also have a beneficial effect by making the data accessible for research. If these resources and their temporal and spatial context receive proper protection and analysis, they can add to the understanding of human adaptation to the environment and their use of the land and its resources. Analysis of cultural resources also can provide a very important key to changes in population and human movement within and throughout a geographic region.

The potential for the Project to impact sensitive cultural resources during Phase I is directly related to the likelihood that such resources are present and whether they are encountered during Project development and construction activities. As discussed above, Alameda County was inhabited by the Ohlone Native Americans, therefore there is a likelihood that cultural resources

could be encountered during Project-related site preparation, grading, and excavation. Therefore, potential impacts to cultural resources would be a significant impact of the Project.

Phase II

The impact discussion for Phase I would also apply to Phase II of the Project. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.4.1a: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to *CEQA Guidelines* Section 15064.5. If any find is determined to be significant, representatives from the County and the archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the County shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, proposed Project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the Project site outside the 50-foot area while mitigation for historical resources or unique archaeological resources is being carried out.

Mitigation Measure 3.4.1b: In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area suspected to overlie adjacent remains until the Alameda County Coroner has determined that the remains are not subject to any provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. The Coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

If the Alameda County Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC).

After notification, the NAHC will follow the procedures outlines in Public Resources Code Section (PRC) 5097.98 that include notifications of the most likely descendants (MLDs), and recommendations for the treatment of the remains. The MLDs will have 48 hours after notification by the NAHC to make their recommendations (PRC Section 5097.98).

Level of Significance After Mitigation

Mitigation Measures 3.4.1a and 3.4.1b would reduce impacts to less than significant for Phase I and Phase II.

3.4.3 REFERENCES

Alameda County. 1994. *East County Area Plan, Volume 1 Goals, Policies and Programs.* May 1994.

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3.5 GEOLOGY, SOILS, AND SEISMICITY

This section describes the existing geologic and seismic setting and evaluates the potential for construction and operation of the Project elements to cause adverse impacts associated with surface and subsurface geologic materials, seismic ground shaking, slope stability, soil conditions, and paleontological resources. Groundwater resources and hydrogeologic impacts are addressed in Section 3.8, Hydrology and Water Quality.

3.5.1 SETTING

Topography

The Project site lies within the southeastern portion of the Livermore Valley, a large, east-west trending valley bounded by the Diablo Range to the north, east, and south, and linked to the west with the Amador Valley. The hills south and east of the City of Livermore gradually become steeper towards the Altamont Hills of the Diablo Range. Altamont Pass is approximately ten miles northeast of the project site.

Near the Project site, the terrain ranges from relatively shallow hills to rolling plateau. Site slope gradients range from 2.5:1 to 10:1 (horizontal:vertical) in the surrounding hills (with the steepest slopes in the southwest), and the lowland valley area has a slope gradient shallower than 25:1 (ENGEO, 2018). The site is bisected in the southeast by the deeply incised Arroyo Las Positas watercourse. The area on the west side of the arroyo, the Phase II area, is gently sloping. The elevations on the west side of the arroyo range from 662 feet along the north and west borders, to 491 feet near the arroyo.

Geology

The Diablo Range consists predominantly of a core of igneous and metamorphic rocks of the Mesozoic Franciscan Assemblage. Based on a review of the Department of Conservation's 2010 Geologic Map of California, the Project site is underlain in part by unconsolidated and semi-consolidated rocks of the quaternary era composed of alluvium, lake, playa, and terrace deposits. The site is partially underlain by semi-consolidated rocks of the quaternary era including Pliocene and/or Pleistocene sandstone, shale, and gravel deposits. (Department of Conservation 2010a).

Soils

Soil types and their distribution in the Project area were identified through a review of the 2018 geotechnical exploration report prepared by ENGEO (ENGEO, 2018) (see **Appendix F**). NRCS Alameda Area Soil Survey (NRCS 1966) and the online Web Soil Survey (NRCS 2015). Soil types within the Project area mainly consist of interbedded layers of fine- and coarse-grained material associated with the alluvial deposits and the Livermore gravel formation. The upper approximately 2-10 feet of soil consist predominantly of clay. Beneath the surficial clay layer, there is a varying 5-10-foot-thick layer of generally medium dense to very dense coarse-grained material consisting of clayey sand, clayey gravel, silty sand, sand, and gravel. Below this granular layer, there is hard lean clay and silty clay with varying amounts of sand and gravel.

Soil mapping of the watershed of the project site prepared the National Resource Conservation Science (NRCS) indicates that surficial soil materials are primarily comprised of the Altamont series, which consists of deep, well drained soils that formed in material weathered from fine grained sandstone and shale, and the Linne series, which consists of moderately deep, well drained soils that formed in material weathered from fairly soft shale and sandstone.

Seismicity

The Project lies within a seismically active region (ENGEO, 2018). According to the Alameda County General Plan Safety Element, the County has been subjected to numerous seismic events, originating both on faults within the County and in other parts of the region. Six major Bay Area earthquakes have occurred since 1800 that have affected the area. It has been determined that earthquakes of equally destructive forces are a certainty within the region, such as the Hayward-Rodgers Creek fault system that is estimated to have a probability of 31 percent of producing an earthquake of a magnitude of 6.7 or higher by 2043, and this probability is the highest of Bay Area faults. (Alameda County, 2013). **Table 3.5-1** shows the active and potentially active faults within Unincorporated Alameda County, which includes the Project site.

The nearest active fault is the Greenville Connected, which is mapped approximately 3.3 miles east of the site. Faults in the region capable of generating substantial earthquakes that may affect the site are summarized in **Table 3.5-1**.

TABLE 3.5-1. ACTIVE FAULTS CAPABLE OF PRODUCING SIGNIFICANT GROUND SHAKING AT THE SITE

Fault Name	Distance from Site (miles)	Direction from Site	Maximum Moment Magnitude
Greenville Connected	3.3	East	7.0
Mount Diablo Thrust	4.0	Northwest	6.5
Calaveras	9.0	West	7.0
Great Valley	13.0	East	6.9
Hayward	14.9	West	7.3
Green Valley Connected	18.6	Northwest	6.8

SOURCE: ENGEO, 2018.

The third version of Uniform California Earthquake Forecast developed by the Working Group on California Earthquake Probabilities provides estimates of the 30-year probability of various magnitudes earthquakes in the San Francisco Bay Area (ENGEO, 2018). **Table 3.5-2** shows the results of the Study.

TABLE 3.5-2. 30-YEAR PROBABILITY OF EARTHQUAKE IN THE BAY AREA

Earthquake Magnitude	30-year probability of one or more events
5 or Greater	100%
6 or Greater	98%
7 or Greater	51%
8 or Greater	4%

SOURCE: ENGEO, 2018.

Geologic and Seismic Hazards

Fault Surface Rupture

In major earthquakes, fault displacement can cause surface rupture along the fault, leading to severe damage to any structures or other improvements located on the fault trace. No portion of the site is located with an Alquist-Priolo Earthquake Fault Zone (DMG 1982). The closest active fault to the Project site is the Greenville fault, about 3.3 miles to the east; no active faults have been mapped on the project site. Therefore, the potential for surface rupture at the Project site is minimal.

Ground Shaking

Earthquakes generated from seismically active faults in the Bay Area are likely to affect the site during the life of the Project. Major factors that affect the severity (intensity) of ground shaking include the size (magnitude) of the earthquake, the distance to the fault that generated the earthquake, and the underlying geologic materials. Given similar subsurface conditions, the intensity of ground shaking decreases with distance from the causative fault. Thick, loose soils, such as non-compacted alluvium and artificial fill, tend to amplify and prolong the ground shaking, while bedrock is less susceptible to prolonged ground shaking and soil failure. The deep alluvial soils beneath the Livermore Valley in the Project vicinity could amplify ground shaking compared with bedrock conditions.

Liquefaction

Liquefaction is the sudden loss of strength in loose, saturated materials (predominantly sands) during an earthquake, which results in the temporary fluid-like behavior of those materials (much like quicksand). Liquefaction typically occurs in areas where groundwater is shallow and materials consist of poorly consolidated, well sorted[1] sands.

[1] Well sorted refers to sand grains that are all roughly the same size.

The state of California Seismic Hazard Zones map by California Geologic Survey maps the area around the creek as lying within a potential liquefaction hazard zone (**Figure 3.5-1**). The alluvial deposits, near Arroyo Las Positas, have been mapped as having moderate liquefaction susceptibility (ENGEO 2018). ENGEO tested site soils for liquefaction potential and calculated an estimated liquefaction-induced settlement in the overall site area is up to 2.5 inches; however, the 2.5-inch potential is an isolated area located in the eastern portion of the site, near the entrance. If restricted to areas where vertical structures and bridges are to be constructed, estimated liquefaction-induced settlement is a maximum of 1.3 inches (ENGEO 2018).

Lurching

Lurching, or lurch cracking, is a general term for the formation of irregular ground surface cracks in response to earthquake-induced ground shaking. These features typically range in length from a few inches to many feet, have small displacements, and are usually localized. The potential for lurching is highest in areas underlain by soft, saturated materials, especially where bordered by steep banks (i.e., the incised Arroyo Las Positas) or adjacent hard ground. Alluvial materials at the Project site could be subject to lurching.

Slope Stability & Landslide Hazards

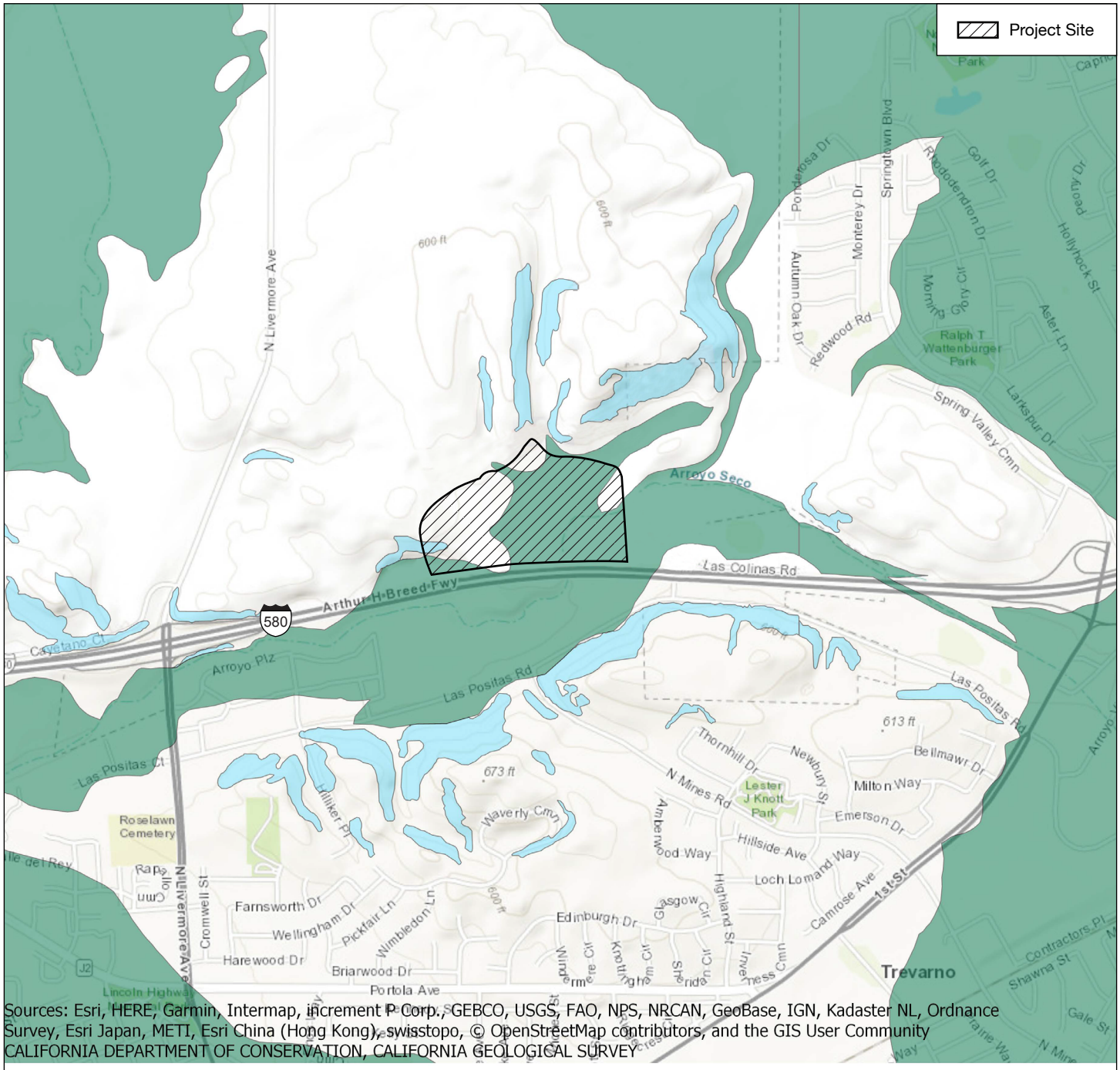
Landslides can result from static forces (gravity) as well as from seismically induced ground shaking. The susceptibility of a slope to fail (landsliding) depends on the slope and underlying geology, the amount of rainfall that has occurred, change in slope geometry, and/or the magnitude of the seismic event. In addition to these general factors, slope stability can also be influenced by human activities, including placement of loads (e.g., buildings and other improvements) and excavation activities.

The state of California Seismic Hazard Zones map by California Geologic Survey maps the hillside areas located at the northern and western portions of the site as earthquake-induced landslide zones (ENGEO 2018).

In general, the relatively level and gently sloping portions of the Project site are not susceptible to landslide activity. Because topographic relief of the lower portion of the Project site is low and existing natural slopes are slight, the hazard of natural slope failure in the Project site vicinity under static conditions is remote (ENGEO, 2018).

Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquake ground motion but can occur under non-seismic conditions due to excessive weight on underlying compressible clays. Settlement may not occur at the same rate in all locations (referred to as differential settlement), which most commonly occurs in loose, non-compacted materials of variable density and strength. Alluvial materials at the site could be subject to differential settlement (ENGEO, 2018).



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
CALIFORNIA DEPARTMENT OF CONSERVATION, CALIFORNIA GEOLOGICAL SURVEY

EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

N

0 1,000 2,000 FEET

Liquefaction Zone
Areas where historical occurrence of liquefaction, or local geological,geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required

Earthquake-Induced Landslide Zones
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public

Source: ENGEO 2018

Figure 3.5-1
Seismic Hazards Zone Map

Expansive Soils

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments as they become saturated (swell) and then dry out (shrink). The cyclic shrinking and swelling can damage foundations and structures. Expansive soils in natural or engineered slopes can cause "soil creep" which can lead to severe cracking in dry soils and eventually result in damage to pavement and foundations. Cracking in the soil surface and in pavement can result in infiltration of surface water. The native soils at the Project site are composed of clays, and can be highly expansive (ENGEO, 2018).

Paleontological Setting

Paleontological resources are the fossilized remains of plants and animals: vertebrates (animals with backbones; e.g., mammals, birds, fish), invertebrates (animals without backbones; e.g., starfish, clams, coral), and microscopic plants and animals (microfossils). Paleontological resources can include mineralized body parts, body impressions, or footprints and burrows. They are valuable, non-renewable, scientific resources, which are used to document the existence of extinct life forms and to reconstruct the environments in which they lived.

Soil at the site generally consists of interbedded layers of Holocene alluvium and late-Miocene to early-Pleistocene Livermore gravels. A review of the University of California Museum of Paleontology (UCMP 2021) database confirms that vertebrate fossils sites within the Livermore gravel or quaternary deposits could include extinct camel (*Camelidae*), horse (*Equus* sp.), giant ground sloth (*Xenarthra*), tapir (*Tapirus* sp.), and mammoth (*Mammuthus* sp.).

Regulatory Setting

Alquist-Priolo Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Zoning Act) (Public Resources Code section 2621) was enacted by the State of California in 1972 to address the hazard of surface faulting to structures for human occupancy. The A-P Zoning Act was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged homes, commercial buildings, and other structures. The primary purpose of the A-P Zoning Act is to prevent the construction of buildings intended for human occupancy on the surface traces of active faults. The A-P Zoning Act is also intended to provide the citizens with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings against ground shaking. The Project site is not located within an A-P Zone (DMG, 1982).

Seismic Hazards Mapping Act

The State of California passed the Seismic Hazards Mapping Act of 1990 (Public Resources Code sections 2690–2699) to address the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Cities and counties must regulate

certain development projects within these zones until the geologic and soil conditions of their project sites have been investigated and appropriate mitigation measures, if any, have been incorporated into development plans. The State Mining and Geology Board provides additional regulations and policies to assist municipalities in preparing the Safety Element of their General Plan and encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. Under Public Resources Code section 2697, cities and counties must require, prior to the approval of a project located in a seismic hazard zone, submission of a Preliminary Geotechnical Report defining and delineating any seismic hazard. The Project site is not located within or near a mapped seismic hazard area.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California (DGS, 2020).

Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. Structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that substantial structural damage would not occur in the event of a maximum magnitude earthquake. However, it is reasonable to expect that a structure designed in-accordance with the seismic requirements of the CBC should not collapse in a major earthquake (DGS, 2020).

Local Regulations

Alameda County General Plan

The Safety Element of the Alameda County General Plan specifies numerous policies to meet its relevant goal, which is to minimize risk to lives and property due to seismic and geologic hazards. The following policies are applicable to the Project:

> *Policy P1*: To the extent possible, projects should be designed to accommodate seismic shaking and should be sited away from areas subject to hazards induced by seismic shaking (land sliding, liquefaction, lurking, etc.) where design measures to mitigate the hazards will be uneconomic or will not achieve a satisfactory degree of risk reduction.

Policy P2: Structures should be located at an adequate distance away from active fault traces, such that surface faulting is not an unreasonable hazard.

Policy P3: Aspects of all development in hillside areas, including grading, vegetation removal and drainage, should be carefully controlled in order to minimize erosion, disruption to natural slope stability, and landslide hazards.

Policy P4: Within areas of demonstrated or potential slope instability, development should be undertaken with caution and only after existing geological and soil conditions are known and considered. In areas subject to possible widespread major land sliding, only very low density development should be permitted, consistent with site investigations; grading in these areas should be restricted to minimal amounts required to provide access.

Policy P5: All existing structures or features of structures which are hazardous in terms of damage, threat to life or loss of critical and essential function in the event of an earthquake should be, to the extent feasible, brought into conformance with applicable seismic and related safety (fire, toxic materials storage and use) standards through rehabilitation, reconstruction, demolition, or the reduction in occupancy levels or change in use.

Policy P6: The County shall not approve new development in areas with potential for seismic and geologic hazards unless the County can determine that feasible measures will be implemented to reduce the potential risk to acceptable levels, based on site-specific analysis. The County shall review new development proposals in terms of the risk caused by seismic and geologic activity.

Policy P7: The County, prior to approving new development, shall evaluate the degree to which the development could result in loss of lives or property, both within the development and beyond its boundaries, in the event of a natural disaster.

Policy P8: The County shall ensure that new major public facilities, including emergency response facilities (e.g., hospitals and fire stations), and water storage, wastewater treatment and communications facilities, are sited in areas of low geologic risk.

Policy P10: Buildings shall be designed and constructed to withstand ground shaking forces of a minor earthquake (1-4 magnitude) without damage, of a moderate (5 magnitude) earthquake without structural damage, and of a major earthquake (6-8 magnitude) without collapse of the structure. The County shall require that critical facilities and structures (e.g. hospitals, emergency operations centers) be designed and constructed to remain standing and functional following an earthquake.

Policy P11: All construction in unincorporated areas shall conform to the Alameda County Building Ordinance, which specifies requirements for the structural design of foundations and other building elements within seismic hazard areas.

Policy P14. In order to minimize off-site impacts of hillside development, new construction on landslide-prone or potentially unstable slopes shall be required to implement drainage and erosion control provisions to avoid slope failure and mitigate potential hazards.

Alameda County East County Area Plan

Alameda County's East County Area Plan (ECAP) is a long-term policy document which identifies current and future needs of Alameda County and establishes goals and policies for its

development. Three area plans address circulation, open space, conservation, safety, and noise elements for their respective areas. The following policies are applicable to the Project:

Policy 308: The County shall not permit development within any area outside the Urban Growth Boundary exceeding 25 percent slopes to minimize hazards associated with slope instability.

Policy 309: The County shall not approve new development in areas with potential for seismic and geologic hazards unless the County can determine that feasible measures will be implemented to reduce the potential risk to acceptable levels, based on site specific analysis. The County shall review new development proposals in terms of the risk caused by seismic and geologic activity.

Policy 310: The County, prior to approving new development, shall evaluate the degree to which the development could result in loss of lives or property, both within the development and beyond its boundaries, in the event of a natural disaster.

Policy 313: The County shall require development in hilly areas to minimize potential erosion and disruption of natural slope stability which could result from grading, vegetation removal, irrigation, and drainage.

Policy 315: The County shall require that buildings be designed and constructed to withstand ground-shaking forces of a minor earthquake without damage, or a moderate earthquake without structural damage, and of a major earthquake without collapse of the structure.

Alameda County Municipal Code

Chapter 15.36 Grading, Erosion and Sediment Control of the Alameda County General Ordinance Code requires that: Except for the specific exceptions listed hereinafter, no person shall do or permit to be done any grading on any site in the unincorporated area of this county without a valid permit obtained from the director of public works.

In addition, all construction activities associated with the Proposed Project would be subject to the requirements of the CBC.

Paleontological Resources - California Public Resources Code Sections 5097.5 and 30244

Other state requirements for paleontological resource management are included in Public Resources Code sections 5097.5 and 30244. Section 5097.5 prohibits the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency. It defines the removal of paleontological sites or features as a misdemeanor, and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands. Section 30244 requires that, where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

3.5.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

The following thresholds of significance are consistent with CEQA *Guidelines* Appendix G. A significant impact would occur to Geology, Soils, and Seismicity if the Project would:

- 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. Refer to Division of Mines and Geology Special Publication 42;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
- 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; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Topics with No Impact

Phase I

There are no known active, sufficiently active, or well-defined faults have been recognized as crossing or being immediately adjacent to the Project site during Phase I. The Project site does not lie within an Alquist-Priolo Earthquake Fault Zone (DMG, 1982). The Project would not increase the frequency or effects of seismic activity in the area. Therefore, there would be no impacts related to fault rupture and, thus, this surface fault rupture.

Phase II

The analysis above also would apply to Phase II of the Project. There would be no impacts related to fault rupture. Phase II of the Project would not generate wastewater and would not include a septic system. Therefore, these topics are not discussed further in this analysis.

Impact Analysis

Impact 3.5.1: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. (Significant)

Phase I

As discussed in the Setting information in this section, an earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site, similar to that which has occurred in the past. ENGEO's Geotechnical Exploration Report concluded that the Project site is suitable for development, provided the geotechnical recommendations are properly implemented into site preparation, building, drainage, and foundation plans (ENGEO, 2018). Conformance to the current building code recommendations does not guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, a well-designed and constructed modern structure is not likely to collapse or cause loss of life in a major earthquake. In Phase I, the proposed buildings include the main funeral home, pavilion, and an entry plaza. These buildings could experience structural damage depending on the magnitude generated by an earthquake resulting in the risk of loss, injury or death involving seismic ground shaking. Therefore, this would be a significant impact of the Project.

Phase II

The impact discussion for development of Phase I would also apply to Phase II of the Project. Phase II structures would include a columbarium and mausoleum. In addition, there is the potential for the proposed lake features to fail in a major earthquake. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.5.1a: The Project Applicant shall implement all recommendations outlined in ENGEO's Geotechnical Exploration Report, including but not limited to construction monitoring recommendations, earthwork recommendations, and foundation recommendations. The Project Applicant shall also implement any recommendations provided by future Supplemental Geotechnical Exploration Report(s) during development of the Project.

Mitigation Measure 3.5.1b: The proposed lakes shall be designed under static and seismic loading conditions to ensure that the likelihood of lake system failure during a major earthquake event is minimal. Lake designs shall be reviewed and approved by the County Public Works Department prior to construction.

Level of Significance After Mitigation

Mitigation Measure 3.5.1a would reduce impacts to less than significant for Phase I. Mitigation Measures 3.5.1a and 3.5.1b would reduce impacts to less than significant for Phase II.

Impact 3.5.2: The Project could create impacts to topsoil or soil erosion. (Significant)

Phase I

Project grading activities could subject the bared areas of the site and any soil stockpile areas to substantial erosion if not properly protected. New construction under the Project would be required to comply with the General Construction National Pollutant Discharge Elimination System (NPDES) Permit, which regulates construction site stormwater management, and requires preparation of a Stormwater Pollution Prevention Plan (SWPPP). Once the Project is constructed, the primary erosion source would be from outfalls from the proposed storm drainage system. If not properly protected, stormwater existing the outfalls could result in localized erosion near the outfalls. Therefore, this would be a significant impact of the Project.

Phase II

The impact discussion for construction of Phase I would also apply to Phase II. Phase II has steeper hillsides and therefore higher erosion potential than Phase I. As with Phase I, this phase would require a SWPPP for construction. Post-construction, outfalls from the lakes and into the Arroyo could result in substantial erosion at those locations if not properly designed and protected. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.5.2: The Project stormwater system design shall locate and protect all stormwater outfalls to ensure proper stability and erosion protection. This may include energy dissipators, armoring, bio-revetments/gabions, and other erosion and slope protection features. Outfalls to be protected include lake outlets, discharge points into the Arroyo, and discharges into other swales and channels on-site.

Level of Significance After Mitigation

Mitigation Measures 3.5.1a and 3.5.2 would reduce impacts to less than significant for Phase I. Mitigation Measures 3.5.1a, 3.5.1b, and 3.5.2 would reduce impacts to less than significant for Phase II.

Impact 3.5.3: The Project could result in liquefaction, landslides, lateral spreading. (Less than Significant)

Phase I

Liquefaction

As described in the Setting information in this section, in areas where structures are proposed, estimated liquefaction-induced settlement is a maximum of 1.3 inches (ENGEO, 2018). The potentially liquefiable soils at the site are generally thin layers of alluvial soils with a minimum 14-foot cap of non-liquefiable soil. This cap is sufficiently thick to prevent venting and surface rupture or sand boils during a strong seismic event (ENGEO, 2018).

In addition, all substantive structures on the site would be required by the County to undergo geotechnical evaluation and comply with the current California Building Code standards prior to issuance of a Building Permit. Any problematic soil conditions would be identified and remedied during site preparation and/or foundations would be designed to address any such conditions. Therefore, impacts related to liquefaction during Phase I would be less than significant.

Landsliding

No indications of previous deep-seated landsliding were observed during the field exploration on-site and no features indicative of deep-seated slope instability were observed in historical aerial photographs of the site (ENGEO, 2018). Therefore, based on observations in the field and due to the consistency of material encountered during the subsurface explorations, the potential for deep-seated earthquake-induced landsliding affecting proposed Project structures is low (ENGEO, 2018).

Lateral Spreading

ENGEO determined that lateral spreading on the site (i.e., towards the open faces of the Arroyo) is considered a low risk (ENGEO, 2018).

Implementation of Mitigation Measure 3.5.1a would further reduce the significance of impacts related to liquefaction, landsliding, and lateral spreading during Phase I. Therefore, impacts would be less than significant.

Phase II

The impact discussion for Phase I would also apply to Phase II. Implementation of Mitigation Measure 3.5.1a would further reduce the significance of impacts related to liquefaction, landsliding, and lateral spreading during Phase II. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.5.4: The Project is located on Expansive Soils. (Significant)

Phase I

ENGEO observed potentially expansive clay near the surface of the site at most exploration locations (ENGEO, 2018). Laboratory testing indicated that those soils exhibit moderate to high shrink/swell potential with variations in moisture content (ENGEO, 2018). Expansive soils change in volume with changes in moisture. They can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shall foundations. Therefore, this would be a significant impact of the Project.

Phase II

The impact discussion for Phase I would also apply to Phase II. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.5.4: As described in ENGEO's Geotechnical Exploration Recommendations (2018), building damage due to volume changes associated with expansive soils shall be reduced by: (1) using a rigid mat foundation that is designed to resist the settlement and heave or expansive soil, (2) deepening the foundations to below the zone of moisture fluctuation and/or (3) using a layer of select fill below building locations. Successful performance of structures on expansive soils requires special attention during construction and it is imperative that exposed soils be kept moist prior to placement of concrete for foundation construction. Building-specific geotechnical reports shall include provisions to address expansive soils. These reports shall be reviewed and approved by the County prior to issuance of any building permits.

Level of Significance After Mitigation

Mitigation Measure 3.5.4 would reduce impacts to less than significant for Phase I and Phase II.

Impact 3.5.5: The Project could directly or indirectly destroy a unique paleontological resource. (Significant)

Phase I

No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. Soil at the site generally consists of interbedded layers of Holocene alluvium and late-Miocene to early Pleistocene Livermore gravels. Holocene alluvial deposits in Alameda County are generally not considered paleontologically significant. While the likelihood of encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, this would be a significant impact of the Project.

Phase II

The impact discussion for Phase I would also apply to Phase II. Therefore, this would be a significant impact of the Project.

Mitigation Measures

Mitigation Measure 3.5.5: In the event a paleontological or other geologically sensitive resource (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the

find is examined by a qualified paleontologist. The paleontologist shall notify the appropriate representative at the Counter of Alameda who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant, the County shall implement measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

Level of Significance After Mitigation

Mitigation Measure 3.5.5 would reduce impacts to less than significant for Phase I and Phase II.

3.5.3 REFERENCES

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3.6 GREENHOUSE GAS EMISSIONS

This section describes the greenhouse gas (GHG) emissions setting and evaluates potential GHG emissions impacts. This section was prepared pursuant to California Environmental Quality Act (CEQA) *Guidelines* Section 15064.4 and CEQA *Guidelines* Appendix G, which requires a lead agency to make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project.

GHG emissions would be generated during Project operations from the direct use of electricity, natural gas, and petroleum fuels, as well as indirect uses related to water/wastewater conveyance and solid waste disposal. GHG emissions would also be temporarily generated by construction equipment and vehicles required for construction of the Project.

3.6.1 SETTING

Global Climate Change

Climate is defined as the average statistics of weather, which include temperature, precipitation, and seasonal patterns such as storms and wind, in a particular region. Global climate change refers to the long term and irrevocable shift in these weather-related patterns. Using ice cores and geological records, baseline temperature and carbon dioxide (CO_2) data extends back to previous ice ages thousands of years ago. Over the last 10,000 years, the rate of temperature change has typically been incremental, with warming and cooling occurring over the course of thousands of years. However, scientists have observed an unprecedented increase in the rate of warming over the past 150 years, roughly coinciding with the global industrial revolution, which has resulted in substantial increases in GHG emissions into the atmosphere. The anticipated impacts of climate change in California range from water shortages to inundation from sea level rise. Transportation systems contribute to climate change primarily through the emissions of certain GHGs (CO_2, methane (CH_4), and nitrous oxide (N_2O)) from nonrenewable energy (primarily gasoline and diesel fuels) used to operate passenger, commercial and transit vehicles. Land use changes contribute to climate change through construction and operational use of electricity and natural gas, and waste production.

The Intergovernmental Panel on Climate Change (IPCC) has reached consensus that human-caused emissions of GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increases in global average surface temperature from 1951 to 2010 were caused by the anthropogenic increase in GHG concentrations and other anthropogenic forces together. The IPCC predicts that the global mean surface temperature increases by the end of the 21st century (2081– 2100) relative to 1986–2005, could range from 0.5 to 8.7 degrees Fahrenheit. Additionally, the IPCC projects that global mean sea level rise will continue during the 21st century, very likely at a faster rate than observed from 1971 to 2010. For the period 2081–2100 relative to 1986–2005, the rise will likely range from 10 to 32 inches (IPCC, 2013).

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The six primary GHGs are:

- carbon dioxide (CO_2), emitted when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned;
- methane (CH_4), produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, incomplete fossil fuel combustion, and water and wastewater treatment;
- nitrous oxide (N_2O), typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning;
- hydrofluorocarbons (HFCs), primarily used as refrigerants;
- perfluorocarbons (PFCs), originally introduced as alternatives to ozone depleting substances and typically emitted as by-products of industrial and manufacturing processes; and
- sulfur hexafluoride (SF_6), primarily used in electrical transmission and distribution.

Although there are other contributors to global climate change, these six GHGs are identified by the U.S. Environmental Protection Agency (U.S. EPA) as threatening the public health and welfare of current and future generations. GHGs have varying potential to trap heat in the atmosphere, known as global warming potential (GWP), and atmospheric lifetimes. GWP reflects how long GHGs remain in the atmosphere, on average, and how intensely they absorb energy. Gases with a higher GWP absorb more energy per pound than gases with a lower GWP, and thus contribute more to warming Earth. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 28 tons of CO_2; hence, CH_4 has a 100-year GWP of 28 while CO2 has a GWP of 1. GWP ranges from 1 (for CO_2) to 23,500 (for SF_6).

In emissions inventories, GHG emissions are typically reported in terms of pounds or metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWP than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Regional GHG Emissions Estimates

In 2019, the United States emitted about 6,577 million metric tons of CO_2. Emissions increased from 2018 to 2019 by 1.7 percent. GHG emissions in 2019 (after accounting for sequestration from the land sector) were 12.9 percent below 2005 levels. This decrease was largely driven by a decrease in emissions from fossil fuel combustion, which was a result of decreased total energy

use and reflects a continued shift from coal to less carbon intensive natural gas and renewables (U.S. EPA, 2021).

In 2018, California emitted approximately 425 million metric tons of CO_2e, about one million metric tons of CO_2e higher than 2017 levels and six million metric tons of CO_2e below the 2020 GHG Limit of 431 million metric tons of CO_2e established by Assembly Bill (AB) 32. Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. In 2018, California's gross domestic product (GDP) grew 4.3 percent while the emissions per GDP declined by 0.4 percent compared to 2017. The transportation sector remains the largest source of GHG emissions (40 percent) in the state, but transportation emissions decreased in 2018 compared to 2017, which is the first year over year decrease since 2013. The electricity sector and industrial sector account for 15 percent and 21 percent of California's GHG emissions, respectively. The residential/commercial sector and the agricultural sector account for 10 percent and eight percent of California's GHG emissions, respectively. High GWP gases (refrigerants), recycling/waste, and other emissions make up the final seven percent of California's GHG emissions (CARB, 2020).

In 2005, overall community-wide GHG emissions for unincorporated Alameda County was 930,039 metric tons of CO_2e. The largest proportion of GHG emissions in the County in 2005 came from the Transportation sector, followed by Residential Energy Use, Commercial/Industrial Energy Use, Water Consumption, and Wastewater. Projected 2020 emissions indicate overall community-wide GHG emissions to be 1,028,500 metric tons of CO_2e (Alameda County, 2014).

In 2019, Alameda County's government operations generated an estimated 43,372 metric tons of CO_2e. Employee commutes, natural gas usage in facilities, and fuel usage in vehicle fleets were the largest contributors to the County's government operation's emissions. The County achieved a 31 percent reduction in emissions compared to its 2003 emissions baseline, exceeding its minimum reduction target set in 2010. Switching to clean electricity in buildings and infrastructure contributed the most to emissions reductions (Alameda County, 2021).

Regulatory Setting

Federal

The U.S. Supreme Court in Massachusetts et al. v. Environmental Protection Agency et al. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in Utility Air Regulatory Group v. EPA (134 S. Ct. 2427 [2014]) held that the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether

a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

Greenhouse Gas Emissions and Fuel Efficiency

In September 2011, U.S. EPA, in coordination with the National Highway Traffic Safety Administration (NHTSA), adopted fuel consumption and CO_2 emission standards to reduce GHG emissions of heavy-duty vehicles. These Phase 1 federal standards apply to model year 2014 and newer heavy-duty trucks, tractors, pick-up trucks, vans, and vocational vehicles. The category of specialized vocational vehicles includes delivery trucks, emergency vehicles, and refuse trucks such as the "packer" garbage collection trucks used to transport solid waste to transfer stations and landfills. The Phase 1 regulations do not include standards regarding the trailers pulled by these vehicles for improving aerodynamics and fuel efficiency.

In 2016, working together with NHTSA and CARB, U.S. EPA implemented the next phase of federal GHG emissions and fuel-efficiency standards for medium- and heavy-duty vehicles and associated trailers. These federal Phase 2 standards build on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and aim to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles. The progressively more stringent federal Phase 2 standards are more technology-driven than the Phase 1 standards, in that they require manufacturers to improve existing technologies or develop new technologies for heavy-duty trucks, tractors, and vocational vehicles to achieve the stricter standards. The Phase 2 federal standards were jointly adopted by the U.S. EPA and NHTSA on October 25, 2016. California subsequently enacted its own Phase 2 standards for GHG emissions, which are discussed in further detail below.

State

Assembly Bill 1493

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions.

Executive Order S-3-05

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order directed the Secretary of the California EPA (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction is accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause

climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents. On November 30, 2017, the Second Update to the Climate Change Scoping Plan was approved by the CARB. The 2017 Scoping Plan identifies how the State can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels (SB 32), and substantially advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

Low Carbon Fuel Standard

Under the Climate Change Scoping Plan, the CARB identified the low carbon fuel standard (LCFS) as one of the nine discrete early action measures to reduce California’s GHG emissions. The LCFS is designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits.

In 2018, the CARB approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS standards are expressed in terms of the "carbon intensity" (CI) of gasoline and diesel fuel and their respective substitutes. The program is based on the principle that each fuel has "life cycle" GHG emissions and the life cycle assessment examines the GHG emissions associated with the production, transportation, and use of a given fuel. The life cycle assessment includes direct emissions associated with producing, transporting, and using the fuels, as well as significant indirect effects on GHG emissions, such as changes in land use for some biofuels. The carbon intensity scores assessed for each fuel are compared to a declining CI benchmark for each year. Low carbon fuels below the benchmark generate credits, while fuels above the CI benchmark generate deficits. Credits and deficits are denominated in metric tons of GHG emissions. Providers of transportation fuels must demonstrate that the mix of fuels they supply for use in California

meets the LCFS carbon intensity standards, or benchmarks, for each annual compliance period. A deficit generator meets its compliance obligation by ensuring that the credits it earns or otherwise acquires from another party is equal to, or greater than, the deficits it has incurred.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

Executive Order No. B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate 2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders "All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets." The Executive Order also states that "CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent."

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate

quantitative thresholds consistent with a statewide per capita goal of 6 metric tons of CO_2e by 2030 and 2 metric tons of CO_2e by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB X 1-2 in 2011. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general 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. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Assembly Bill 341

In 2011, the legislature established a 75 percent statewide solid waste recycling rate goal by 2020 with its passage of AB 341 (Chesbro, Chapter 476, Statutes of 2011). AB 341 directed CalRecycle to develop a strategy to achieve this 75 percent recycling goal. In response, CalRecycle developed the 75 Percent Strategy which includes five strategies and three additional focus areas for its pursuit to achieve the recycling goal. Strategies include moving organics out of the landfill; expanding the recycling/manufacturing infrastructure; exploring new models for state and local funding of materials management program; promoting state procurement of postconsumer recycle content products; and promoting extended producer responsibility. CalRecycle has provided updates to this strategy along with supporting documentation as recently as 2017, which tracks progress towards this goal and summarizes co-benefits from implementation of the 75 Percent Strategy.

Assembly Bill 1826

In October 2014, the governor signed AB 1826 (Chesbro Chapter 727, Statues of 2014), requiring local jurisdictions to implement an organic waste recycling program to divert organic waste generated by businesses. The law phases in the mandatory recycling of commercial organics over

time. In 2020, CalRecycle is mandated to conduct a formal review of all jurisdictions to determine the total statewide disposal of organic waste. If CalRecycle finds that the statewide disposal of organic waste has not been reduced by 50 percent of the disposal level in 2014, the requirements of this law will expand, and certain exemptions may be removed.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecyle), in consultation with the state board, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2019 California Energy Code was adopted by the CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent compared to the 2016 standards primarily through prescriptive requirements for high-efficacy lighting. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards exceed those in the California Energy Code.

California Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code (CALGreen) is part 11 of Title 24, California Code of Regulations. CALGreen is the first-in-the-nation mandatory green building standards code, developed in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of GHG emissions to 1990 levels by 2020. CALGreen includes a waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

Regional

2017 Clean Air Plan

The BAAQMD's *2017 Clean Air Plan* (BAAQMD, 2017b) includes the Bay Area's first-ever comprehensive Regional Climate Protection Strategy, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG emissions in the Bay Area. Measures of the *2017 Clean Air Plan* addressing the transportation sector are in direct support of Plan Bay Area 2040, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the region's transportation plan/ sustainable communities strategy. Highlights of the *2017 Clean Air Plan* control strategy include:

- *Limit Combustion*: Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- *Stop Methane Leaks*: Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- *Reduce Exposure to Toxics*: Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- *Put a Price on Driving*: Implement pricing measures to reduce travel demand.
- *Advance Electric Vehicles*: Accelerate the widespread adoption of electric vehicles.
- *Promote Clean Fuels*: Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- *Accelerate Low-Carbon Buildings*: Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- *Support More Energy Choices*: Support of community choice energy programs throughout the Bay Area.
- *Make Buildings More Efficient*: Promote energy efficiency in both new and existing buildings.
- *Make Space and Water Heating Cleaner*: Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

Local

Alameda County Community Climate Action Plan Element

The Alameda County General Plan Community Climate Action Plan (CAP), adopted in 2014 as part of the Alameda County General Plan, outlines a course of action to reduce community wide GHG emissions generated within the unincorporated areas of Alameda County. Successful implementation of the CAP will reduce GHG emissions to 15 percent below 2005 levels by 2020

and set the County on a path toward reducing emissions to 80 percent below 1990 levels by 2050. The CAP defines a path to achieve the County's GHG reduction targets and outlines the detailed implementation of steps in the following six action areas: land use, transportation, energy, water, waste, and green infrastructure. The CAP includes the following measure pertaining to GHG emissions that is relevant to the Project:

> *Measure E-10*: Require new construction to use building materials containing recycled content.

3.6.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Because the issue of global climate change is inherently a cumulative issue, the contribution of Project-related GHG emissions to climate change is addressed as a cumulative impact.

CEQA Guidelines Section 15064 and Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions.

For the purposes of the Environmental Impact Report (EIR), consistent with Appendix G of the *CEQA Guidelines*, GHG emissions generated by the Project could have a cumulatively considerable contribution to global climate change if the Project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Some counties, cities, and air districts have developed guidance and thresholds for determining the significance of GHG emissions that occur within their jurisdiction. Alameda County is the CEQA lead agency for the Project and is, therefore, responsible for determining whether GHG emissions with the Project would have a cumulatively considerable contribution to climate change.

Alameda County has not adopted thresholds or approaches for evaluating a Project's GHG emissions in CEQA documents. The Bay Area Air Quality Management District (BAAQMD) has adopted project-level GHG emissions significance thresholds for project operations in their *California Environmental Quality Act Air Quality Guidelines* (*CEQA Guidelines)* (BAAQMD, 2017a). The BAAQMD *CEQA Guidelines* include a bright line threshold of 1,100 metric tons of CO_2e per year or an "efficiency threshold" of 4.6 metric tons of CO_2e per year per service population. Projects exceeding both thresholds would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact. Alternatively, a project that is found to be consistent with a Qualified Greenhouse Gas reduction strategy, such as a Climate Action Plan, would have a less than significant impact.

These numeric thresholds, however, were to achieve the state's 2020 target of 1990 GHG levels. Project construction is not expected to commence until 2023, therefore thresholds of significance adopted in order to achieve 2020 statewide targets are not appropriate for this Project. On September 8, 2016, Governor Brown signed SB 32 into law, amending the California Global Warming Solution Act. SB 32 requires the CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030, and CARB adopted an updated Climate Change Scoping Plan in December 2017 to provide a framework for achieving this more stringent 2030 target. BAAQMD has yet to publish a threshold for 2030 in response to SB 32 and CARB's 2017 Scoping Plan. So, in the interim, this analysis utilizes a threshold of significance that is 40% below BAAQMD's thresholds of significance that were adopted to achieve the 2020 statewide targets for this Project. Consequently, for the purposes of this EIR, a bright-line threshold of 660 metric tons of CO_2e per year is utilized based on the GHG reduction goals of SB 32.

Impact Analysis

Impact 3.6.1: The Project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant)

Construction

Construction-related activities would generate GHG emissions from off-road equipment used for site preparation, grading/excavation, trenching/utilities, paving, building construction/equipment installation and architectural coating associated with Project elements; on-road trucks used for material delivery and equipment hauling; and worker commute trips.

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 (CAPCOA, 2021). Phase I construction would result in approximately 320 metric tons of CO_2e in 2023 and approximately 202 metric tons of CO_2e in 2024. Phase II construction would result in approximately 735 metric tons of CO_2e in 2027, approximately 1,167 metric tons of CO_2e per in 2028, and approximately 78 metric tons of CO_2e in 2029. The BAAQMD has not adopted thresholds of significance for GHG emissions from construction activities, therefore, the total construction GHG emissions (approximately 2,500 metric tons of CO_2e) from the Project were amortized over 30 years and added to the Project's operational GHG emissions for determining significance. Detailed modeling assumptions and results are provided in **Appendix C**.

Operations

Project operations would generate GHG emissions from motor vehicles, onsite equipment (biodiesel or natural gas fueled tractors), landscaping equipment, area sources (e.g., solvents and cleaners), and energy use. Operational GHG emissions would also be generated through use of the natural gas fired incinerator for the crematorium and the natural gas fired emergency generator.

Project operational GHG emissions were estimated using the CalEEMod Version 2020.4.0 (CAPCOA, 2021). Project operational GHG emissions were conservatively analyzed for full buildout of the Project (completion of Phase II) for operational year 2025. Project operational GHG emissions (including amortized construction GHG emissions) are summarized in **Table 3.6-1**

and would not exceed the threshold of significance of 660 metric tons of CO_2e per year. Detailed modeling assumptions and results are provided in **Appendix C**.

TABLE 3.6-1. PROJECT ANNUAL GHG EMISSIONS

Source[1]	CO_2e metric tons/year
Construction (30-year amortized)	83.4
Area Sources	0.0
Energy (electricity and natural gas)[2]	43.6
Offroad (biodiesel or natural gas fueled tractors)	45.0
Mobile	61.8
Waste	56.2
Water	1.5
Stationary (Emergency Generator)	2.7
Total Project Annual Emissions	**294**
Significance Threshold	660
Potentially Significant?	No

NOTES:
[1] Emissions estimates conservatively assume that the Project will be fully operational by year 2025. Values reflect rounding.
[2] Photovoltaic (PV) solar panels would reduce GHG emissions from energy use, however energy use without PV solar panels is displayed since the electricity savings are currently unknown.

SOURCE: CAPCOA, 2021, RCH Group, 2021.

As displayed in **Table 3.6-1**, Project operational GHG emissions (including amortized construction GHG emissions) would not exceed the threshold of significance of 660 metric tons of CO_2e per year. Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.6.2: The Project could conflict with the County's Climate Action Plan, BAAQMD's Clean Air Plan, or CARB's 2017 Scoping Plan. (Less than Significant)

The following presents a review of the Project for potential conflicts with Alameda County's Climate Action Plan, BAAQMD's Clean Air Plan, and CARB's 2017 Scoping Plan.

Alameda County Community Climate Action Plan

The County's Climate Action Plan identifies how the County will take action to reduce GHG emissions in the areas of transportation, land use, building energy, water, waste, and green infrastructure. Most of the measures in the Climate Action Plan are countywide measures that are intended for individual development projects. One measure is applicable to the Project:

Measure E-10: Require new construction to use building materials containing recycled content.

The County has not yet adopted an ordinance requiring the use of recycled materials for new building construction. If adopted prior to Project construction, the Project would comply and therefore would not conflict with the County's Climate Action Plan.

BAAQMD's Clean Air Plan

The BAAQMD's 2017 Clean Air Plan includes the Bay Area's first-ever comprehensive Regional Climate Protection Strategy, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG emissions in the Bay Area. The 2017 Clean Air Plan does not include measures for individual development projects. Therefore, the Project would not conflict with the 2017 Clean Air Plan.

CARB's 2017 Scoping Plan

The 2017 Scoping Plan identifies how the State can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels (SB 32), and substantially advance toward our 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Scoping Plan does not include measures for individual development projects. Furthermore, as discussed in Impact 3.6-2, the Project would be below the bright-line threshold of 660 metric tons of CO_2e per year, which was based on the GHG reduction goals of SB 32 and CARB's 2017 Scoping Plan. Therefore, the Project would not conflict with the 2017 Clean Air Plan.

Conclusion

As discussed above, the Project would not conflict with Alameda County's Climate Action Plan, BAAQMD's Clean Air Plan, and CARB's 2017 Scoping Plan. Furthermore, the Project would include several features that reduce GHG emissions, such as 30 electric vehicle (EV) charging stalls, photovoltaic (PV) solar panels, biodiesel or natural gas fueled tractors for burials, and all electric landscaping equipment, which support the goals of the above plans (Kliment, 2021). Therefore, the Project would have a less-than-significant impact.

Mitigation Measures

None required.

3.6.3 REFERENCES

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3.7 HAZARDS, HAZARDOUS MATERIALS AND WILDFIRE

This section describes the regulatory framework and existing conditions related to Hazards, Hazardous Materials and Wildfire and analyzes potential impacts that could occur as a result of the Project.

3.7.1 SETTING

Introduction

Hazardous Waste Regulation Definitions

Certain chemical and physical properties of substances cause them to be considered hazardous. The terms hazardous material and hazardous waste are legal terms defined in State regulations. California Code of Regulations (CCR) Title 22 defines hazardous material as a substance or combination of substances, which because of quantity, concentration, or physical, chemical or infectious characteristics, may either: (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Chapter 10, Article 2, §66260.10). Title 22 classifies hazardous substances according to four properties: toxicity, ignitability, corrosivity, and reactivity. Carcinogens (substances known to cause cancer) are a special class of toxic substances. Explosives, volatile fuels, and landfill gas are examples of reactive materials. Hazardous wastes are hazardous residues or discards that no longer have practical use, such as substances that have been discarded, spilled, contaminated, or disposed (CCR, Title 22, Chapter 11, Article 2, §66261.10).

The U.S. EPA considers Household Hazardous Waste (HHW) as products that can catch fire, react, or explode under certain circumstances, or that are corrosive or toxic as HHW. Products, such as paints, cleaners, oils, batteries, and pesticides can contain hazardous ingredients and require special care when disposed of (USEPA, 2020).

DTSC implements its Unified Program on hazardous materials and wastes locally through the Certified Unified Program Agency (CUPA) for the city or county. Temporary and permanent household hazardous waste collection facilities (HHWCFs) operate under Permit by Rule authorization pursuant to CCR Title 22, §66270.60, and are overseen by the CUPA.

Hazard Exposure

Exposure to hazardous compounds or disease organisms can arise through transport by air of potentially toxic materials released in gaseous form or as smoke emitted by a fire; transport by animal vectors, such as scavenging birds, rodents, or insects; and transport by surface water or groundwater where hazardous materials leave the landfill site due to leaks, spills, or uncontrolled runoff. Pathways of exposure to a hazardous material or waste depend on the chemical and physical properties of the waste and the type of occurrence or accident that released it. The four common exposure pathways are inhalation, ingestion, direct contact (with skin or eyes), and injection (skin puncture or cut). Factors that influence the health effects of exposure to hazardous

material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility. A material may be hazardous by one exposure pathway but not another; for example, a chemical might be toxic if ingested but not if touched.

Effects of Exposure

Health effects of exposure to hazardous chemicals can vary greatly and are specific to each chemical. Possible health effects of exposure may be acute (immediate, or of short-term severity) or chronic (long-term, recurring, or resulting from repeated exposure). Acute effects, usually resulting from a single exposure, might include burns or injury to body organs or systems such as from exposure to corrosive, reactive, or ignitable materials. Chronic effects, usually resulting from repeated or long-term exposure to a toxic material (as in a poorly ventilated workplace, for example), could also include systemic or organ damage. Chronic toxic effects of particular concern are birth defects and cancer.

Sensitive Receptors

Regarding public health and safety, a sensitive receptor is an individual or population that resides near or encounters a potential health hazard. The property bordering the Project site to the east consists of an existing residence approximately 800 feet east of the Project site.

Regulatory Setting

The use, production, and disposal of hazardous materials and waste are regulated extensively by federal, State, regional, and local regulations, and guidance, with major objectives of protecting the public health and the environment. These regulations and guidance were developed primarily for application in industrial and manufacturing environments where worker health and safety and waste production as a byproduct of manufacturing occurs. A myriad of laws and regulations at the federal, State, and local levels affect the management of hazardous materials.

Federal

The U.S. Environmental Protection Agency (EPA or U.S. EPA) is the lead agency responsible for enforcing federal regulations that affect public health and the environment. The U.S. EPA is responsible at the federal level for enforcing regulations pertaining to hazardous materials. The applicable federal regulation pertaining to hazardous materials are contained primarily in the Code of Federal Regulations (CFR) Titles 29, 40 and 49. Hazardous materials are listed and classified in 49 CFR 172.101. Regulations governing the use, management, handling, transportation and disposal of hazardous materials and waste are administered by federal, state and local governmental agencies. Federal regulations governing hazardous materials and waste include the Resource Conservation, and Recovery Act of 1976 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Amendments and Re-authorization Act of 1986 (SARA).

State

The U.S. EPA designates much of its regulatory authority to the individual states. In California, the U.S. EPA has granted most enforcement authority over federal hazardous materials

regulations to the California Environmental Protection Agency (CalEPA). CalEPA serves as the umbrella agency for six boards/departments: the California Air Resources Board (CARB), the Department of Pesticide Regulation (DPR), the Department of Toxic Substances Control (DTSC), the Department of Resources Recycling and Recovery (CalRecycle), the Office of Environmental Health Hazard Assessment (OEHHA), and the State Water Resource Control Board (SWRCB) and associated Regional Water Quality Control Boards (RWQCB). State regulations require planning and management to ensure that hazardous materials are handled, stored, and disposed of properly in order to reduce health risks to humans as well as environmental risk.

The DTSC works in conjunction with the U.S. EPA to enforce and implement specific laws and regulations pertaining to hazardous wastes. California legislation, for which DTSC has primary enforcement authority, includes the Hazardous Waste Control Act and the Hazardous Substance Account Act. Most State hazardous waste regulations are contained in Title 27 of the CCR. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects and establishes cleanup and action levels for subsurface contamination that are equal to, or more restrictive than, federal levels.

State worker health and safety regulations related to construction activities are enforced by the California Division of Occupational Safety and Health (CalOSHA). Regulations include exposure limits and requirements for protective clothing and training to prevent exposure to hazardous materials. CalOSHA regulations concerning the use of hazardous materials in the workplace, as detailed in Title 8 of the California Code of Regulations (CCR), include requirements for safety training, availability of safety equipment, implementation and maintenance of accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Title 8 regulations (§3203) include requirements for worker safety training and injury/illness prevention programs contained in Senate Bill 198, which was adopted in 1990. CalOSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

Under the authority of CalEPA, SWRCB and DTSC are responsible for overseeing the remediation of contaminated soil and groundwater sites. The provisions of Government Code 65962.5 (also known as the Cortese List) require the State Water Resources SWRCB, DTSC, the California Department of Health Care Services (CDHCS), and CalRecycle to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal and/or hazardous materials releases to CalEPA.

Local

The State of California's Title 24 is adopted by reference in Chapter 15.08, Building Code, of the Alameda County Municipal Code. The California Building Code is updated every three years. Currently, the Alameda County Municipal Code adopted the 2019 version of the Building Code. Commercial buildings are plan-checked by County building officials for compliance with the typical fire safety requirements of the California Building Code.

Chapter 6.04 of the Alameda County Municipal Code adopts the California Fire Code. The California Fire Code is updated every three years, and provides standards for emergency planning and preparedness, fire service features, fire protection services, hazardous materials, fire flow requirements, and fire hydrant location and distribution. In addition, the Fire Code authorizes the Fire Chief to specify water supply and road design standards.

The Alameda County Department of Environmental Health (ACDEH) is the Certified Unified Program Agency (CUPA) for Alameda County. As the CUPA, the County Department of Environmental Health coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in the county. The ACDEH is responsible for implementation, enforcement, and administration of the HMBP program for facilities located in Alameda County (Alameda County, 2021).

Alameda County General Plan

The Alameda County General Plan's Safety Element aims to minimize human injury, loss of life, property damage, and economic and social dislocation due to natural and human-made hazards (Alameda County, 2013). The element includes the following policies pertaining to hazardous materials that are relevant to the Project:

Goal 2: To reduce the risk of urban and wildland fire hazards.

Policy P2: Hill area development and particularly that adjoining heavily vegetated open space area, should incorporate careful site design, use of fire-retardant building materials and landscaping, development and maintenance of fuel breaks and vegetation management programs, and provisions to limit public access to open space areas in order to minimize wildland fire hazards.

Policy P3: Development should generally be discouraged in areas of high wildland fire hazard where vegetation management programs, including the creation and maintenance of fuel breaks to separate urban uses would result in unacceptable impacts on open space, scenic and ecological conditions.

Policy P4: All urban and rural development, existing and proposed, should be provided with adequate water supply and fire protection facilities and services. Facilities serving hill area development should be adequate to provide both structural and wildland fire protection. The primary responsibility falls upon the owner and the developer.

Policy P6: Plan new public and private building to minimize the risk of fires and identify measures to reduce fire hazards to persons and property in all existing development.

Goal 4: Minimize residents' exposure to the harmful effects of hazardous materials and waste.

East County Area Plan

The East County Area Plan (ECAP) includes the following wildfire policies that are applicable to the Project:

Goal: To minimize the risk to lives and property due to environmental hazards.

Policy 134: The County shall not approve new development in areas with potential natural hazards (flooding, geological, wildland fire, or other environmental hazards) unless the County can determine that feasible measures will be implemented to reduce the potential risk to acceptable levels, based on site-specific analysis.

Policy 320: The County shall consider, in reviewing development projects and subdivision of agricultural lands, the severity of natural fire hazards, potential damage from wildland and structural fires, the adequacy of fire protection services, road access, and the availability of an adequate water supply and pressure.

Policy 323: The County shall refer development applications to the County Fire Patrol, or local fire district, for review and recommendations.

Existing Conditions

Hazardous Materials Sites

The DTSC and SWRCB compile and update lists of hazardous materials sites pursuant to Government Code Section 65962.5. The Project site is not included on the databases maintained by the DTSC's Envirostor (DTSC, 2021) and the SWRCB's Geotracker (SWRCB, 2021).

Wildfire Risks

According to the Alameda County General Plan, fire hazards exist in developed areas including buildings, rubbish, automobiles and grass on vacant lots. Alameda County is subject to threat from urban fires, and especially wildland fires, due to its hilly terrain, weather conditions and the nature of plant coverage (Alameda County, 2013). The Alameda County Fire Department is responsible for providing emergency fire and medical response, as well as fire prevention services. To quantify potential risk from wildland fire, Cal Fire has developed a Fire Hazard Severity Scale that uses three criteria (fuel loading, fire weather and topography) to determine fire hazard severity. The eastern portion of the Project Site (i.e., the driveway used to access the site) is in a Local Responsibility Area (LRA)[1] and the western portion of the Project Site is in a State Responsibility Area (SRA)[2]. The Project site is not located on lands classified as Very High Fire Hazard Severity Zones (VHFHSZ) (CalFire, 2021).

Schools

There are no existing schools that are within one-quarter mile of the Project site. There is an approved high school project that would be located northeast of the Project site. A review of the 2004 traffic report for that proposed Catholic High School indicated that, if built, the school facilities would be more than one-quarter mile from the facilities at the MVMG Project site. While there are no activities taking place currently with the approved High School Project, a 5-year extension of the Development Agreement between the City of Livermore and the developer was approved in 2020 and extends to December 14, 2025.

[1] Local Responsibility Area (LRA). LRAs are areas not protected by Cal Fire, generally they are densely populated areas, incorporated cities, and agricultural lands.

[2] State Responsibility Area (SRA). CAL FIRE has a legal responsibility to provide fire protection on all SRA lands, which are defined based on land ownership, population density and land use.

Airports

The Project is not located within an airport land use plan area or within two miles of a public or private airport or airstrip. The nearest public airport is Livermore Municipal Airport, approximately 3.25 miles west of the Project.

3.7.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the *CEQA Guidelines* states that a Project would result in a significant impact to Hazards, Hazardous Materials and Wildfire if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- 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;
- 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 of that may result in temporary or ongoing impacts to the environment; or,
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Topics with No Impact

Phase I and Phase II

As discussed above, the DTSC and SWRCB compile and update lists of hazardous material sites pursuant to Government Code §65962.5. The Project site is not included in the databases maintained by the DTSC's Envirostor (DTSC, 2021) or the SWRCB's Geotracker (SWRCB, 2021). Therefore, there are no impacts related to Government Code §65962.5.

The Project is not located within an airport land use plan area or within two miles of a public airport or airstrip. Therefore, the Project would have no impact from safety hazards or excessive noise for people working at the Project site.

The Project site would not emit or handle hazardous materials within one-quarter mile of an existing or proposed school. Therefore, the Project would have no impact on existing schools.

The Project site would not impair or physically interfere with an adopted emergency response plan or evacuation plan. The Project would involve using the access driveway located along a curve at Las Colinas Road. The access road would be properly maintained and would be designed to provide adequate circulation in the event of emergency evacuations.

The Project would not impede or interfere with emergency preparedness guidelines set forth by the County of Alameda or the City of Livermore.

These topics are not further discussed in this analysis.

Impact Analysis

Impact 3.7.1: Project construction activities would use construction materials and fuels considered hazardous, and regular landscape maintenance of the Project site would likely involve the use of hazardous chemicals. Spills or accidents involving hazardous chemicals could occur and result in potential health and environmental impacts. (Less than Significant)

Phase I

Construction Impacts

Project construction activities could involve the use, transport, and disposal of hazardous materials such as gasoline, diesel fuel, oils, lubricants/greases, paints, solvents and other hazardous substances that are typical for construction activities. Any release of hazardous materials can occur during construction of any project and releases are typically minor spillages of motor vehicle fuels and oils and other substances used for heavy equipment or release of paints, solvents and glues. These accidental releases can result in health and environmental impacts. Spills of hazardous materials on construction sites are typically handled by the construction contractors and are localized and cleaned up in a timely manner. The disposal, use, handling, and storage of hazardous materials during construction would occur in accordance with applicable Federals, State and local laws including CalOSHA requirements. Additionally, contractors are required to comply with any Project-specific Best Management Practices (BMPs)

during construction. Therefore, any potential threatening health and environmental impacts from hazardous materials during construction of Phase I would be a less-than-significant impact.

Operational Impacts

Project operation activities could involve the use, storage, and disposal of hazardous materials such as for landscape maintenance chemicals (i.e., commercial herbicides, pesticides, fertilizers, etc.). Vehicles used for operations would be electric or powered by natural gas and there would be no fuel or diesel for operational vehicles stored on-site. Any hazardous materials or chemicals that would be stored at the Project site for operational maintenance use are required to be stored according to the manufacturer's recommendations. Furthermore, if the Project would store greater than 55 gallons of a liquid, 200 cubic feet of a gas or 500 pounds of a solid, the Project would be required to prepare a Hazardous Materials Business Plan (HMBP) every year to the California Environmental Reporting System (CERS) in order to prevent or minimize harm to public health and the environment from a release of a hazardous material pursuant to California Health and Safety Code, Division 20, Chapter 6.95, Section 25500-25519 and CCR Title 19 (Alameda County, 2021). The Alameda County Department of Environmental Health (ACDEH) would need to be contracted to review and determine the applicability and requirements of the HMBP. The ACDEH also requires that all spills, releases, or threatened releases of a hazardous material must be immediately reported to the County. Compliance with County requirements as well as Federal, State and manufacturer requirements for the storage, use, handling and disposal of hazardous materials would significantly reduce the potential threat of accidental release of hazardous materials that could potentially result in health and environmental impacts. Therefore, any potential threatening health and environmental impacts from hazardous materials during operation of Phase I would be a less-than-significant impact.

Phase II

Construction Impacts

Development of Phase II would occur west of Arroyo Las Positas and would involve the use of the same hazardous materials during construction of Phase I. Accidental releases could potentially result in health and environmental impacts during Phase II. The disposal, use, handling and storage of hazardous materials during construction would also need to comply with all of the applicable Federal, State and local regulations listed in the Phase I construction impact discussion. Therefore, any potential threatening health and environmental impacts from hazardous materials during construction of Phase II would be a less-than-significant impact.

Operational Impacts

Project operation activities during Phase II would also involve the use, storage, and disposal of the hazardous chemicals listed for Phase I operations. Because Phase II of the Project involves a larger area used for landscaping, it is likely that more hazardous chemicals would be needed for landscaping maintenance. Phase II of the Project would be required to follow all Federal, State and local regulations discussed in the Phase I operational impact discussion. Therefore, any potential threatening health and environmental impacts from hazardous materials during operation of Phase II would be a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.7.2: The Project could result in an increased risk in wildfires. (Less than Significant)

Phase I

As discussed above, the eastern portion of the Project Site (i.e., the driveway used to access the site) is in a Local Responsibility Area (LRA) and the western portion of the Project Site is in a State Responsibility Area (SRA). The Project is not located on lands classified as Very High Fire Hazard Severity Zones (VHFHSZ) (CalFire, 2021). The surrounding area of the project includes hillsides, and the undeveloped portions nearby are covered in natural vegetation. Because of the surrounding landscape, the Project could have the potential to result in wildfire through inadvertent events. However, as discussed above, the Project is not located within VHFHSZ and in the case of wildfire through inadvertent events, the Alameda County Fire Department would provide fire protection services to the Project site. The Project would be required to comply with the Alameda County Fire Department's fire suppression requirements and any specific fire protection services under the direction of the local fire chief. Section 6.04 of the Alameda County Municipal Code requires emergency planning and preparedness, fire service features and fire protection services. Section 6.04 also authorizes the fire chief to specify water supply and road design standards. The Project buildings would be required to comply with Chapter 6.04 (and Title 15, Building Code) to meet the County's fire prevention standards. The Project would not require installation of associated infrastructure that may exacerbate wildfire risk. The access road would be properly maintained and would be designed to provide adequate circulation in the event of emergency evacuations. Therefore, Phase I of the Project would not substantially increase the risk of wildfire and the impacts related to wildfire and impacts related to wildfire risk from implementation of the Project would be a less-than-significant impact.

Phase II

Phase II development would occur on the western portion of the Project Site that is in a State Responsibility Area (SRA). The Project is not located on lands classified as Very High Fire Hazard Severity Zones (VHFHSZ) (CalFire, 2021). Phase II would be required to comply with the state and local regulations discussed in the Phase I impact discussion related to wildfire. Therefore, Phase II of the Project would not substantially increase the risk of wildfire and the impacts related to wildfire and impacts related to wildfire risk from implementation of the Project would be a less-than-significant impact.

Mitigation Measures

None required.

3.7.3 REFERENCES

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3.8 HYDROLOGY AND WATER QUALITY

This section describes the existing surface water and groundwater hydrology and water quality conditions at the Project site, as well as the applicable federal, State, and local laws, ordinances, and regulations. The section then analyzes the Project's impacts to surface water and groundwater hydrology and water quality, including whether the Project would violate water quality standards or waste discharge requirements, alter existing drainage patterns of the site or area, contribute to or create polluted runoff, degrade surface and groundwater quality, or increase flood risks on- or off-site.

3.8.1 SETTING

Regulatory Setting

Federal Regulations

Clean Water Act

Under the Clean Water Act (CWA) of 1977, the U.S. Environmental Protection Agency (EPA) seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA authorizes the U.S. EPA to implement water quality regulations. The relevant sections of the CWA are summarized below.

CWA Section 303: Water Quality Standards and Implementation Plans

Section 303 of the CWA requires states to designate beneficial uses for water bodies or segments of water bodies and to establish water quality standards to protect those uses for all waters of the U.S. under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters. Impaired waters are waters that do not meet water quality standards established by the state, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology. The law requires that these jurisdictions establish a priority ranking for listed waters and develop action plans to improve water quality. Inclusion of a water body on the Section 303(d) List of Impaired Water Bodies triggers development of a Total Maximum Daily Load (TMDL) for that water body and a plan to control the associated pollutant/stressor on the list. The TMDL is the maximum amount of a pollutant/stressor that a waterbody can assimilate and still meet the water quality standards. Typically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources.

CWA Section 401: Water Quality Certification

Section 401 of the CWA (33 U.S.C. §1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into navigable waters to obtain a certification from the State in which the discharge originates. The certification ensures

that the discharge will comply with the applicable effluent limitations and water quality standards. The RWQCB is responsible for implementing section 401 of the CWA in California.

CWA Section 402: National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program under section 402 of the CWA is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States. The U.S. EPA has delegated authority of issuing NPDES permits in California to the State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay RWQCB regulates water quality in the Project area. The NPDES permit program is discussed in detail under State Regulations, below.

CWA Section 404: Permits for Fill Placement in Waters of The United States (Including Wetlands)

Waters of the United States (including wetlands) are protected under Section 404 of the CWA. Any activity that involves a discharge of dredged or fill material into waters of the United States, including wetlands, is subject to regulation by the U.S. Army Corps of Engineers (USACE).

California Toxics Rule, 40 CFR 131.38

On May 18, 2000, the U.S. EPA promulgated numeric water quality criteria for priority toxic pollutants and other provisions for water quality standards to be applied to waters within California. U.S. EPA promulgated this rule based on the Administrator's determination that the numeric criteria are necessary in California to protect human health and the environment. The rule fills a gap in California water quality standards that was created in 1994 when a state court overturned the state's water quality control plans containing water quality criteria for priority toxic pollutants. Thus, the state of California has been without numeric water quality criteria for many priority toxic pollutants as required by the CWA, necessitating this action by U.S. EPA. These federal criteria are legally applicable in the state of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. The U.S. EPA and the SWRCB have the authority to enforce these standards, which are incorporated into the NPDES permits that regulate existing discharges in the project area.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California. This Act establishes the authority of the SWRCB and the nine RWQCBs. The SWRCB administers water rights, sets State policy for water pollution control, and implements various water quality functions throughout the State, while the RWQCBs conduct planning, permitting, and most enforcement activities.

The Porter-Cologne Water Quality Control Act requires the SWRCB and/or the RWQCBs to adopt statewide and/or regional water quality control plans, the purpose of which is to establish water quality objectives for specific water bodies. The RWQCB has prepared the *Water Quality Control Plan for the San Francisco Basin* that establishes water quality objectives and

implementation programs to meet the stated objectives and to protect the beneficial uses of the water bodies (discussed under "Surface Water Quality", above). The act also authorizes the NPDES program under the CWA, which establishes effluent limitations and water quality requirements for discharges to waters of the state. Most of the implementation of SWRCB's responsibilities is delegated to the nine regional boards.

California Regional Water Quality Control Board and San Francisco Bay Regional Water Quality Control Board Basin Plan

The Project is under the jurisdiction of the San Francisco Bay RWQCB, which established regulatory standards and objectives for water quality in its Water Quality Control Plan for the San Francisco Bay, and is also known as the "Basin Plan". The San Francisco Bay RWQCB identifies beneficial uses for aquatic ecosystems and underground aquifers as they provide many different beneficial benefits to the people of the State (San Francisco Bay Water Board, 2021). The Water Board is charged with protecting all of the beneficial uses from pollution and nuisance that may occur as a result of waste discharges in the region.

Beneficial uses from Arroyo Las Positas can be classified to include groundwater recharge, cold freshwater habitat, fish migration and spawining, preservation of rare and endangered species, wildlife habitat, water contact recreation, noncontact water recreation (San Francisco Bay Water Board, 2010).

NPDES Waste Discharge Program

The federal CWA established the NPDES program to protect the water quality of receiving waters of the United States. Under the CWA, Section 402, discharging pollutants to receiving waters of the United States is prohibited unless the discharge complies with an NPDES permit. Effluent limitations serve as the primary mechanism in NPDES permits for controlling discharges of pollutants to receiving waters both from construction activities and from discharges from operation of municipal or industrial facilities. When developing effluent limitations for an NPDES permit, a permit applicant must consider limits based on both the technology available to control the pollutants (i.e., technology-based effluent limits) and limits that are protective of the water quality standards of the receiving water (i.e., water quality-based effluent limits[1] if technology-based limits are not sufficient to protect the water body). For inland surface waters and enclosed bays and estuaries, the water-quality-based effluent limitations are based on criteria in the National Toxics Rule and the California Toxics Rule, and objectives and beneficial uses defined in the applicable Basin Plan. There are two types of NPDES permits: individual permits tailored to an individual facility and general permits that cover multiple facilities or activities within a specific category. The NPDES permits relevant to the Project are described below.

NPDES Construction General Permit

The State of California adopted a Construction General Permit (CGP) on September 2, 2009 (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) (General Construction NPDES Permit or CGP). The General Construction NPDES Permit regulates

[1] Water quality-based effluent limits specify the level of pollutant (or pollutant parameter), generally expressed as a concentration, that is allowable

construction site stormwater management. Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the general permit for discharges of stormwater associated with construction activity. The Project would be required to comply with the permit requirements to control stormwater discharges from the Project site. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation.

In the Project area, the CGP is implemented and enforced by the RWQCB, which administers the stormwater permitting program. To obtain coverage under this permit, project operators must electronically file Permit Registration Documents, which include a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other compliance-related documents. An appropriate permit fee must also be mailed to SWRCB. The Stormwater Pollution Prevention Plan (SWPPP) identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on potential pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control potential chemical contaminants. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The SWPPP also includes descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs). Dischargers are responsible for notifying the RWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected.

The CGP includes several new requirements (as compared to the previous CGP, Order No. 99-08-DWQ), including risk-level assessment[2] for construction sites, an active stormwater effluent monitoring and reporting program during construction (for Risk Level II and III sites), rain event action plans for certain higher risk sites[3], and numeric effluent limitations (NELs) for pH and turbidity as well as requirements for qualified professionals that prepare and implement the plan. The risk assessment and SWPPP must be prepared by a State-qualified SWPPP Developer and implementation of the SWPPP must be overseen by a State-qualified SWPPP Practitioner. Project construction activities would be required to be consistent with the CGP.

Anti-Degradation Policy

The SWRCB Anti-Degradation Policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Water in California (SWRCB Resolution No. 68-16), restricts degradation of surface and ground waters. Specifically, this policy protects water bodies where

[2] The CGP defines three levels of risk (Risk Level I, II, and III) that may be assessed for a construction site. Risk is calculated based on the "project sediment risk", which determines the relative amount of sediment that can be discharged given the project and location details, and the "receiving water risk" (the risk sediment discharges pose to the receiving waters).

[3] Those sites that have a high potential for mobilizing sediment in stormwater and drain to a sediment-sensitive waterbody.

existing quality is higher than necessary for the protection of beneficial uses and requires that existing high quality be maintained to the maximum extent possible.

Under the Anti-Degradation Policy, any actions that can adversely affect water quality in all surface and groundwaters must: (1) be consistent with maximum benefit to the people of California; (2) not unreasonably affect present and anticipated beneficial use of the water; and (3) not result in water quality less than that prescribed in water quality plans and policies. Furthermore, any actions that can adversely affect surface waters are also subject to the federal Anti-Degradation Policy (40 CFR Section 131.12) developed under the CWA. Discharges from the Project that could affect surface water quality would be required to comply with the Anti-Degradation Policy, which is included as part of the NPDES permit requirements for point discharges.

Local Regulations

Alameda County General Plan

The Alameda County General Plan's Safety Element contains the following goals and objectives relevant to the Project (Alameda County, 2013):

Goal 3: To reduce hazards related to flooding and inundation.

Alameda County East County Area Plan

Alameda County's East County Area Plan (ECAP) includes the following wildfire policies that are applicable to the Project:

Policy 306: The County shall protect surface and groundwater resources by:

- Preserving areas with prime percolation capabilities and minimizing placement of potential sources of pollution in such areas;
- Minimizing sedimentation and erosion through control of grading, quarrying, cutting of trees, removal of vegetation, placement of roads and bridges, use of off-road vehicles, and animal-related disturbance of the soil;
- Not allowing the development of septic systems, automobile dismantlers, waste disposal facilities, industries utilizing toxic chemicals, and other potentially polluting substances in creekside, reservoir, or high groundwater table areas when polluting substances could come in contact with flood waters, permanently or seasonally high groundwaters, flowing stream or creek waters, or reservoir waters; and,
- Avoiding establishment of excessive concentrations of septic systems over lard land areas.

Implementation Programs:

Program 108: The County shall implement all federal, state and locally imposed statutes, regulations, and orders that apply to storm water quality. Examples of these include, but are not limited to:

- National Pollutant Discharge Elimination System (NPDES) stormwater permit issued by the California Regional Water Quality Control Board (RWQCB) to the Alameda County Urban Runoff Clean Water Program and amendments thereto;

- State of California NPDES General Permit for Storm Water Discharges (General Industrial Permit, General Construction Permit) and amendments thereto;
- Coastal Zone Management Act;
- Coastal Zone Act Reauthorization Amendments;
- Water Quality Control Plan, San Francisco Bay Basin Region (Basin Plan) and amendments thereto; and
- Letters issued by the RWQCB under the California Porter-Cologne Water Quality Act.

Program 109: The County shall endeavor to minimize herbicide use by public agencies by reviewing existing use and applying integrated pest management principles, such as mowing and mulching, in addition to eliminating or scaling back the need for vegetation control in the design phase of a project.

Program 110: The County shall conform with Alameda County Flood Control and Water Conservation District's (Zone 7) Wastewater Management Plan and the Regional Water Quality Control Board's San Francisco Bay Basin Plan.

Existing Conditions

Regional Drainage - Arroyo Las Positas

Arroyo Las Positas is a 7.4-mile-long drainage in the Livermore-Amador Valley in the northeast portion of the Alameda Creek watershed. It is a heavily incised perennial creek running mainly through commercial, agricultural, and ranchland areas (Gunther, 2000). Arroyo Las Positas begins in the Altamont Hills and is a major tributary to Arroyo Mocho. Arroyo Las Positas drains approximately 80 miles prior to its confluence with Arroyo Mocho (San Francisco Bay Area Rapid Transit District, 2017). The Arroyo Las Positas watershed consists of a broad alluvial plain and gently sloped upland areas drained by several tributaries such as Cottonwood Creek, Collier Canyon Creek, Isabel Creek, Cayetano Creek, Altamont Creek, and Arroyo Seco (San Francisco Bay Area Rapid Transit District, 2017). The channel is heavily grazed along its length and the water is highly turbid (Gunther, 2000). Annual precipitation in the watershed averages about 15 inches.

Existing Site Drainage

The Project is bisected by Arroyo Las Positas in the southeast. The Project generally consists of a relatively flat lowland valley area to the southeast, with gently sloping hills and valleys to the north and west. The localized ridges and valleys are oriented roughly north-south in the northern portion of the property, and roughly east-west in the western portion of the property, with valleys draining toward Arroyo Las Positas. Site slope gradients range from 2:5:1 to 10:1 (horizontal: vertical) in the surrounding hills (with the steepest slopes in the southwest), and the lowland valley area has a slope gradient shallower than 25:1 (horizontal:vertical). (ENGEO, 2019) (See **Appendix G**).

Existing Phase I Area Drainage and Runoff

The Phase I area of the Project site currently drains via surface runoff and shallow groundwater seepage directly into the adjacent Arroyo Las Positas. Phase I Pre-development discharges during

the 10-year rain and 100-year events have been calculated to be 2.9 cubic feet per second (cfs), and 5 cfs, respectively (ENGEO, 2019).

Phase II Runoff

The Phase II area of the Project site currently drains via surface runoff and shallow groundwater seepage via several ephemeral channels southward into Arroyo Las Positas. Phase II Pre-development discharges during the 10-year rain event and 100-year rain event have been calculated to be 118.7 cfs, and 213.4 cfs, respectively (ENGEO, 2019).

Groundwater

The Project site has an on-site groundwater well. The groundwater table at the lower part of the project site near the Arroyo is approximately 16 feet below grade (ENGEO, 2018). The well draws from the Livermore Valley Groundwater Basin. The Livermore Valley Groundwater Basin spans approximately 69,600 acres (109 square miles) and has an approximate capacity of 500,000 acre-feet (AF). The Alameda County Flood Control and Water Conservation District, Zone 7 manages groundwater in the basin. Zone 7 has maintained an annual hydrologic budget for the basin. Under average conditions, the groundwater budget has remained in balance with the withdrawal balancing the inflow. The estimated groundwater storage in 1999 was 219,000 AF. Due to higher than usual rainfall in the 2017 water year, the groundwater storage increased to 246,000 AF (ENGEO, 2019).

The groundwater-bearing materials in the basin include valley-fill materials, the Livermore Formation, and the Tassajara Formation (ENGEO, 2019). The valley-fill materials are composed of unconsolidated sand, gravel, silt, and clay. The valley-fill materials yield significant quantities of water to wells in the central and southern portions of the valley. The Livermore Formation is primarily exposed over the south and southwest regions of the Livermore Valley groundwater basin. The Livermore Formation supplies water to deep wells in the eastern half of the basin (ENGEO, 2019). The Tassajara Formation is exposed in the uplands to the north of the Livermore Valley. The Tassajara Formation consists of beds composed of sandstone, siltstone, shale, conglomerate, and limestone. Wells tapping into the Tassajara Formation yield only sufficient water for domestic or stock purposes. For management purposes, the Livermore Valley groundwater basin is also split based on varying geologic, hydrogeologic, and groundwater conditions into the Main Basin, Fringe Subareas, and Upland Areas. The Project site is located within the Upland area and is underlain by the Livermore Formation (ENGEO, 2019).

Dam Inundation

Dam failure is the uncontrolled release of impounded water behind a dam. The Project site is not located within a dam inundation zone (Alameda County, 2013).

Flood Hazards

The Project area is located in Federal Emergency Management Agency's (FEMA's) National Flood Hazard Layer (NFHL) (FEMA Flood Insurance Rate Map Panel # 06001C0334G). Areas along Arroyo Las Positas have been mapped as FEMA Zone AE, an area inundated by 1% annual chance flooding (100-year floodplain) for which base flood elevations have been determined. The

Project site is also within the areas of 0.2% annual chance flood (500-year floodplain). **Figure 3.8-1** shows the FEMA Flood Layers on-site.

3.8.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Consistent with CEQA *Guidelines* Appendix G, a project would have a significant impact on hydrology or water quality if it would:

- violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- 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 offsite;
  - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
  - impede or redirect flood flows;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

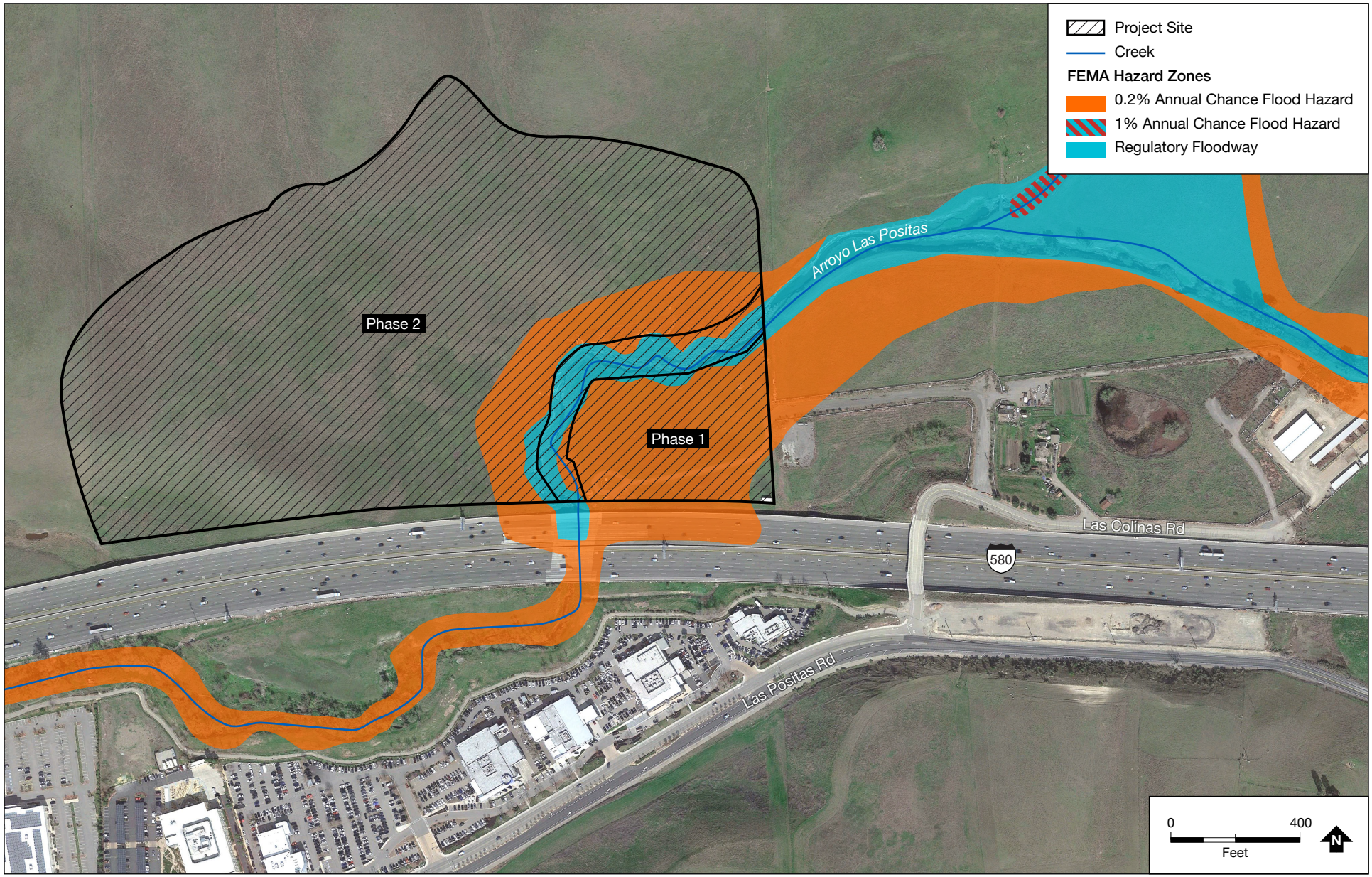
Impact Analysis

Impact 3.8.1: The Project could degrade surface or groundwater quality. (Significant)

Phase I

Construction

Construction activities would include earthwork activities (i.e., grading, excavation, and other soil-disturbing activities). Stormwater runoff from disturbed soils associated with construction activities is a common source of pollutants (mainly sediment) to receiving waters. Earthwork activities can render soils and sediments more susceptible to erosion and result in the migration of soil and sediment in stormwater runoff to storm drains and downstream water bodies. Grading or vegetation removal can lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors can cause a buildup of sediment, which can lead to a reduction in conveyance capacity.



Source: FEMA 2021; RCH Group 2021; Google Earth 2021

Figure 3.8-1
FEMA Flood Map

RCH GROUP
planning & environmental consulting

In addition, construction activities would likely involve the use of various materials such as paint, solvents, oil and grease, petroleum hydrocarbons, concrete and associated concrete wash-out areas. If improperly handled or stored, these materials could result in pollutants being mobilized and transported offsite by stormwater runoff (nonpoint source pollution) and degrade receiving water quality.

Because the Project exceeds one acre in size, construction activities would be required to comply with NPDES regulations and obtain coverage under the State CGP. Under the CGP, the Project would be required to implement construction BMPs as set forth in a detailed SWPPP. SWPPPs are a required component of the CGP and must be prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP). SWPPPs must describe the specific erosion control and stormwater quality BMPs being implemented to minimize pollutants in stormwater runoff, and detail their placement and proper installation. The BMPs are designed to prevent pollutants from coming into contact with stormwater and to keep all products of erosion and stormwater pollutants associated with construction activities from moving offsite into receiving waters.

Under the provisions of the CGP, the State-certified QSD is responsible for determining site risk level for sediment transport, developing the SWPPP, and managing its implementation. Site risk level is determined using a combination of the sediment risk of the project and the receiving water quality risk. Projects can be characterized as Risk Level 1, Level 2, or Level 3, and the minimum BMPs (stormwater controls) and monitoring that must be implemented during construction are based on the risk level. Under the direction of the QSD, the QSP is required to conduct routine inspections of all BMPs, conduct surface water sampling, when necessary, and report site conditions to the State and/or Regional Water Quality Control Board as part of CGP compliance monitoring and reporting using the Stormwater Multi-Application Reporting and Tracking System (SMARTS). Compliance with the CGP is required by law and has proven effective in protecting water quality at construction sites.

Construction earthwork activities would mainly involve grading and excavation. Although unlikely, if shallow groundwater were encountered during excavation activities, it would have to be pumped out of the construction trench to create a dry work area. If excavations intersect shallow groundwater and dewatering activities are required, dewatering would be temporary, highly localized, and would typically involve the extraction of low volumes of shallow groundwater from excavation trenches. The Project could result in the discharge of pollutants to surface waters or groundwater. This would be a significant impact of the Project.

Operation

Phase I would include installation of a septic system for wastewater. The Alameda County Department of Environmental Health coordinates with the San Francisco Bay RWQCB to permit On-site wastewater treatment systems (OWTS's). Design for the septic system has been sent for review by the County and Final approval of the OWTS permit from the Alameda County Department of Environmental Health would be required prior to the construction of the on-site septic system proposed to support Phase I buildings. Approval of an OWTS permit would reduce

potential impacts on water quality standards, waste discharge, or degradation of surface or groundwater quality to a less-than-significant impact.

Following completion of construction of Phase I, a first-flush rainstorm which produces significant amounts of runoff into streams following the seasonal low flow period can result in substantial input of contaminants that have accumulated on impervious surfaces over the drier summer months. Stormwater runoff could be contaminated by herbicides, pesticides, vehicular contaminants, and fuels used on the Project site. Of particular concern would be runoff from parking areas. As part of required Phase I stormwater detention, the Project would include stormwater detention infrastructure consisting of two cisterns and biofilters that would capture and filter any stormwater runoff from the on-site parking area prior to discharge into Arroyo Las Positas. The cisterns would be tied into the parking lot's stormwater inlets. Each cistern would have a 10,000-gallon capacity and two chambers used to capture and serve as biofilters. All silts, oils, and other possible contaminants (either from the parking lot or Phase I building downspouts) would be treated through all four chambers of the proposed cisterns. Once stormwater is filtered through the cisterns, the water would then flow into a biofilter prior to being discharged into the Arroyo. The cisterns would be periodically maintained by a state licensed vendor that would remove soils, sediments, and other wastes from the cistern chambers and adequately dispose of the waste. The Project would be subject to the requirements of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MS4 Permit) (Order No. R2-2015-0049), of which Alameda County is a permittee. Implementation of Mitigation Measures 3.8.1b and 3.8.1c would minimize or eliminate potential degradation of surface water or groundwater quality during operation of Phase I.

Phase II

Construction

The impact discussion for construction of Phase I would also apply to Phase II of the Project. Phase II construction activities would also include earthwork activities (i.e., grading, excavation, and other soil-disturbing activities). Construction activities could also result in an inadvertent discharge of pollutants to surface waters or groundwater. This would be a significant impact of the Project.

Operation

The proposed Phase II drainage system includes two lakes connected by a creek. The upper lake would consist of an upper and lower pool, connected via a waterfall feature. The lakes would retain runoff during the rainy season. The upper lake's water supply would be supplemented by an onsite groundwater well. A pump would recirculate water from the lower lake to the upper pool of the upper lake. The lower lake would act as a reservoir for irrigation water needed for the landscaping on the site. The lower lake would consist of a steeper portion in the deepest parts of the lake that level out to form a shelf. This shelf portion of the lake is sized to retain storm events but would not typically hold water throughout the year (ENGEO, 2019).

The hydrologic analysis determined that, with the lakes, the peak Project runoff into Arroyo Las Positas, including both Phases, would not increase compared to existing conditions (ENGEO, 2019). The lakes would be designed to provide adequate storage to collect excess stormwater and

to meter the detained water through an engineered outfall storage (ENGEO, 2019). Any upstream capture of runoff by the lakes would offset increased runoff downstream of the lakes. As with Phase I, Phase II would be subject to the requirements of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MS4 Permit) (Order No. R2-2015-0049), of which Alameda County is a permittee. Implementation of Mitigation Measure 3.8.1d would ensure the proposed lakes would provide adequate stormwater detention.

Phase II would not include additional infrastructure for wastewater disposal, so no impacts to water quality from that source would occur.

Mitigation Measures

Mitigation Measure 3.8.1a: The Project applicant shall file an NOI to comply with the Construction General Permit with the San Francisco Bay RWQCB prior to each phase of construction. Individual SWPPPs shall be prepared for each NOI and shall detail the treatment measures and BMPs to control pollutants that shall be implemented and complied with during the construction and post-construction phases of the project. The SWPPPs are subject to approval by the San Francisco Bay RWQCB, which makes the final determination on which BMPs are required for the Project.

Mitigation Measure 3.8.1b: Prior to the issuance of grading permits for the Project, the Project applicant shall submit a Stormwater Control Plan to Alameda County for review and approval. The Stormwater Control Plan shall identify pollution prevention measures and practices to prevent polluted runoff from leaving the Project site. The plan shall be implemented to the satisfaction of Alameda County prior to building occupancy.

Mitigation Measure 3.8.1c: Prior to the issuance of grading permits for the Project, the Project applicant shall submit a final drainage plan as prepared by a qualified civil engineer to Alameda County for review and approval. The approved plan shall be incorporated into the Project design and constructed to the satisfaction of Alameda County.

Mitigation Measure 3.8.1d: The lakes shall be maintained on a regular basis by the Project Applicant (or successors-in-interest). Inspections of the lakes shall be conducted at least once a year between July 1st and September 1st. Accumulations of sediment and debris may occur in the lakes. Therefore, the lakes shall be inspected, and excess sediments and debris removed prior to the rainy season, and after heavy rain events. An annual inspection and maintenance report shall be prepared by the property owner and submitted to Alameda County by October 15 of each year, at the property owner's expense.

Level of Significance After Mitigation

Mitigation Measure 3.8.1a, 3.8.1b, and 3.8.1c would reduce impacts to less than significant for Phase I. Mitigation Measures 3.8.1a, 3.8.1b, 3.8.1c, and 3.8.1d would reduce impacts to less than significant for Phase II.

Impact 3.8.2: The Project could potentially decrease groundwater supplies. (Less than Significant)

Phase I

The Project would use the existing on-site groundwater well for non-potable uses (primarily landscape irrigation). Based on a 24-hour flow test conducted by Pacific Coast Well & Pump Inc., the well has an average production capacity of 200 gallons per minute (gpm) which is approximately equal to 0.88 AF of water per day (ENGEO, 2019), however, the groundwater well can draw up to 300 gpm for shorter periods (Kliment, 2021). For the purpose of sustainable groundwater management, the groundwater well draw would be limited to 150 gpm, or approximately 0.66 AF of water per day (or 241 AF per year) (ENGEO, 2019). Groundwater well draw at this rate would ensure that groundwater supplies from the Livermore Valley Groundwater Basin are not depleted (Sasaki, 2021). Based on the groundwater well draw capacity, it is expected that the groundwater supply would exceed the demand for all irrigation demand in Phase I. An existing domestic water connection to Cal Water would provide domestic water for Phase I uses (Kliment, 2021). Therefore, potential impacts to groundwater supplies or groundwater recharge during Phase I would be less than significant.

Phase II

ENGEO determined that there is sufficient water supply to sustain the proposed lakes and creek system (ENGEO, 2019). Results of the water budget analyses indicate that the direct water inflow into the lakes and creek and the supplemental water from the on-site runoff, supplemented with water from the on-site well, would be sufficient to maintain lake water depths and creek flow throughout the year for the average, median, and dry years. As stated above, for the purpose of sustainable groundwater management, the groundwater well draw would be limited to a maximum of 150 gpm or approximately 0.66 AF of water per day (or 241 AF per year). According to the water budget analysis, well-water demand to maintain sufficient water supply for the lakes and creek system would range from approximately 35 AF to 48 AF for average, median, and dry water years (ENGEO, 2019). Furthermore, in order to maintain static or desired lake water levels as well as an equilibrium creek flow during the dry season, water from the lower lake would be re-circulated to the upper lake by use of a pump. This would reduce water demand from groundwater (ENGEO, 2019). Therefore, potential impacts to groundwater supplies or groundwater recharge during Phase II would be less than significant.

Mitigation Measures

None required.

Impact 3.8.3: The Project could increase risk of flood hazards or provide sources of polluted runoff. (Less than Significant)

Phase I

Stormwater on-site would drain from the parking lot inlets and Phase I building downspouts into the stormwater cisterns and would not alter existing drainage runoff from on-site. Construction of

Phase I would need to comply with Mitigation Measure 3.8.1a to mitigate any potential sources of polluted runoff. The proposed stormwater infrastructure (cisterns and biofilter) has been designed to ensure that the post-development peak runoff would not exceed pre-development peak runoff (Starkweather, 2021).

Implementation of Phase I does not propose any development in the Arroyo and would not alter the existing drainage pattern or course of Arroyo Las Positas or impede or redirect flood flows. Development of Phase I would avoid areas of high flow and FEMA floodplain hazard zones (1% Annual Chance Flood Hazard/100-year floodplain) but would only develop in areas labeled as 0.2% Annual Chance Flood Hazard (500-year floodplain). With use of appropriate flood damage-resistant material requirements, development within the 500-year flood plain would be considered a less-than significant impact. Further, the Project would not alter channel capacity or otherwise increase flood hazards either on the site or downstream. Therefore, impacts to Arroyo Las Positas, stormwater runoff and drainage and water quality would be less than significant.

Phase II

ENGEO evaluated the use of the two proposed lakes to attenuate peak flows from the project before discharging into the Arroyo Las Positas Creek. ENGEO conducted the hydrological analysis using the Synthetic Unit Hydrograph Method as described in the Alameda County Hydrology and Hydraulic Manual (ENGEO, 2019) to develop peak flow hydrographs within the Site tributary watersheds of Arroyo Las Positas Creek.

The Project lakes have been designed to be operated such that peak runoff would not exceed pre-development peak runoff. The upper lake would have a capacity of 23.92-AF of water and the lower lake would have a capacity of 19.21 AF. With the use of a terraced bank, the lower lake would have additional capacity of 10.04 AF. This additional area would be managed for stormwater detention. Therefore, the lower lake would sufficiently contain the estimated 5.3 AF of water onsite produced by a 100-year storm event (ENGEO, 2019).

In addition to the lakes, the Project would install 2.6 acres of wetlands west of Arroyo Las Positas, along the southern boundary of the central portion of the Project site. Water in this wetland area would come from direct precipitation. The wetlands would be designed to only receive supplemental surface runoff in the event of very large storm events, along with discharge from the lower lake during storm events. The water would be detained in this wetlands area and then discharged at 10-year and 100-year predevelopment flows via a stabilized outfall structure into Arroyo Las Positas. Therefore, Phase II impacts to Arroyo Las Positas, stormwater runoff, and drainage (including water quality) would be less than significant.

Mitigation Measures

None required.

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3.9 LAND USE, PLANNING, AND AGRICULTURE

This section identifies potential impacts of the Project on Land Use Planning and Agricultural Resources. This section evaluates the compatibility of the Project with existing or future land uses and adopted plans.

3.9.1 SETTING

Existing Land Uses and Designations

Existing Uses

As discussed in Chapter 2**,** The Project would be developed on approximately 47 acres in the southern portion of the ±104-acre parcel. The Project site is on agriculturally designated land in unincorporated Alameda County directly north of, and adjacent to Interstate 580 between North Livermore Avenue and the North First Street exits. Arroyo Las Positas flows in a southwesterly direction across the Project site. Land west of Arroyo Las Positas is used for cattle grazing. and land east of Arroyo Las Positas is not used for grazing since it is regularly disked for fire protection (Starkweather, 2021). The Project site is classified as Grazing Land on the California Department of Conservation's (CDC) California Important Farmland Finder (CDC, 2021). There are no Prime or Unique Farmlands, or Farmland of Statewide Importance on the Project site.

The property bordering the Project site to the east of Arroyo Las Positas supports an existing residence, agricultural uses, and several roadways, while the area west of Arroyo Las Positas, the western portion of the Project site, is undeveloped and is currently used for grazing. Parcels to the north of the Project site are also used for grazing.

Land Use Designations

The parcel that includes the Project site is designated as Large Parcel Agriculture (LPA) in the East County Area Plan (ECAP). According to the Alameda County Zoning Map, the entire parcel is zoned "A" Agricultural (Alameda County, 2021a). As detailed below, cemetery uses are permitted on Agricultural-zoned lands with a Conditional Use Permit (CUP).

Regulatory Setting

Alameda County General Plan

The Alameda County General Plan's Conservation Element contains the following goals and objectives relevant to the Project (Alameda County, 1976):

> *Goal*: To protect and maintain soils in Alameda County in such a manner to be beneficial to agriculture and open uses.
>
> *Goal*: To protect agriculture and agricultural lands.

East Area County Plan

The ECAP is an Area Plan implementing the General Plan in the East County Area (including the Project site). In November 2000, the Alameda County electorate approved the Save Agriculture and Open Space Lands Initiative (Measure D; effective date, December 22, 2000). The Initiative amended portions of the County General Plan, including the ECAP. The ECAP incorporates the revisions called for by the initiative. Policies, programs, tables, and figures were added, revised, or enacted by the Initiative in the ECAP. The purpose of this Initiative was to preserve and enhance agriculture and agricultural lands, and to protect the natural qualities, the wildlife habitats, the watersheds, and the open space of Alameda County from excessive, badly located and harmful development.

The ECAP includes a Land Use Element that aims to protect sensitive lands and regionally significant open space The Element's following goals and policies related to Land Use Planning and Agricultural Resources are relevant to the Project:

> *Goal*: To maximize long-term productivity of East County's Agricultural resources.
>
> *Policy 71*: The County shall conserve prime soils (Class I and Class II as defined by the USDA Soil Conservation Service Land Capability Classification) and Farmland of Statewide Importance and Unique Farmland (as defined by the California Department of Conservation Farmland Mapping and Monitoring Program) outside the Urban Growth Boundary.
>
> *Policy 74*: The County shall require that, where conflicts between a new use and existing use are anticipated, the burden of mitigating the conflicts be the responsibility of the new use.
>
> *Policy 79*: The County shall require any proposal for agricultural support service uses within area designated "Large Parcel Agriculture" or "Resource Management" to meet a minimum the following criteria:
>
> - The project will not require the extension of public sewer or water.
> - The project will not detract from agricultural production on-site or in the area.
> - The project will not create a concentration of commercial uses in the area.
> - The project is compatible with and will not adversely affect surrounding uses.
>
> *Policy 99*: The County shall require all tentative maps in areas designated "Large Parcel Agriculture" or "Resource Management" to identify a building envelope of no more than two acres on each proposed parcel within which all residential development and residential accessory uses shall be located. On-site housing for farm employees who require full-time, on-site residency is considered an agricultural use and is not limited to the identified two-acre building envelope.

As mentioned above, the Project site is designated as LPA. According to the ECAP, lands designated as LPA requires a minimum parcel size of 100 acres. The maximum building intensity for non-residential buildings is 0.01 FAR (floor area ratio) but not less than 20,000 square feet. All buildings shall be located on a contiguous development envelope not to exceed 2 acres except they may be located outside the envelope if necessary for security reasons, or if structures for agricultural use, necessary for agricultural use.

City of Livermore

The City's General Plan includes smart growth principles that prohibit urban uses beyond the North Livermore Urban Growth Boundary and focuses infill and mixed-use development within the City limits where there are suitable services and utilities. The General Plan also includes policies for the protection and enhancement of views along Scenic Corridors such as Interstate 580.

North Livermore Urban Growth Boundary Initiative

The North Livermore Urban Growth Boundary Initiative limits urbanization and promotes the preservation of open space, habitat and agriculture. It also obligates the City of Livermore to discourage and oppose any urban uses beyond the Urban Growth Boundary.

3.9.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the California Environmental Quality Act (CEQA) Guidelines states that a Project would result in a significant impact to Land Use Planning and Agricultural Resources if it would:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;
- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production;
- Result in the loss of forest land or conversion of forest land to non-forest use; or,
- 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.

Topics with No Impact

Phase I and Phase II

The Project site is not under a Williamson Act contract. There are no forest or timberland resources or forest land resources on-site. Therefore, the Project would have no impacts related to these topics and they are not further discussed in this analysis.

Impact Analysis

Impact 3.9.1: The Project would conform to the ECAP and Agricultural Zoning Land Use Designation Requirements. (Less than Significant)

Phase I and Phase II

ECAP Land Use Designation and Allowable Land Uses

As discussed in the Setting, the ECAP designates the Project site as LPA. This designation permits a range of agricultural and related uses. Cemetery uses are not called out in this designation.

Zoning Requirements and Allowable Land Uses

As discussed in the Setting information in this Section 3.9, the entire 104-acre parcel that includes the Project site is zoned "A" Agricultural. The surrounding properties that are within the County are also within the "A" district. According to Section 17.06.30 of the Alameda County Municipal Code (ACMC), A districts are established to promote implementation of general plan land use proposals for agricultural and other nonurban uses, to conserve and protect existing agricultural uses, and to provide space for and encourage such uses in places where more intensive development is not desirable or necessary (ACMC, 2021).

According to Section 17.06.035 of the County Zoning Ordinance, a cemetery use shall be permitted in an A district only if approved by the planning commission, sitting as a board or zoning adjustments (as provided in Section 17.54.135 and 17.06.010) and provided it meets all the requirements necessary to allow for a cemetery use. Provided that the County issues the Project a CUP to allow for a cemetery, the Project site would be consistent with the ECAP and Zoning Designations.

As discussed in the Setting information in this Section 3.9, under the County's Agricultural zoning designation, the maximum building intensity for non-residential buildings is .01 FAR but not less than 20,000 square feet. The Project would be developed on approximately 47 acres in the southern portion of the ±104-acre parcel. Therefore, a 0.01 FAR for the ±104-acre parcel would result in a maximum allowable development area of approximately 45,000 square feet.

Phase I structures would include the Main Funeral Home, the Pavilion, the pump house, and other minor structures that would constitute approximately 20,000 square feet of hardscape building development subject to FAR requirements (Starkweather, 2021).

Phase II of the Project includes development of the burial crypts, a columbarium, a mausoleum, and the proposed lake features. Proposed Phase II hardscape would total approximately 20,000 square feet (Kliment, 2021). The burial crypts and proposed lakes would not be considered hardscape structures subject to FAR requirements for LPA designations. The total maximum hardscape building development area is approximately 40,000 square feet. Therefore, the Project would not exceed the approximately 45,000-square foot allowable development area (Starkweather, 2021).

If the Project is approved and receives a CUP from the County, impacts related to land use designations would be less than significant.

Mitigation Measures

None required.

Impact 3.9.2: The Project would result in a loss of Agricultural Land. (Less than Significant)

Phase I and Phase II

Implementation of the Project would result in the conversion of land zoned by Alameda County as agricultural to a non-agricultural use. Phase I and Phase II of the Project would result in the conversion of approximately 47 acres of agricultural lands primarily used for grazing in the County to non-agricultural uses. The Phase I area of the Project site is not being used for active agricultural production, while areas in Phase II are used for cattle grazing.

Alameda County has more than 200,000 acres of land designated for agricultural purposes, most of which is in the Tri-Valley region of Eastern Alameda County (Alameda County, 2021b). The loss of 47 acres of agricultural land would be considered negligible compared to the existing acreage designated for agricultural purposes in Alameda County. Furthermore, the Project would not result in the loss or conversion of Prime or Unique farmland, or Farmland of Statewide Importance (CDC, 2021). Therefore, impacts related to loss of agricultural land would be less than significant.

Mitigation Measures

None required.

Impact 3.9.3: The Project would conflict with Alameda County General Plan and ECAP Policies. (Less than Significant)

Phase I and Phase II

Table 3.9-1 includes analysis of relevant policies in the Alameda County General Plan and ECAP that are discussed in the Regulatory Setting above. As detailed in **Table 3.9-1**, the Project would not substantively conflict with land use goals and policies related to development on land zoned for agriculture in the County. Therefore, impacts related to the Project conflicting with applicable goals and policies would be less than significant.

Mitigation Measures

None required.

TABLE 3.9-1. PROJECT CONSISTENCY WITH GENERAL PLAN AND ECAP POLICIES

General Plan Policies	Consistent?	Analysis
Goal: To protect and maintain soils in Alameda County in such a manner to be beneficial to agriculture and open uses.	Generally Consistent	If the Project is approved a CUP, the zoning ordinance would allow the Project site to develop a cemetery and the Project would be an allowable use in agricultural district in the County as outlined in Section 17.06.035 of the ACMC. The development of the Project would convert approximately 47 acres of agricultural land in the County to non-agricultural uses. The land west of Arroyo Las Positas is used for cattle grazing and it is not used for active agricultural production. The loss of agricultural land is not loss of Prime or Unique farmland, or Farmland of Statewide Importance.
Goal: To protect agriculture and agriculture lands	Generally Consistent	As discussed above, if the Project is approved a CUP, the zoning ordinance would allow the Project site would be an allowable use. The development of the Project would convert approximately 47 acres of agricultural land in the County to non-agricultural uses. However, since the loss of agricultural land is not loss of Prime or Unique farmland, or Farmland of Statewide Importance, impacts would be considered less-than-significant.
Goal: To maximize long-term productivity of East County's Agricultural resources.	Generally Consistent	Development of the Project would result in the conversion of approximately 47 acres of agricultural lands primarily used for grazing in the County to non-agricultural uses. Alameda County has more than 200,000 acres designated for agricultural purposes. The loss of 47 acres of agricultural land would be considered negligible compared to the existing acreage designated for agricultural purposes and it is not expected that the loss of 47 acres of agricultural land would conflict with the County's Goal of long-term agricultural productivity.
Policy 71: The County shall conserve prime soils (Class I and Class II as defined by the USDA Soil Conservation Service Land Capacity Classification) and Farmland of Statewide Importance and Unique Farmland (as defined by the California Department of Conservation Farmland Mapping and Monitoring Program) outside the Urban Growth Boundary.	Yes	The Project site is not on land classified as Prime Farmland, Unique Farmland or Farmland of Statewide Importance (CDC, 2021). The Project site would not disturb soils classified as Class I or Class II soil types.
Policy 74: The County shall require that, where conflicts between a new use and existing use are anticipated, the burden of mitigating the conflicts be the responsibility of the new use.	Yes	The Project would enhance the existing access road that would be used to enter the Project site and the Project would be responsible to mitigate any potentially significant environmental impacts (See Sections 3.1-3.13 for detailed environmental analysis and specific Mitigation Measures). Any potential conflicts that may arise during Project construction and operation between the existing residential land use to the east would be the responsibility of the Project Applicant to mitigate and resolve.
Policy 79: The County shall require any proposal for agricultural support service uses within an area designated "Large Parcel Agriculture" or "Resource Management" to meet a minimum the following criteria: • The project will not require the extension of public sewer or water.	Yes	The Project site is designated as LPA. The Project would not require the extension of public or sewer water. It would use existing Cal Water infrastructure for domestic water. The Project would not create a concentration of commercial uses in the area. It would not detract from agricultural production in the area. Land west of Arroyo Las Positas is used for cattle grazing. Land east of Arroyo Las Positas is disked and regularly maintained and not used for grazing. As discussed above, development of the Project. The proposed cemetery uses would not conflict with these surrounding agricultural land uses.

TABLE 3.9-1. PROJECT CONSISTENCY WITH GENERAL PLAN AND ECAP POLICIES (Continued)

General Plan Policies	Consistent?	Analysis
• The project will not detract from agricultural production on-site or in the area. • The project will not create a concentration of commercial uses in the area. • The project is compatible with and will not adversely affect surrounding uses.		
Policy 99: The County shall require all tentative maps in areas designated "Large Parcel Agriculture" or "Resource Management" to identify a building envelope of no more than two acres on each proposed parcel within which all residential development and residential accessory uses shall be located. On-site housing for farm employees who require full-time, on-site residency is considered an agricultural use and is not limited to the identified two-acre building envelope.	Yes	The Project would not include on-site residential development or residential accessory uses.

SOURCE: ECAP, 1994 and Alameda County General Plan, 1976.

3.9.3 REFERENCES

Alameda County. 1976. *Alameda County General Plan, Conservation Element*. November 1976.

Alameda County. 1994. *East County Area Plan, Volume 1, Goals, Policies and Programs.* May 1994.

Alameda County. 2021a. *Alameda County Zoning Map GIS Viewer.* https://www.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773. Accessed June 2, 2021.

Alameda County. 2021b. *Agricultural Resources.* https://www.acgov.org/board/district1/agresources.htm#:~:text=Alameda%20County%20encompasses%20738%20square,region%20of%20Eastern%20Alameda%20County. Accessed August 4, 2021.

California Department of Conservation. 2021. *California Important Farmland Finder* https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed June 2, 2021.

Kliment, Mike. 2021. *Senior Vice President, Monte Vista Memorial Investment Group, LLC.* Written Correspondence with Luis Rosas, RCH Group, on June 29, 2021 regarding proposed size of Phase II structures.

Starkweather, TW 2021. *CEO, Monte Vista Memorial Investment Group, LLC.* Telephone conversation with Luis Rosas, RCH Group, on July 30, 2021 regarding FAR requirements and Project specific details to comply with those requirements.

3.10 NOISE

This section evaluates the potential noise impacts of the Project. This section provides a brief technical background on "sound", as well as existing noise sources and levels in the Project vicinity. This evaluation reviews applicable State and local noise regulations followed by analysis of noise impacts of construction and operation of the Project and Mitigation Measures needed to reduce significant impacts, as necessary.

3.10.1 SETTING

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound pressure level has become the most common descriptor used to characterize the "loudness" of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. Decibels are measured using different scales, and it has been found that A-weighting of sound levels best reflects the human ear's reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A–weighted sound level over a given time period (Leq)[1]; average day–night 24-hour average sound level (Ldn)[2] with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL)[3], also a 24-hour average that includes both an evening and a nighttime sensitivity weighting. Other frequently used noise descriptors are summarized below:

- Lx: the noise level that is equaled or exceeded x percent of the specified time period.
- L50: the noise level that is equaled or exceeded 50 percent of the specified time period. The 50 represents the median sound level. Limits for the L50 parameter are specified in the Alameda County Municipal Code.
- L25: the noise level that is equaled or exceeded 25 percent of the specified time period. Limits for the L25 parameter are specified in the Alameda County Municipal Code.
- L8: the noise level that is equaled or exceeded 8 percent of the specified time period. Limits for the L8 parameter are specified in the Alameda County Municipal Code.

[1] The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time–varying sound energy in the measurement period.

[2] Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

[3] CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

- L2: the noise level that is equaled or exceeded 2 percent of the specified time period. Limits for the L2 parameter are specified in the Alameda County Municipal Code.

- Lmax: the instantaneous maximum noise level for a specified period of time.

Table 3.10-1 identifies decibel levels for common sounds heard in the environment. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 1998).

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dB;

- Outside of such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise;

- It is widely accepted that the average healthy ear, however, can barely perceive noise levels changes of 3 dB;

- A change in level of 5 dB is a readily perceptible increase in noise level; and

- A 10-dB change is recognized as twice as loud as the original source.

TABLE 3.10-1. TYPICAL NOISE LEVELS

Noise Level (dB)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	
40-60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

SOURCE: RCH Group, Inc. (modified from Caltrans Technical Noise Supplement, 1998)

Noise Attenuation

Stationary point sources of noise, including construction equipment, attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dB each time the distance doubles from the source, that also depends on ground absorption (Caltrans, 1998). Physical barriers located between a noise source and the noise

receptor, such as berms or sound walls, would increase the attenuation that occurs by distance alone. Noise from large construction sites would have characteristics of both "point" and "line" sources, so attenuation would likely range between 4.5 and 7.5 dB per doubling of distance.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others due to the amount of noise exposure, in terms of both duration and insulation from noise, and the types of activities typically involved. Residences, hospitals, schools, and nursing homes are generally more sensitive to noise than commercial and industrial land uses. The Project site is undeveloped and is currently used for grazing. The only nearby sensitive receptor would be the existing residence approximately 800 feet east of the Project site. Interstate 580 borders the Project site to the south.

Existing Noise Sources

To quantify existing ambient noise levels, RCH Group conducted two long-term (72-hour) and several short-term (10-minute) noise measurements on and nearby the Project site. Long-term noise measurements were made using Metrosonics db308 Sound Level Meters calibrated before and after the measurements. Short-term measurements were made using a Larson Davis SoundTrack LxT Sound Level Meter calibrated before and after measurements. **Table 3.10-2** summarizes the locations and results of the noise measurements. **Figure 3.10-1** shows the locations of the noise measurements. The main source of noise in the Project vicinity is traffic-related noise from Interstate 580. See **Appendix H** for 24-hour noise plots for Site 1 and raw sound level data. Thursday (5/6/2021) is on the first two graphs, Friday (5/7/2021) is on the second two graphs, and Saturday (5/8/2021) is on the last two graphs.

TABLE 3.10-2. EXISTING NOISE LEVELS

Location	Time Period	Noise Levels (dB)	Noise Sources
Site 1: West area of Project site, approximately 350 feet north of Interstate 580.	May 6, 12:00 a.m. Through May 8, 11:59 p.m., 2021 Thursday – Saturday 72-hour measurement.	Hourly Leq's ranged from: 55-71 L2 ranged from: 60-73 L8 ranged from: 58-72 L25 ranged from: 55-71 L50 ranged from: 53-71 CNELs: 73,74,71	Unattended noise measurements do not specifically identify noise sources.
Site 1: West area of Project site, approximately 350 feet north of Interstate 580.	March 22, 12:00 p.m. Through 4:00 p.m., 2021 4-hour measurement.	Hourly Leq's ranged from: 68-69 L2 ranged from: 71-72 L8 ranged from: 69-71 L25 ranged from: 68-70 L50 ranged from: 67-69	Unattended noise measurements do not specifically identify noise sources.
Site 1: West area of Project site, approximately 350 feet north of Interstate 580.	Monday May 10, 2021 10:51 a.m. to 11:01 a.m.	5-minute Leq's: 70, 70 5-minute Ln's: L2: 72 L8: 71-72 L25: 71 L50: 70	Constant traffic on Interstate 580 60-69 dB.

TABLE 3.10-2. EXISTING NOISE LEVELS (Continued)

Location	Time Period	Noise Levels (dB)	Noise Sources
Site 1: West area of Project site, approximately 350 feet north of Interstate 580.	Monday March 22, 2021 11:15 a.m. to 11:25 a.m.	5-minute Leq's: 54, 54 5-minute Ln's: L2: 58 L8: 56 L25: 54 L50: 53	Standstill traffic on Interstate 580 50-60 dB. Note* Accident on 580, Standstill traffic.
Site 1: West area of Project site, approximately 350 feet north of Interstate 580.	Monday March 22, 2021 4:08 p.m. to 4:18 p.m.	5-minute Leq's: 69, 68 5-minute Ln's: L2: 72, 72 L8: 70, 71 L25: 69, 70 L50: 67, 68	Constant traffic on Interstate 580 59-58 dB.
Site 2: Driveway to access Project site, approximately 150 feet north of Las Colinas Road and approximately 320 feet north of Interstate 580. Near off-site residence.	Monday March 22, 2021 11:34 a.m. to 11:44 a.m.	5-minute Leq's: 63, 64 5-minute Ln's: L2: 66, 68 L8: 65, 66 L25: 64, 67 L50: 63, 63	Constant traffic on Interstate 580 50-59 dB, Distant sprinklers 49 dB.
Site 2: Driveway to access Project site, approximately 150 feet north of Las Colinas Road and 320 feet north of Interstate 580. Near off-site residence.	Monday March 22, 2021 3:45 p.m. to 3:55 p.m.	5-minute Leq's: 57, 57 5-minute Ln's: L2: 60, 60 L8: 59, 59 L25: 57, 58 L50: 56, 58	Constant traffic on Interstate 580 53-57 dB.
Site 3: On access road to access Project site, approximately 450 feet north of Interstate 580.	Monday March 22, 2021 3:57 p.m. to 4:07 p.m.	5-minute Leq's: 65, 67 5-minute Ln's: L2: 68, 69 L8: 67, 68 L25: 65, 66 L50: 65, 64	Constant traffic on Interstate 580 60-67 dB.

SOURCE: RCH Group 2021.

Source: RCH Group 2021; Google Earth 2021

Figure 3.10-1
Noise Measurement Locations

RCH GROUP
planning & environmental consulting

Regulatory Context

Pertinent local noise regulations are discussed within the following section. There are no applicable federal noise requirements.

State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB at a distance of 50 feet. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the vehicle centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dB, Ldn in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB.

Local

Alameda County General Plan

The Alameda County General Plan (Countywide Noise Element), adopted in 1975, provides a framework to regulate excessive noise levels and promotes compatibility of land uses with respect to noise. The Countywide Noise Element does not explicitly define the acceptable outdoor noise levels within residential areas, but it does recognize the Federal Environmental Protection Agency (EPA) noise level standards for residential uses (45 dB, Ldn interior noise level of any habitable room). The following policies specific to noise apply to the Project:

> Unincorporated Area Policy Goal #1: Alameda County should provide its residents and wildlife with an environment which is free from excessive noise pollution by preventing and suppressing undesirable levels, frequencies, and time durations of noise.
>
> Unincorporated Area Policy Goal #2: Alameda County should encourage noise compatible land uses near highways and other noise generators.

East County Area Plan

In addition to the Alameda County General Plan's Noise Element, the East County Area Plan (ECAP), which is the governing general plan for the Project area, contains goals, policies, and implementation programs intended to minimize the exposure to excessive noise for East County residents and workers. The following policies pertaining to Noise are relevant to the Project:

> *Policy 288*: The County shall endeavor to maintain acceptable noise levels throughout East County.

Policy 289: The County shall limit or appropriately mitigate new noise sensitive developments in areas exposed to projected noise levels exceeding 60 dB based on the California Office of Noise Control and Land Use Compatibility Guidelines.

Alameda County Municipal Code

The Alameda County Municipal Code aims to control unnecessary, excessive, and annoying noise in the County.

Section 6.60.040 provides that noise generation within any unincorporated area of the county as measured at a receiving residence shall not exceed the applicable noise level standards provided below in **Table 3.10-3.**

TABLE 3.10-3. MAXIMUM ALLOWABLE EXTERIOR NOISE EXPOSURES FOR RESIDENTIAL LAND USES IN ALAMEDA COUNTY

Hourly Noise Metric	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L50 (30 minutes in any hour)	50	45
L25 (15 minutes in any hour)	55	50
L8 (5 minutes in any hour)	60	55
L2 (1 minute in any hour)	65	60
Lmax (Maximum instantaneous level)	70	65

NOTE: These are the standards from Table 6.60.040A in the Alameda County Municipal Code

SOURCE: Alameda County Municipal Code, Title 6, Chapter 6.60, Section 6.60.40

Construction Hours. Pursuant to Section 6.60.070 (E), the provisions of Chapter 6.60 of the Alameda County Municipal Code shall not apply to noise sources associated with construction. Construction activities are to occur between 7 a.m. to 7 p.m. on weekdays and 8 a.m. to 5 p.m. on weekends in the county.

3.10.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the *CEQA Guidelines* states that a Project would result in a significant impact to Noise if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; or
- 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, expose persons residing or working in the project area to excessive noise levels.

Topics with No Impact

Phase I and Phase II

Vibrational effects from typical construction activities are only a concern within 25 feet of existing structures (Caltrans, 2002). Project construction during Phase I and Phase II would utilize typical construction equipment and would occur at distances far greater than 25 feet of existing structures and would not result in any vibration impacts. Therefore, vibration impacts are not further discussed in this analysis.

The Project is not located within an airport land use plan area or within two miles of a public or private airport or airstrip. The nearest public airport is Livermore Municipal Airport, approximately 3.25 miles west of the Project. At this distance, aircraft noise would not be a significant source of noise at the Project and would have no impact. Therefore, airport noise impacts are not further discussed in this analysis.

Impact Analysis

Impact 3.10.1: Construction and operation of the Project could increase noise levels at sensitive off-site residential receptors. (Less than Significant)

Phase I

Construction Related Noise Impacts

Construction would result in a temporary increase in noise levels in the vicinity of the Project. Construction activities would include site grading, clearing and excavation work. Construction would require noise-generating equipment, such as excavating machinery (e.g., excavators, loaders, etc.) and other construction equipment (e.g., scrapers, dozers, compactors, trucks, etc.). The noise levels generated by construction equipment can vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction.

The maximum noise levels for various types of construction equipment that could be used during construction are provided in **Table 3.12-4**. Maximum equipment noise levels would range from 74 to 89 dB, Lmax at 50 feet. Road construction for site access could occur as close as 150 feet from the nearest sensitive receptor. Most of the construction would occur in areas greater than 800 feet from the nearest sensitive receptor. **Table 3.12-5** provides typical construction activity noise levels at 50 feet.

Construction noise levels would fluctuate throughout the day depending on the equipment use, construction schedules, and location of construction during extended periods of time. The majority of construction activities would occur at distances greater than 800 feet from the nearby residence during Phase I. Most of the construction related noise activities that would affect the nearest receptor during Phase I would be construction-related truck traffic on the access road that would be used to access the Project site during construction. Project construction would comply with the construction hours in the Alameda County Municipal Code (between 7 a.m. to 7 p.m. on

weekdays and 8 a.m. to 5 p.m. on weekends). Therefore, Phase I noise effects from construction would be a less-than-significant impact.

TABLE 3.10-4. TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (Lmax)

Construction Equipment	Noise Level (dB, Lmax at 50 feet)
Dump Truck	76
Air Compressor	78
Backhoe	78
Dozer	82
Compactor (ground)	83
Crane	81
Excavator	81
Flat Bed Truck	74
Paver	77
Grader	85
Compressor (Air)	78
Generator	81
Roller	80
Vibratory Concrete Mixer	80
Concrete Mixer Truck	79
Jackhammer	89
Finishing	89

NOTES: Lmax = maximum sound level

SOURCE: Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide, 2006.

TABLE 3.10-5. TYPICAL CONSTRUCTION ACTIVITIES NOISE LEVEL

Construction Equipment	Noise Level (dB, Leq at 50 feet)
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

NOTES: Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.
Leq= equivalent sound level

SOURCE: U.S. Environmental Protection Agency, Legal Compilation, 1973.

Operational Noise Impacts

As shown in **Table 3.10-2**, noise levels were observed to be loud on and nearby the Project site. Noise levels on-site are dominated by constant traffic from Interstate 580. Noise from Project operations would not be expected to be substantially louder than activities that already occur at the Project site. As mentioned above, the access road that is approximately 150 feet west of the nearest sensitive receptor would be used by vehicles driving to the Project site. Operational traffic would have a minimal effect on the future noise levels because the nearest sensitive receptor would have constant noise from traffic on Interstate 580. Any permanent increase in ambient noise levels in the site vicinity would not be substantially greater than existing noise that is primarily traffic-generated noise from Interstate 580. Therefore, any increase in operational noise from Phase I would be a less-than-significant impact.

Phase II

Construction Related Noise Impacts

Phase II development would occur west of Arroyo Las Positas and at distances from the closest sensitive receptor that are much farther than Phase I development. Due to the distance between proposed Phase II development and the nearest sensitive receptor, the only construction-related noise activities that would affect the nearest receptor during Phase II would be construction-related truck traffic on the access road. Construction-related truck traffic would pass within approximately 150 feet west of the residence when driving on the access road. Project construction would comply with the construction hours in the Alameda County Municipal Code (between 7 a.m. to 7 p.m. on weekdays and 8 a.m. to 5 p.m. on weekends). Trucks would not operate at high speeds, and noise levels would be less at lower speeds that would be required. Therefore, Phase II construction noise would be a less-than-significant impact.

Operational Noise Impacts

Noise from operations would not be substantial in relation to existing noise that is primarily traffic-generated noise from Interstate 580. Phase II development would involve development of the burial lots, new wetland features and lakes. Given the distance to the nearest sensitive receptor and the traffic noise from Interstate 580 at the nearest sensitive receptor, noise from Phase II operations would have minimal if any impacts on future noise levels at nearest sensitive receptor. Therefore, operational noise from Phase II would be a less-than-significant impact.

Mitigation Measures

None required.

3.10.3 REFERENCES

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3.11 TRANSPORTATION

This section provides background information on the transportation system in the vicinity of the Project site, outlines potential impacts to transportation that may result from the Project, and proposed mitigation measures, if necessary, to reduce those impacts to a less-than-significant level. A discussion of federal, state, and local laws, policies, and regulations that influence transportation systems are also presented in this section. Background traffic volumes, the environmental setting, and impact analysis information presented in this section were obtained from the Focused Traffic Study prepared for the Project (PHA Transportation Consultants, 2021; see **Appendix I**), which was peer reviewed by the County and City of Livermore and revised based on their recommendations.

3.11.1 SETTING

Project Site Access and Area Traffic Circulation

Direct access to the Project site is via an access road off Las Colinas Road. Las Colinas Road goes to the south, over the Interstate 580 overpass and is connected to Las Positas Road. Regional access to the Project site is provided via Interstate 580 connections with North Livermore Avenue to the west and First Street to the east. The access road off Las Colinas Road is an Alameda County Road that is not paved; the primary purpose of the road is to provide access to the Project site. The County access road is the only access road to the Project site. **Figure 3.11-1** shows the route from Las Positas Road to the Project site. There is minimal traffic between Las Positas and the Project site, including the Interstate 580 overpass that connects Las Positas to the Project Site. The Project applicant is open to improving the current County Road to serve as the access to the Project site. The necessary improvements would be identified in Conditions of Approval by the County and would meet either City or County road standards.

Las Colinas Road is a two-way local street providing access to several residences and barns east of the Project site and the horse stables at the eastern terminus of the road. The entire length of the road is about 1,500 feet long measuring from the eastern terminus to its connection at Las Positas Road over Interstate 580. The Road measures about 26 feet wide with one travel lane in each direction. The road is marked with solid double yellow lines indicating no passing. The Current (February 2021) daily traffic volume is 68 vehicles per day (VPD) on weekdays. The peak-hour volumes are less than 15 VPD for both a.m. and p.m. peak hours. There are no posted speed limit signs observed.

Las Positas Road is a collector road with a varying width between two and four-lane connecting North Livermore Avenue in the west and First Street in the east. It has two travel lanes in each direction west of North Mines Road but transitions to a two-lane road with one lane in each direction in the east near the Las Colinas Road Bridge over Interstate 580. It then transitions back to four-lane as it approaches the shopping area near First Street. The current daily traffic volume on a weekday is 12,899 VPD east of North Livermore Avenue and 8,534 VPD west of First Street. The peak-hour volume on Las Positas Road near Las Colinas Road is about 290 in the a.m. and 520 in

Source: RCH Group 2021

Figure 3.11-1
Site Access from Las Positas Road

RCH GROUP
planning & environmental consulting

the p.m. peak hour. The posted speed limit on Las Positas Road is 40 miles per hour (mph) based on the City of Livermore speed limit map (City of Livermore, 2020).

North Livermore Avenue is a four-lane arterial road south of Interstate 580. It runs in a north-south orientation providing access to and from Interstate 580. There are additional turn lanes provided at major intersections along its length. The daily traffic volume is about 30,975 VPD south of the interchange based on a 2016 City of Livermore traffic count. The speed limit for North Livermore Avenue is 40 mph per the City of Livermore speed limit map (City of Livermore, 2020).

First Street is a six-lane north-south arterial road south of I-580 near the Project site. It provides access to and from the freeway. There are also additional turn lanes provided at intersections along its length. The daily volume is about 36,590 vehicles daily south of the Interstate 580 interchange. The speed limit for First Street is 40 mph based on the City of Livermore speed limit map (City of Livermore, 2020).

Interstate 580 is a freeway running in an east-west orientation. There are four travel lanes in each direction with additional high occupancy vehicle (HOV) lanes in the vicinity of the Project site. It has interchanges at North Livermore Avenue and First Street. The segment near the Project site vicinity carries about 193,000 VPD near North First Street according to a 2019 traffic count conducted by Caltrans.

Study Area Traffic Safety Review

Traffic control devices on Las Colinas Road consist of a stop sign at the approach from Las Colinas Road to Las Positas Road, a 15 mph-speed advisory sign near the curve, and a double yellow line marking at the center of the road. Traffic control devices on Las Positas Road consist of traffic signals at North Livermore Avenue, North Mines Road, and First Street. Traffic signals are also provided at major accesses to shopping areas along the road with turn lanes. The posted speed limit on Las Positas Road is 45 mph. Several segments of the Las Positas Road near North Livermore Avenue in the west and First Street in the east are divided with a raised landscaped median. There is a left-turn pocket at the eastbound Las Positas Road to northbound Las Colinas Road, accommodating left-turn traffic from Las Positas Road onto Las Colinas Road.

According to data obtained from Traffic Injuries and Mapping System (TIMS), a traffic collision records center located at UC Berkeley indicated there were 6 reported collisions along the segment of Las Positas Road between North Livermore Avenue and First Street between 2017 and 2019 (2020 data was not yet available). This represents an average of 2 collisions per year during the three years. There were no reported collisions on Las Colinas Road during the same three-year period. As such, Las Colinas Road and Las Positas Road do not appear to be collision hot spots. TIMS obtained traffic collision records from SWITRS, a Statewide Integrated Traffic Records System database that contains all collisions that were reported to California Highway Patrol (CHP) from local and government agencies.

Regulatory Setting

Transportation policies, laws, and regulations that would apply to the Project are summarized below. This information provides a context for the impact discussion related to the Project's consistency with applicable regulatory conditions. There are no federal environmental laws or policies applicable to the proposed Project's transportation analysis.

State

Senate Bill 743

Senate Bill 743 (SB 743; Steinberg, 2013) governs the application of new State CEQA *Guidelines* for addressing transportation impacts based on Vehicle Miles Traveled (VMT). It was codified in Public Resources Code §21099, and required changes to the guidelines implementing the analysis of transportation impacts in CEQA (State CEQA *Guidelines*) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.). The Governor's Office of Planning and Research (OPR) has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the State CEQA *Guidelines* that identify VMT as the most appropriate metric to evaluate a project's transportation impacts. With the Agency's certification and adoption of the changes to the State CEQA *Guidelines*, automobile delay (traffic congestion), as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)"

The major concern with "level of service" analyses is that fixing traffic congestion results in better traffic flows, higher speeds, reduced times for trips, and decision making that favors more driving (induced trip generation). Wider freeways and collector roads with less congestion induce more traffic at higher speeds with resulting increases in greenhouse gases and traffic accidents (OPR, 2020a).

The OPR document *Technical Advisory On Evaluating Transportation Impacts in CEQA* (Technical Advisory) (OPR, 2018) provides general direction regarding the methods to be employed and significance criteria to evaluate VMT impacts, absent polices adopted by local agencies. To achieve the State's long-term climate goals, California needs to reduce per capita VMT.

The Technical Advisory is focused on the major contributors to VMT including:

- Residential and Office Project; and
- Retail Project.

Cemeteries are not mentioned in the Technical Advisory as they would typically have little, if any, contribution to transportation impacts.

Caltrans LOS Criteria

With the implementation of SB 743, the California Department of Transportation (Caltrans) has indicated that for CEQA purposes LOS on State highways is no longer a significance criterion. Instead, Caltrans recommends that a project's impact on safety be evaluated. Caltrans recommends

that peak period queue lengths in comparison to available storage be the primary evaluation criterion.

Local Regulations (Alameda County)

Alameda County Congestion Management Program

The Alameda County Transportation Commission (Alameda CTC) is a joint powers authority that plans, funds, and delivers transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County. It was formed in 2010 from the merger of the Alameda County Transportation Improvement Authority and the Alameda County Congestion Management Agency (CMA).

As required by state law, Alameda CTC updates its Congestion Management Program (CMP) every two years by monitoring the operational performance of the designated County CMP road network. The current CMP was adopted in September 2019. The Alameda CTC is currently in the process of transitioning to VMT as the primary metric for traffic impacts.

Alameda Countywide Transportation Plan

The Alameda Countywide Transportation Plan is a long-range policy document that guides transportation funding decisions for Alameda County's transportation system through 2050. The Plan establishes near-term priorities and guides long-term decision-making for the Alameda CTC. It establishes a vision for the county's complex transportation system that supports vibrant and livable communities. The Plan is updated every four years and serves as a key input into the region's transportation plan, Plan Bay Area (Alameda CTC, 2020). The plan sets the following four goals for Alameda County's transportation system.

1. *Accessible, Affordable and Equitable*: Improve and expand connected multimodal choices that are available for people of all abilities, affordable to all income levels and equitable.

2. *Safe, Healthy and Sustainable*: Create safe multimodal facilities to walk, bike and access public transportation to promote healthy outcomes and support strategies that reduce reliance on single-occupant vehicles and minimize impacts of pollutants and greenhouse gas emissions.

3. *High Quality and Modern Infrastructure*: Deliver a transportation system that is of a high quality, well-maintained, resilient, and maximizes the benefits of new technologies for the public.

4. *Economic Vitality*: Support the growth of Alameda County's economy and vibrant local communities through a transportation system that is safe, reliable, efficient, cost-effective, high-capacity and integrated with sustainable transit-oriented development facilitating multimodal local, regional, and interregional travel.

These goals are aligned with one or more performance categories and performance measurements. The Plan also identifies land use and conservation development strategies.

East County Area Plan

The East County Area Plan (ECAP) includes the following policies specific to transportation and circulation, and applicable to the Project.

Policy 183: The County shall seek to minimize traffic congestion levels throughout the East County street and highway system.

Policy 184: The County shall seek to minimize the total number of Average Daily Traffic (ADT) trips throughout East County.

Other Local Plans (City of Livermore)

The City of Livermore has a future roadway on its General Plan Circulation Map that connects Las Colinas Road with Redwood Road and Springtown Boulevard. The road would be a 2-lane collector street (City of Livermore, 2004). That road would be about one-half mile from the Las Colinas Road and would cross Arroyo Las Positas and other sensitive habitats. The road, if built, would not follow the current County Road that connects Las Colinas to the Project site.

In 2005, the City of Livermore approved a Mitigated Negative Declaration for a Catholic High School with a capacity of 1,600 students in an undeveloped area north of the Monte Vista Memorial Gardens (MVMG) Project site (City of Livermore, 2005). Primary access was proposed from Las Colinas Road via an extension into the school property from the Las Colinas overpass. Access for emergency vehicles only is proposed from Redwood Road. Otherwise, Redwood Road would be closed to traffic. The Catholic High School Project would not connect Las Colinas Road with Redwood Road. Mitigation for the Catholic High School Project includes the full cost of the extension of Las Colinas Road into the Catholic High School and construction of necessary traffic signals at the Las Colinas Road and Las Positas Road intersection.

3.11.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Based on Appendix G of the State CEQA *Guidelines*, implementation of the Project would have significant impacts and environmental consequences on transportation if it would:

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 §15064.3, subdivision (b);

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

d) Result in inadequate emergency access.

Topics with No Impact

Phase I and Phase II

The Project site would not impair or physically interfere with an adopted emergency access plan. The Project would involve using the County access road from Las Colinas Road. The access road would be properly maintained and would be designed to provide adequate circulation for emergency vehicles, especially fire engines. These issues are not further discussed in this analysis.

The County Road that would be used as access to the Project site is not currently used by pedestrians or bikes for transportation and is not part of County or City transit, bike, or pedestrian plans. These issues are not further discussed in this analysis.

Impact Analysis

Impact 3.11.1: The Project would generate vehicle miles travelled (VMT) that could conflict or be inconsistent with State CEQA *Guidelines* §15064.3, subdivision (b). (Less than Significant)

VMT refers to the amount and distance of vehicle travel attributable to a project. VMT generally represents the number of vehicle trips generated by a project multiplied by the average trip length for those trips. CEQA Guidelines §15064.3 provides guidance on determining the significance of transportation impacts.

The full text of §15064.3 is provided below:

> **SECTION 15064.3. DETERMINING THE SIGNIFICANCE OF TRANSPORTATION IMPACTS**
>
> (a) Purpose.
>
> This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact.
>
> (b) Criteria for Analyzing Transportation Impacts.
>
> (1) Land Use Projects. 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.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

(c) Applicability.

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

The California Governor's OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* provides general direction regarding the methods to be employed and significance criteria to evaluate VMT impacts, absent polices adopted by local agencies. The directive addresses several aspects of VMT impact analysis, and is organized as follows:

- *Screening Criteria*: Screening criteria are intended to quickly identify when a project should be expected to cause a less-than-significant VMT impact without conducting a detailed study.
- *Significance Thresholds*: Significance thresholds define what constitutes an acceptable level of VMT and what could be considered a significant level of VMT requiring mitigation.
- *Analysis Methodology*: These are the potential procedures and tools for producing VMT forecasts to use in the VMT impact assessment.
- *Mitigation*: Projects that are found to have a significant VMT impact based on the County's significance thresholds are required to implement mitigation measures to reduce impacts to a less-than-significant level (or to the extent feasible).

Screening Criteria

Screening criteria can be used to quickly identify whether sufficient evidence exists to presume a project would have a less-than-significant VMT impact without conducting a detailed study. However, each project should be evaluated against the evidence supporting that screening criteria to determine if it applies. Projects meeting at least one of the criteria below can be presumed to have a less than significant VMT impact, absent substantial evidence that the project will lead to a significant impact.

The extent to which the Project qualifies under each criterion is noted below.

- *Regional Truck Traffic*: The OPR directive specially focuses on the need to evaluate residential and employment-based travel, either from the standpoint of home-based trips or through evaluation of commute trips associated with employment centers. Consistent with Section 1564.3 of the State CEQA *Guidelines*, impacts from regional truck traffic are not included in the VMT estimates.

- *Small Projects*: Defined as a project that generates 110 or fewer average daily vehicle trips.

- *Affordable Housing*: Defined as a project consisting of deed-restricted affordable. housing.

- *Local-Serving Non-Residential Development*: The directive notes that local serving retail uses can reduce travel by offering customers more choices in closer proximity. Local serving retail uses of 50,000 square feet or less can be presumed to have a less-than-significant impact.

- *Projects in Low VMT-Generating Area*: Defined as a residential or office project that is in a VMT efficient area based on an available VMT Estimation Tool. The project must be consistent in size and land use type (i.e., density, mix of uses, transit accessibility) as the surrounding built environment.

- *Proximity to High Quality Transit*: The directive notes that employment and residential development located within a half mile of a high-quality transit corridor can be presumed to have a less-than-significant impact.

Project Trip Generation Estimates

The Project includes a 24 acre-interment area and is expected to employ 10 professional staff members. Based on acreage-base trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, the Project site is expected to generate 108 daily trips (one-way trips). ITE Trip Generation Manual is published by the ITE and has a database containing trip generation rates and characteristics at various land-use categories and sites nationwide. Trip generation surveys were conducted frequently to update the manual's database.

As discussed in Chapter 2, the Project would operate from 9 a.m. to 4 p.m. Monday through Friday during the initial stage but would open 7 days a week eventually. Since the MVMG would operate between 9 a.m. and 4 p.m., the peak hour traffic related to the Project would mostly consist of employee trips traveling to and from the Project site and is not expected to have significant impacts on peak hour traffic operations in the area.

Table 3.11-1 shows the summary of the trip generation estimates based on the number of employees and the size of the burial ground, plus estimated visitors, and deliveries.

TABLE 3.11-1. "PROJECT" TRIP GENERATION ESTIMATES
MONTE VISTA MEMORIAL GARDENS – ALAMEDA COUNTY

Monte Vista Memorial Gardens	Units	AM Peak- Hour Trips (7-9 a.m.)			PM Peak-Hour Trips (4-6 p.m.)			Average Daily Trips (24- hour)		
		In	Out	Total	In	Out	Total	In	Out	Total
Acres (ITE 566)	24	3	1	4	7	14	21	54	54	108
Employees	10	10	0	10	0	10	10	10	10	20
Visitors	30	2	1	3	1	2	3	30	30	60
Deliveries	10	0	0	0	0	0	0	10	10	20
Total		**12**	**1**	**13**	**1**	**12**	**13**	**50**	**50**	**100**

ITE Trip Generation Manual (9th Edition) Rates for the cemetery (ITE land-use code 566):

Employee Based (PHA Estimates)
Daily Rate 2/employee, 50% in, 50% out,
AM Peak Hour Rate 1/employee, 100% in,0% out,
PM Peak Hour Rate, 1/employee, 0% in, 100% out

Acreage Based (ITE)
Daily Rate 4.73/acre, 50% in, 50% out.
AM Peak Hour Rate 0.17/acre, 70% in, 30% out.
PM Peak Hour Rates 0.84/acre, 33% in, 67% out.

Deliveries, Visitors (PHA Estimates)
UPS, FedEx, Amazon, USPS, Newspaper, assumed each generates two one-way trips.

Phase I and Phase II

Table 3.11-1 includes the full Project buildout estimate of acres and employees (Phase I + Phase 2), and as discussed below would qualify under the OPR Small Project criteria. Phase I by itself would have reduced average daily trips based on less acres and employees.

The Project's VMT impacts can be presumed to be less than significant based on review of the OPR directive's screening criteria and general guidance. The OPR Small Project criteria is applicable to the Project. The Project is projected to generate 100 – 108 average daily vehicle trips based on estimates using acres and employees respectively. As the 110 average daily automobile trips threshold would not be exceeded, the Project's VMT impacts can be presumed to be less than significant.

Mitigation Measures

None required.

Impact 3.11.2: The Project could conflict with the City of Livermore General Plan for a connector road to Redwood Road and Springtown Boulevard and the plans for a Private High School north of the Project Site. (Less than Significant)

As discussed in the Setting of this Section 3.11, the City of Livermore has a 2-lane collector street on its Circulation Element and there are plans for a Catholic High School north of the Project site between Las Colinas Road and Redwood Road that connects to Springtown Boulevard. Neither of these plans are active at this time but could become active sometime in the future. Improvements to the County access road to the MVMG Project site and use of the County access road could conflict with possible road configuration that would connect Las Colinas Road to Redwood Road, but a redesigned roadway could provide access to both Redwood Road and the MVMG Project site.

The road connection between Las Colinas overpass and Redwood Road would have many environmental challenges in avoiding sensitive habitats, including the overpass of Arroyo Las Positas. The proposed improvements to the County road for the MVMG Project access are improvements to an existing unimproved road and the impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.11.3: The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)

One of the main features of the proposed access road is that it would be a low-speed entrance due to the geometrics of the entrance route (see **Figure 3.11-1**). In the past, transportation safety has focused on streamlining automobile flow and accommodating driver error. An updated and more holistic approach has developed over the past decade, however. This updated approach focuses on three overlapping strategies (OPR, 2020b):

- Reduce speed and increase driver attention
- Protect vulnerable road users
- Reduce overall VMT and sprawl

Since human error is inevitable, reducing the consequences of any given error or lapse of attention is critical. Cities around the country that have implemented measures to reduce and stabilize speed have shown a reduction in serious injuries and deaths for everyone on the road, from drivers to passengers to pedestrians (OPR, 2020b).

The travel from Las Colinas Road to the County access Road would be a sharp curve to the left when entering and a sharp curve to the right when leaving the Project site. This configuration requires reduced speed and driver attention. The Project would include improvements to the existing County access road and those improvements would include safety considerations. Both

Las Colinas Road and the County access road would be low-speed road with very limited traffic and Project traffic would be limited to daytime hours. Furthermore, the road improvements would be required to meet either County or City of Livermore standards. Given these factors, especially the low speeds due to the overall configuration, the Project would not substantially increase traffic hazards and the impact would be less than significant.

Mitigation Measures

None required.

3.11.3 REFERENCES

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3.12 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS

This section evaluates potential impacts on public services and utilities that could result from the Project, including impacts to fire protection, water, wastewater, and power suppliers. Stormwater drainage at the Project site is addressed in Section 3.8, Hydrology and Water Quality.

3.12.1 SETTING

Regulatory Context

State

California Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (enacted in 1969) gave the State's Water Resources Control Board (SWRCB) regulatory authority over State waters and water quality policy. This act divided the State into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality at the local and regional level. Alameda County is overseen by the San Francisco Bay RWQCB.

California Energy Commission

The Warren-Alquist Act (enacted in 1974) established the California Energy Commission (CEC) as the state's primary energy policy and planning agency. The CEC regulates the provision of natural gas and electricity within the State of California and is committed to reducing energy costs, curtailing greenhouse gas emissions, and ensuring a safe, resilient, and reliable supply of energy (California Energy Commission, 2021).

Local

California Fire Code

Chapter 6.04 of the Alameda County Municipal Code (ACMC) adopts the California Fire Code in its entirety. The California Fire Code is updated every three years, and provides standards for emergency planning and preparedness, fire service features, fire protection services, hazardous materials, fire flow requirements, and fire hydrant location and distribution. In addition, the Fire Code authorizes the Fire Chief to specify water supply and road design standards.

East County Area Plan

The East County Area Plan (ECAP) includes the following goals and policies that are applicable to the Project:

> *Policy 13*: The County shall not provide nor authorize public facilities or other infrastructure in excess of that needed for permissible development consistent with the Initiative. This policy shall not bar 1) new, expanded of replacement infrastructure necessary to create adequate service for the East County, 2) maintenance, repair or improvements of public facilities which do not increase capacity, and 3) infrastructure such as pipelines, canals, and power transmission lines which have no excessive growth-inducing effect on the East County

area and have permit conditions to ensure that no service can be provided beyond that consistent with development allowed by the Initiative. "Infrastructure" shall include public facilities, community facilities, and all structures and development necessary to the provision of public services and utilities.

Goal: To ensure the prompt and efficient provision of police, fire, and emergency medical facility and service needs.

Policy 241: The County shall provide effective law enforcement, fire, and emergency medical services to unincorporated areas.

Policy 244: The County shall require that new developments are designed to maximize safety and security and minimize fire hazard risks to life and property.

Policy 245: The County shall adhere to the provisions of the Alameda County Fire Protection Master Plan.

Goal: To provide an adequate, reliable, efficient, safe, and cost-effective water supply to the residents, businesses, institutions, and agricultural uses in East County.

Policy 253: The County shall approve new development only upon verification that an adequate, long-term, sustainable, clearly identified water supply will be provided to serve the development, including in times of drought.

Goal: To provide efficient and cost-effective utilities

Policy 285: The County shall facilitate the provision of adequate gas and electric service and facilities to serve existing and future needs while minimizing noise, electromagnetic, and visual impacts on existing and future residents.

Policy 287: The County shall require new developments to locate utility lines underground, whenever feasible.

Public Service Providers

Fire Protection

The Alameda County Fire Department (ACFD) would provide fire protection services to the Project site in the event of a fire emergency. The nearest ACFD Station is approximately 4.3 driving miles southwest of the Project site.

Police Protection

The Alameda County Sherriff's Department would provide police protection services to the Project site in the event of an emergency. The nearest Sherriff's station is located approximately 8.4 driving miles west of the Project site.

Schools

There are no existing schools that are within one-quarter mile of the Project site. There is an approved High School Project that would be located northeast of the Project site that would be

within one-quarter mile of the Project site. While there are no activities taking place currently with the approved High School Project, a 5-year extension of the Development Agreement between the City of Livermore and the developer was approved in 2020 and extends to December 14, 2025.

Water

The Project site has an existing on-site well that has been permitted to be used for all irrigation water demand on-site. An existing domestic water meter provides domestic water use on-site and is regulated and permitted through California's Water System (Cal Water). There are three fire hydrants installed on the County access road and three more on Las Colinas Road for fire protection that were approved by the Alameda County Fire Marshal (Kliment, 2021).

Stormwater Drainage

Future stormwater drainage infrastructure would consist of two cisterns and biofilters to capture and filter any stormwater runoff on-site for subsequent discharge into the arroyo on-site.

Wastewater

There is no existing wastewater infrastructure. A septic system would provide future on-site wastewater treatment.

Electric Power

There is an existing permitted and approved Pacific Gas & Electric (PG&E) panel on-site. Electric power on-site is provided by PG&E. Photovoltaic (PV) solar panels and batteries would supplement electricity from PG&E and a natural gas fired emergency generator would provide backup power.

Natural Gas

There is existing high pressure natural gas infrastructure installed to the site. Once operational, PG&E would supply natural gas to the facilities at the Project site using the existing infrastructure.

Telecommunications

Telecommunications at the Project site would be provided by wireless technology providers for internet and telephone services.

Solid Waste

There is no existing solid waste infrastructure. Once operational, solid waste would be removed on a scheduled basis by a local waste hauling company. Any biowaste would be removed on a scheduled basis by a State licensed vendor under contract.

3.12.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the *CEQA Guidelines* states that a Project would result in a significant impact to Public Service Systems and Utilities if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks or other public facilities;

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;

- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- 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; or

- Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Topics with No Impact

Phase I and Phase II

Due to the nature of the Project, there is no expectation that development of the Project would result in an increase in calls for fire and emergency protection services. The Project would create only a marginal increase in jobs and employees and development of Phase I and Phase II is not expected to result in an increase in calls for police protection or result in any changes in crime that would warrant changes to police protection service ratios and/or response times. Furthermore, there would be no population increase in the County that would warrant a need for new schools, parks, or other public facilities. These issues are not further discussed in this section.

Impact Analysis

Impact 3.12.1: The Project could require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, which could cause significant environmental effects. (Less than Significant)

Phase I

As discussed above, there is an existing on-site well that has been permitted to be used for all irrigation water demand on-site during construction and operation of Phase I. Domestic water use for buildings developed in Phase I would be regulated and permitted through Cal Water. There is existing infrastructure on-site to connect to PG&E's electric and natural gas systems and the Project would not require expansion or relocation of the nearest PG&E substation. Phase I would also require development of stormwater retention infrastructure that would capture and filter stormwater and discharge it into Arroyo Las Positas (consistent with discharge requirements). Phase I would require development of a wastewater septic system to capture and treat wastewater generated on-site. Phase I would not require any construction or relocation of new wastewater or stormwater facilities which could cause significant environmental effects. Telecommunications would be provided by wireless technology, and there would not be a need for any future utility lines or construction or relocation of telecommunication facilities. Therefore, Phase I would not result in new or expanded facilities that could cause significant environmental effects and impacts would be less than significant.

Phase II

Once Phase I is developed, Phase II would not require additional infrastructure for water, wastewater, stormwater, electric power, or telecommunication facilities. Phase II would involve development of new wetland features, lakes, interment areas, a mausoleum, and a columbarium. The proposed lakes would be supplemented by the on-site groundwater well. Therefore, Phase II would not result in new or expanded facilities that could cause significant environmental effects and impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.12.2: The Project could have water demands greater than water supplies. (Less than Significant)

Phase I

Water during Phase I would be needed for irrigation, domestic water, and fire protection. Irrigation water for Phase I would be supplied using an existing on-site groundwater well. The Project would use the existing on-site groundwater well for non-potable uses (primarily landscape irrigation). Based on a 24-hour flow test conducted by Pacific Coast Well & Pump Inc., the well has an average production capacity of 200 gallons per minute (gpm). For the purpose of sustainable groundwater

management, the groundwater well draw would be limited to 150 gpm, or approximately 0.66 acre-feet (AF) of water per day (or 241 AF per year) (ENGEO, 2019). Groundwater well draw at this rate would ensure that groundwater supplies from the Livermore Valley Groundwater Basin are not depleted (Sasaki, 2021). Based on the groundwater well draw capacity and the limited non-potable water demand for Phase I of the Project, groundwater supply from the on-site well would be sufficient. Domestic water uses on-site for Phase I would be regulated and permitted through Cal Water. Furthermore, there are three fire hydrants installed on the County access road and three more on Las Colinas Road for fire protection that were approved by the Alameda County Fire Marshal (Kliment, 2021). There would be sufficient water supplies to accommodate future water needs during normal years, single dry years, and multiple dry years for Phase I of the Project. Therefore, impacts related to Phase I water demand would be less than significant.

Phase II

Water during Phase II would also be needed for irrigation, domestic water, and fire protection. Phase II would involve development of new wetland features, lakes, interment areas, a mausoleum, and a columbarium. Water supplies to satisfy water demand for Phase II would be supplied by the infrastructure described in the impact discussion for Phase I. As stated above, for the purpose of sustainable groundwater management, the groundwater well draw would be limited to a maximum of 150 gpm or approximately 0.66 AF of water per day (or 241 AF per year). According to the water budget analysis, well-water demand to maintain sufficient water supply for the lakes and creek system would range from approximately 35 AF to 48 AF for average, median, and dry water years (ENGEO, 2019). Furthermore, in order to maintain static or desired lake water levels as well as an equilibrium creek flow during the dry season, water from the lower lake would be re-circulated to the upper lake by use of a pump. This would reduce water demand from groundwater (ENGEO, 2019). There would be sufficient water supplies to accommodate future water needs during normal years, single dry years, and multiple dry years for Phase II of the Project. Therefore, impacts related to Phase II water demand would be less than significant.

Mitigation Measures

None required.

Impact 3.12.3: The Project could have an impact on a wastewater treatment provider. (Less than Significant)

Phase I

Wastewater would be treated on-site using a septic system and would not require connections to a municipal wastewater treatment system. Therefore, impacts on wastewater treatment providers from Phase I would be less than significant.

Phase II

The impact discussion in Phase I would also apply to Phase II of the Project. Therefore, impacts on wastewater treatment providers from Phase II would be less than significant.

Mitigation Measures

None required.

Impact 3.12.4: The Project could generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure and would comply with federal, state and local management statutes and regulations related to solid waste. (Less than Significant)

Phase I

The Project would generate solid waste during construction and operation of Phase I. The solid waste generated during construction would likely involve construction debris and materials typical from site preparation and construction of Phase I infrastructure. Solid waste generated from operations would likely involve common waste generated from buildings and typical solid waste from lawn maintenance, which would be removed on a scheduled basis by the State licensed vendor under contract to remove solid waste. Any biowaste from operations would also be removed on a scheduled basis by a State licensed vendor under contract. Refuse from the Project would be delivered to either the Vasco Road Sanitary Landfill or the Altamont Landfill and Resource Recovery, both of which service Alameda County. Both landfills have adequate capacity to serve the Project's generation of solid waste. Furthermore, solid waste generated from Phase I construction and operation would be in compliance with federal, state and local regulations. Therefore, solid waste impacts from Phase I construction and operation would be less than significant.

Phase II

The impact discussion in Phase I would also apply to Phase II of the Project. Therefore, solid waste impacts from Phase II construction and operation would be less than significant.

Mitigation Measures

None required.

3.12.3 REFERENCES

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Kliment, Mike. 2021. *Senior Vice President, Monte Vista Memorial Investment Group, LLC.* Telephone conversation with Luis Rosas, RCH Group, on June 14, 2021 regarding on-site utilities for the Project.

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3.13 ENERGY

This section describes the energy setting and evaluates potential impacts to energy resources. This section was prepared pursuant State CEQA *Guidelines* Section §15126 and State CEQA *Guidelines* Appendix F, which require that EIRs include a discussion of the potential energy impacts of projects. The analyses within this section consider whether the Project would result in inefficient, wasteful, and unnecessary consumption of energy. Energy resources required for the Project would include electricity, natural gas, and petroleum fuels. These energy resources would be required for construction and operation of the Project.

3.13.1 SETTING

Regulatory Setting

Federal

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the country. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for the Energy Independence and Security Act of 2007 (described below).

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. The EPAct includes several parts intended to build an inventory of alternative fuel vehicles in large, centrally-fueled fleets in metropolitan areas. The EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty alternative fuel vehicles. In addition, financial incentives are also included in The EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. States are also required by The EPAct to consider a variety of incentive programs to help promote alternative fuel vehicles. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds on progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

State

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required the CEC to: "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code Section 25301(a)). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and an update every other year. The 2019 IEPR is the most recent IEPR, which was adopted February 20, 2020. The 2019 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally-responsible energy sources. The 2019 IEPR provides an analysis of Electricity sector trends building decarbonization and energy efficiency, zero-emission vehicles, energy equity, climate change adaptation, electricity reliability in Southern California, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts (CEC, 2020).

Senate Bill 1078, 350 and 100: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS required that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. The program was accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65% of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 was signed into law, which again increases the RPS to 60% by 2030 and requires all the state's electricity to come from carbon-free resources by 2045.

Senate Bill X1-2: California Renewable Energy Resources Act

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California's energy markets. The State's three major energy policy agencies (CEC, CPUC, and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California's electricity and natural gas needs. It was the first time that energy policy agencies formally collaborated to define a common vision and set of strategies to address California's future energy needs and emphasize the importance of the impacts of energy policy on the California environment.

In the October 2005 Energy Action Plan II, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. CEC recently adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternatives Fuel Plan

AB 1007 (Chapter 371, Statues of 2005) required the CEC to prepare a state plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with the California Air Resources Board (CARB) and in consultation with other State, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32, Senate Bill 32, and Climate Change Scoping Plan and Update

Reducing GHG emissions in California has been the focus of the state government for approximately two decades. GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to

40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050.

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB, 2017). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). In 2018, electricity generation accounted for 15 percent of the State's GHG emissions (CARB, 2020). California plans to significantly reduce GHG emissions from the energy sector through the development of renewable electricity generation in the form of solar, wind, geothermal, hydraulic, and biomass generation. The State is on target meet the SB X1-2-33 percent renewable energy target by 2020 and will continue to increase statewide renewable energy to 60 percent by 2030, as directed by SB 100. Additionally, the State will further its climate goals through improving the energy efficiency of residential and non-residential buildings by continual updates (i.e., every three years) to the Energy Code, which contains mandatory and prescriptive energy efficiency standards for all new construction.

Low Carbon Fuel Standard

Under the Climate Change Scoping Plan, the CARB identified the low carbon fuel standard (LCFS) as one of the nine discrete early action measures to reduce California's GHG emissions. The LCFS is designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits.

In 2018, the CARB approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS standards are expressed in terms of the "carbon intensity" (CI) of gasoline and diesel fuel and their respective substitutes. The program is based on the principle that each fuel has "life cycle" GHG emissions and the life cycle assessment examines the GHG emissions associated with the production, transportation, and use of a given fuel. The life cycle assessment includes direct emissions associated with producing, transporting, and using the fuels, as well as significant indirect effects on GHG emissions, such as changes in land use for some biofuels. The carbon intensity scores assessed for each fuel are compared to a declining CI benchmark for each year. Low carbon fuels below the benchmark generate credits, while fuels above the CI benchmark generate deficits. Credits and deficits are denominated in metric tons of GHG emissions. Providers of transportation fuels must demonstrate that the mix of fuels they supply for use in California meets the LCFS carbon intensity standards, or benchmarks, for each annual compliance period. A deficit generator meets its compliance obligation by ensuring that the amount of credits it earns or otherwise acquires from another party is equal to, or greater than, the deficits it has incurred.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2019 California Energy Code was adopted by the CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent compared to the 2016 standards primarily through prescriptive requirements for high-efficacy lighting. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards exceed those in the California Energy Code.

California Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code (CALGreen) is part 11 of Title 24, California Code of Regulations. CALGreen is the first-in-the-nation mandatory green building standards code, developed in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of GHG emissions to 1990 levels by 2020. CALGreen includes a waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

Local

Alameda County Community Climate Action Plan Element

The Alameda County General Plan Community Climate Action Plan (CAP), adopted in 2014 as part of the Alameda County General Plan, outlines a course of action to reduce community wide GHG emissions generated within the unincorporated areas of Alameda County. Successful implementation of the CAP will reduce GHG emissions to 15 percent below 2005 levels by 2020 and set the County on a path toward reducing emissions to 80 percent below 1990 levels by 2050. The CAP defines a path to achieve the County's GHG reduction targets and outlines the detailed implementation of steps in the following six action areas: land use, transportation, energy, water, waste, and green infrastructure. The CAP includes the following measure pertaining to energy that is relevant to the Project:

> *Measure E-10*: Require new construction to use building materials containing recycled content.

Environmental Setting

Electricity and Natural Gas

Electricity and natural gas service is provided to the Project site by Pacific Gas & Electric (PG&E). There is an existing permitted and approved PG&E panel on-site. There is existing high pressure natural gas infrastructure installed to the Project site. Once operational, PG&E would supply electricity and natural gas to the Project's facilities using the existing infrastructure on-site.

In 2019, statewide electricity generation was 200,475 gigawatt hours (GWh) of electric power (CEC, 2019) and statewide natural gas consumption totaled 2,217 trillion Btu (2,144 billion cubic feet) (U.S. EIA, 2019).

Petroleum Fuels

Petroleum fuels (diesel and gasoline) would be consumed by equipment and vehicles during construction of the Project. Once operational, petroleum fuels would be consumed by motor vehicles. In 2018, California consumed approximately 681 million barrels (3,668 trillion Btu) of petroleum, with transportation sources consuming approximately 86 percent (U.S. EIA, 2018). In 2019, California gasoline sales were approximately 38,534,000 gallons per day and diesel fuel sales were approximately 10,319,000 gallons per day (U.S. EIA, 2018).

3.13.2 IMPACTS AND MITIGATION MEASURES

Significance Criteria

For the purposes of the EIR, consistent with Appendix G of the *CEQA Guidelines*, impacts related to energy would be considered significant if the Project would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact Analysis

Impact 3.13.1: Project construction or operation could result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. (Less than Significant)

The Project would consume energy resources during temporary construction activities and long-term operations.

Construction

Construction activities are a temporary and one-time direct source of energy consumption. Construction activities would consume petroleum fuels (primarily diesel and gasoline) through the operation of heavy off-road equipment, trucks, and worker automobiles. Electricity could be

used for lighting and other equipment such as air compressors, however the amount consumed would be minimal. Natural gas would not be consumed during construction activities.

Construction activities would occur in two phases. Construction activities would be efficient since the Project site would be balanced requiring no haul trucks for importing or exporting soil. Construction of the Project would utilize fuel efficient equipment and trucks consistent with state regulations and would be consistent with state regulations intended to reduce the inefficient, wasteful, or unnecessary consumption of energy, such as anti-idling and emissions regulations. Construction activities would comply with the California's Green Building Standards Code (CALGreen) waste diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills.

Project construction fuel usage estimates were developed for the Project using standard fuel conversion factors (U.S. EIA, 2016) and the California Emissions Estimator Model (CalEEMod) results for the air quality and GHG emissions analyses (see **Appendix C**). Phase I construction was estimated to consume a total of approximately 43,000 gallons of diesel fuel and 9,400 gallons of gasoline. Phase II construction was estimated to consume a total of approximately 151,000 gallons of diesel and approximately 50,000 gallons of gasoline. As noted previously, 2019 California gasoline sales were approximately 38,534,000 gallons per day and diesel fuel sales were approximately 10,319,000 gallons per day (U.S. EIA, 2018). Therefore, total fuel usage for construction of the Project (Phase I and II) would represent approximately 0.005 percent of statewide annual diesel consumption and approximately 0.0004 percent of statewide annual gasoline consumption.

Construction would result in the temporary consumption of energy resources in order to develop the Project that would include many energy efficient features and generate renewable energy (discussed further below). The consumption of energy resources during Project construction would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, Project construction would result in a less-than-significant impact.

Operation

Long-term energy consumption associated with the Project would include electricity, natural gas, and petroleum fuel consumption for operation of buildings, vehicles, and equipment. The Project would include a 3 megawatt (MW) off-grid photovoltaic (PV) system and 30 electric vehicle (EV) charging parking spaces. The Project would also include two biodiesel or natural gas fueled tractors for burials. Furthermore, landscape equipment (mowers, tractors, and utility vehicles) would be electric (Kliment, 2021).

Project construction fuel usage estimates were developed for the Project using standard fuel conversion factors (U.S. EIA, 2016) and the California Emissions Estimator Model (CalEEMod) results for the air quality and GHG emissions analyses (see **Appendix C**). The Project is estimated to consume approximately 162,000 kWh of electricity and 523,600,000 British thermal unit (BTU) of natural gas per year. However, the 3 MW off-grid PV system is expected to offset a substantial amount of electricity usage for the Project. The Project is also estimated to consume

approximately 6,300 gallons of gasoline per year from motor vehicles, which is approximately 0.00005 percent statewide annual gasoline consumption.

While the Project would consume energy resources during construction and operation, the consumption of such resources would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the Project would result in a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.13.2: The Project could conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant)

The Project would include a 3 MW off-grid PV system and 30 EV charging parking spaces. Through the generation of renewable electricity, the Project would support several state plans, programs and regulations such as SB 100, which increased the RPS to 60 percent by 2030 and requires all the state's electricity to come from carbon-free resources by 2045. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project would result in a less-than-significant impact.

Mitigation Measures

None required.

3.13.3 REFERENCES

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CHAPTER 4
OTHER CEQA TOPICS AND IMPACT OVERVIEW

4.1 GROWTH-INDUCING EFFECTS OF THE PROPOSED PROJECT

4.1.1 INRODUCTION

Section 15126.2(e) of the California Environmental Quality Act (CEQA) *Guidelines* requires that an EIR discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This discussion should include an analysis of how the proposed project might remove barriers to population growth and characteristics of the project that might encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. In discussing a project's potential for population growth it should not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a public service that otherwise limits growth.

The CEQA *Guidelines* further explains that the environmental effects of induced growth may be indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected, would exceed available services, or otherwise result in an identifiable secondary impact as discussed above. Local land use plans provide for land use development patterns and growth

policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service and solid waste service.

Components of Growth

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community, including an unincorporated area of a county, defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

4.1.2 GROWTH EFFECTS OF THE PROJECT

The Project is a proposed cemetery that would include a funeral home, interment areas and associated services, including a crematorium and mortuary. The Project is expected to create more than 10 permanent professional positions to maintain Project operations. It is unlikely that the Project would attract housing or commercial development to the Project vicinity. Furthermore, the Project vicinity is primarily agricultural.

The Project would not directly or indirectly remove barriers to population growth and/or encourage and facilitate other activities that could significantly affect the environment. The Project would provide a cemetery that is conveniently located for present and future Tri-Valley residents. The presence of a cemetery is not a constraint to the development of new housing or commercial areas and the Project is not anticipated to induce additional growth in the region. Further, the Project would not involve expansion or extension of infrastructure outside of the Project site or the expansion or extension of roadways that could induce unplanned growth adjacent to the Project site.

4.2 CUMULATIVE IMPACTS

4.2.1 INTRODUCTION

The CEQA *Guidelines* (Section 15355) define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." This section of the CEQA *Guidelines* further notes that:

a) *The individual effects may be changes resulting from a single project or a number of separate projects.*

b) *The cumulative impact from several projects is the change in the environment, which results in the incremental impacts of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

East County Area Plan

The East County Area Plan (ECAP) is an Area Plan implementing the General Plan in the East County Area (including the Project site). The ECAP provides for the long-range direction and development of land within the ECAP area. The parcel that includes the Project site is designated as Large Parcel Agriculture (LPA) in the ECAP. According to the Alameda County Zoning Map, the entire parcel is zoned "A" Agricultural (Alameda County, 2021a). Cemetery uses are permitted on Agricultural-zoned lands with a conditional use permit (CUP). The land surrounding Project is primarily utilized for either agricultural activities or open space/resource management. The majority of the land surrounding the Project site is zoned "A" Agricultural and designated as LPA or Resource Management (Alameda County, 1994 and 2021a).

Projects Potentially Having Related or Cumulative Effects

A proposed Catholic High School project site, in the City of Livermore, is just northeast of the Project site. The Development Agreement for the Catholic High School Project was approved in 2005 and the City of Livermore approved a five-year extension of the Development Agreement in 2020. The amendment extended the Development Agreement to December 14, 2025. No other planned or approved development projects are in the vicinity of Project. Due to the low intensity of Project operations (approximately 100 average vehicle trips per day), it is unlikely that the Project would combine with the future Catholic High School Project, if ever developed, to create cumulative effects.

4.2.2 CUMULATIVE IMPACT DISCUSSION

Aesthetics

Cumulative aesthetics impacts are limited to the immediate project vicinity. The Project would not result in significant and unavoidable impacts to aesthetics. Impacts related to scenic resources, scenic vistas, light, and glare, and altering the existing visual character of the Project site would be less than significant. Therefore, the Project would not result in significant cumulative aesthetics impacts.

Air Quality

Cumulative air quality impacts are limited to the region (for regional pollutants) and the immediate project vicinity (for localized pollutants). The Project would not result in significant and unavoidable impacts on air quality. For regional pollutants, the BAAQMD considers cumulative impacts to be less than significant if a project is below BAAQMD's project-level thresholds of significance (BAAQMD, 2017). As detailed in Section 3.2, construction and operation of the Project would not exceed BAAQMD's thresholds of significance for criteria pollutants (regional pollutants) with the implementation of mitigation measures. Furthermore, localized pollutants (i.e., toxic air contaminants and fine particulate matter [PM2.5]) from the Project would not exceed BAAQMD's project-level or cumulative health risk thresholds of significance. Therefore, the Project would not result in significant cumulative air quality impacts.

Biological Resources

Cumulative biological resources impacts are limited to the region. The Project would not result in significant and unavoidable impacts on biological resources. The implementation of mitigation measures in Section 3.3 would ensure that the Project does not have a considerable contribution to regional cumulative impacts on biological resources. Those mitigation measures would mitigate potentially significant impacts to wetlands, or special status plants and animals. Therefore, the Project would not result in significant cumulative biological resources impacts.

Cultural and Tribal Cultural Resources

Cumulative cultural and tribal cultural resources (TCRs) impacts are limited to the region. The Project would not result in significant and unavoidable impacts to cultural and TCRs. The implementation of mitigation measures identified in Section 3.4 would ensure that the Project would not have a considerable contribution to regional impacts on cultural and TCRs. Therefore, the Project would not result in significant cumulative cultural and TCRs impacts.

Geology, Soils, and Seismicity

Geologic, soils, and seismic impacts tend to be site-specific and depend on the local geology and soil conditions. The Project would not result in significant and unavoidable impacts to geology, soils, and seismicity. With the implementation of mitigation measures identified in Section 3.5 ground shaking, loss of topsoil and erosion, and expansive soils impacts would be less than significant. Since geologic, soils, and seismic impacts are limited to the Project site, the Project could not combine with other regional projects to create significant cumulative impacts. Therefore, the Project would not result in significant cumulative geology, soils, and seismicity impacts.

Paleontological Resources

Paleontological resources impacts are limited to the region. The Project would not result in significant and unavoidable impacts paleontological resources. The implementation of mitigation measures identified in Section 3.5 would ensure that the Project would not have a considerable contribution to regional impacts paleontological resources. Therefore, the Project would not result in significant cumulative paleontological resources impacts.

Greenhouse Gas Emissions

The greenhouse gas (GHG) emissions impact analysis in Section 3.6 is inherently a cumulative impact analysis because GHG emissions are a global pollutant. The Project would not result in significant and unavoidable impacts on GHG emissions. The Project would be below the GHG emissions significance threshold, which was based on the GHG reduction goals of Senate Bill (SB) 32 and California Air Resource Board's (CARB's) 2017 Scoping Plan. Furthermore, the Project would not conflict with the County's Climate Action Plan, BAAQMD's Clean Air Plan, or CARB's 2017 Scoping Plan. Therefore, the Project would not result in significant cumulative GHG emissions impacts.

Hazards, Hazardous Materials, and Wildfire

Hazards, hazardous materials, and wildfire impacts are limited to the immediate vicinity (i.e., small fires, spills, or accidents) of the Project and potentially the region (wildfire). The Project would not result in significant and unavoidable impacts to hazards, hazardous materials, and wildfire. Impacts related spills or accidents with hazardous chemicals and wildfire would be less than significant. Therefore, the Project would not result in significant cumulative impacts to hazards, hazardous materials, and wildfire.

Hydrology and Water Quality

The geographic scope for assessing potential cumulative hydrology and water quality impacts consists of the Project site and surrounding lands within the Arroyo Las Positas. The Project would not result in significant and unavoidable impacts to hydrology and water quality. With the implementation of mitigations measures in Section 3.8 impacts to surface and groundwater quality would be less than significant. The Project would be developed in accordance with applicable regulatory requirements through the established regulatory review process. Therefore, the Project would not result in significant cumulative impacts to hydrology and water quality.

Land Use, Planning and Agricultural Resources

Land use, planning, and agricultural resources impacts are limited to the region. The Project would not result in significant and unavoidable impacts to land use, planning, and agricultural resources. If the Project is approved and receives a CUP from the County, impacts related to land use designations would be less than significant. Alameda County has more than 200,000 acres of land designated for agricultural purposes, most of which is in the Tri-Valley region of Eastern Alameda County (Alameda County, 2021b). The loss of 47 acres of agricultural land would be considered negligible compared to the existing acreage designated for agricultural purposes in Alameda County. Therefore, the Project would not result in significant cumulative impacts to land use, planning, and agricultural resources.

Noise

Noise impacts are limited to immediate vicinity of the Project. The Project would not result in significant and unavoidable impacts to noise. Noise impacts related to construction and operation (including traffic noise) would be less than significant. Noise levels on-site are dominated by constant traffic from Interstate 580 and noise from operation of the Project would not be expected to be substantially louder than activities that already occur at the Project site. Therefore, the Project would not result in significant cumulative noise impacts.

Transportation

Transportation impacts are limited to the region. The Project would not result in significant and unavoidable impacts to transportation. The Project is below the vehicle miles traveled (VMT) screening criteria provided in the California Governor's Office of Planning and Research (OPR) document Technical Advisory on Evaluating Transportation Impacts in CEQA and the Project's

VMT impacts would be less than significant. Therefore, the Project would not result in significant cumulative transportation impacts.

Public Services, Utilities and Service Systems

Public services, utilities, and service systems impacts are limited to the region. The Project would not result in significant and unavoidable impacts to public services, utilities, and service systems. Impacts related to on-site utilities, water demand, wastewater, and solid waste would be less than significant. Therefore, the Project would not result in significant cumulative impacts to public services, utilities, and service systems.

Energy

Cumulative energy impacts are limited to the region and the state. The Project would not result in significant and unavoidable impacts to energy resources. The Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Furthermore, the Project would not conflict with any state or local plans for renewable energy. Therefore, the Project would not result in a considerable contribution to regional or statewide cumulative impacts to energy and would not result in significant cumulative energy impacts.

4.3 UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

CEQA *Guidelines* Section 15126.2(b) requires that an EIR discuss "significant environmental effects which cannot be avoided if the proposed project is implemented." Unavoidable significant impacts are those that could not be reduced to less-than-significant levels by mitigation measures identified in the EIR.

This EIR has not identified any significant environmental impacts that would be unavoidable with implementation of the Project. All potential impacts would be reduced to levels of less than significant with implementation of mitigation measures (where necessary) as identified in this EIR.

4.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA *Guideline*s Section 15126(f) requires that an EIR must identify any significant irreversible environmental changes that could be caused by a project. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. Development of the Project would irreversibly commit the Project site for cemetery use in perpetuity, and no portion of the Project site that will be developed is likely to revert to its natural state. Development of the Project would also result in the commitment of non-renewable resources (e.g., petroleum products and other construction materials) and renewable resources (e.g., wood products) used in construction. Operation of the Cemetery would require a commitment of energy resources (e.g., electricity, water, and natural gas). No other irreversible environmental changes resulting from the Project are anticipated.

4.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

4.5.1 MINERAL RESOURCES

The Project would not affect mineral resources or result in the loss of any mineral resource of local or statewide importance. Therefore, the Project would not affect mineral resources.

4.5.2 POPULATION AND HOUSING

The Project would not result in displacement of existing housing or induce population growth. As stated above, the Project would create employment opportunities, however, the Project is not anticipated to induce additional growth in the region. The Project is expected to create more than 10 permanent professional positions to maintain Project operations. The addition of perhaps 10-15 employees (and families) moving to the region would not substantially affect population and housing. Furthermore, most of the jobs would likely be filled by existing residents in the region. Therefore, the Project would not affect population and housing.

4.5.3 RECREATION

The Project would not affect recreational facilities. There are no recreational facilities in the vicinity of the Project that would be affected by the Project. Therefore, the Project would not affect recreation.

4.6 REFERENCES

Alameda County. 2021a. *Alameda County Zoning Map GIS Viewer.* https://www.arcgis.com/apps/View/index.html?appid=4a648cb409d744b8a4f645e6e35fe773. Accessed June 2, 2021.

Alameda County. 2021b. *Agricultural Resources.* https://www.acgov.org/board/district1/agresources.htm#:~:text=Alameda%20County%20encompasses%20738%20square,region%20of%20Eastern%20Alameda%20County. Accessed August 4, 2021.

Alameda County. 1994. *East County Area Plan, Volume 1, Goals, Policies and Programs.* May 1994.

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CHAPTER 5
ALTERNATIVES TO THE PROJECT

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires an evaluation of the comparative effects of a range of reasonable alternatives to the project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project (CEQA *Guidelines* §15126.6(a)). The range of alternatives is governed by the "rule of reason" that requires the Environmental Impact Report (EIR) to set forth only those alternatives necessary to permit a reasoned choice (§15126.6(f)). The significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project, and a matrix may be used to summarize the comparison of alternatives (§15126.6(d)).

The EIR must assess the identified alternatives and determine which among the alternatives (including the project as proposed) is the environmentally superior alternative. One of the alternatives to be assessed is the "No Project" alternative (see discussion below). If the No Project alternative is identified as the environmentally superior alternative, then another of the remaining alternatives must be identified as the environmentally superior alternative.

This chapter discusses the following alternatives to the Project:

1. No Project Alternative
2. Reduced Project Footprint Alternative
3. Access Road Coordination Alternative

The components of these alternatives are described below, including a discussion of their impacts and how they would differ from the significant impacts of the proposed Project. A discussion of the environmentally superior alternative is also included in this chapter.

The CEQA *Guidelines* require that an EIR briefly describe the rationale for selecting the alternatives to be discussed (§15126.6(a)) and suggest that an EIR also identify any alternatives that were considered by the lead agency but were rejected as infeasible (§15126.6(c)). This chapter of the EIR also identifies alternatives considered but rejected.

5.2 FACTORS IN SELECTION OF ALTERNATIVES

The alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- the extent to which the alternative would accomplish most of the basic objectives of the project (see Chapter 2, Project Description);
- the extent to which the alternative would avoid or lessen any of the identified significant adverse environmental effects of the project;
- the feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, consistency with regulatory limitations, and whether the County can reasonably acquire, control, or otherwise have access to the site or off-site locations that could potentially be a project alternative;
- the appropriateness of the alternative in contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice; and
- the requirements of CEQA *Guidelines* to consider a "no project" alternative and to identify an "environmentally superior" alternative in addition to the no-project alternative (CEQA *Guidelines*, §15126.6).

As stated in Chapter 2, Project Description, the project objectives are:

Objective 1. Develop the Project site with a cemetery that would be considered a low-intensity traffic use consistent Alameda County Measure D.

Objective 2. Provide a cemetery that is conveniently located for present and future Tri-Valley residents.

Objective 3. Provide a Funeral Home building with full-service amenities and staff that support the cemetery mission, including an appropriate and peaceful space for religious ceremony and practices intended to accommodate a wide variety of religious and cultural standards or practices for Tri-Valley residents.

Objective 4. A portion of the cemetery would be used to provide a cemetery area that would be exclusively for the Jewish Community. The Jewish community is an estimated 40,000 members in Alameda County, with approximately 10,000 members in the Tri-Valley area. This cemetery would provide services for Judaism's three major groups (Orthodox, Conservative and Reform) and accommodate religious restrictions unique to each of the major groups.

In consideration of the above factors, three alternatives (including the No Project Alternative) are analyzed in this EIR.

5.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Several other alternatives were considered in the process of identifying a reasonable range of alternatives to the proposed Project.

5.3.1 ALTERNATE PROJECT SITE LOCATION ALTERNATIVE

CEQA *Guidelines* §15126.6(f)(2) requires examination of an alternative location for a project if such locations would result in the avoidance of or lessening of significant impacts. The Project would not result in significant and unavoidable impacts. An alternate location in Alameda County would likely be of comparable size and would pose similar potential environments impacts, which may not be able to be mitigated to a less-than-significant level. The Project applicant has chosen the Project site because it meets the Project objectives and allows for the feasible development of a cemetery. There has not been a cemetery developed in Alameda County in over 110 years. This alternative was rejected from further analysis because an alternate location would not avoid or lessen significant impacts, and there are no known properties that are available to the Project applicant and allow for the feasible development of a cemetery that meet the Project objectives.

5.3.2 PROJECT WITH FUTURE ROAD TO REDWOOD ROAD AND SPRINGTOWN BOULEVARD

The City of Livermore has a future roadway on its General Plan Circulation Map that connects Las Colinas Road with Redwood Road and Springtown Boulevard. The road would be a 2-lane collector street (City of Livermore, 2004). That road would extend about one-half mile from Las Colinas Road and would cross Arroyo Las Positas and other sensitive habitats.

In 2005, the City of Livermore approved a Mitigated Negative Declaration (MND) for a Catholic High School with a capacity of 1,600 students in an undeveloped area north of the Monte Vista Memorial Gardens (MVMG) Project site (City of Livermore, 2005). Primary access was proposed from Las Colinas Road via an extension into the school property from the Las Colinas overpass. Access for emergency vehicles only is proposed from Redwood Road. Otherwise, Redwood Road would be closed to traffic, due to neighborhood objections over the through traffic that would result from the road connection. The Catholic High School Project, as analyzed in the 2005 MND, would not connect Las Colinas Road with Redwood Road for through traffic.

Building the roadway with the Project was rejected from further analysis because the roadway is not needed for the proposed Project. Furthermore, the roadway connecting to Redwood Road would likely have substantial biological and hydrologic impacts, since it would cross through Arroyo Las Positas and other sensitive habitats. It would be unnecessary to build the future road before it is needed to connect with Redwood Road and Springtown Boulevard, or before the Catholic High School Project comes to fruition.

5.3.3 DEVELOP CEMETERY WITHOUT FUNERAL HOME, PAVILLION BUILDING, AND CREMATORIUM

Another alternative that was considered was to develop the Project without the funeral home, pavilion, building, and crematorium and have the Project rely on existing services in the region. This would reduce the intensity of Project development, but it would fail to meet the Project objective of providing a funeral home building with full-service amenities and staff that support the cemetery mission, including an appropriate and peaceful space for religious ceremony and practices intended to accommodate a wide variety of religious and cultural standards or practices

for Tri-Valley residents. Furthermore, this alternative was not further considered because it would create inefficiencies related to operation of the Project (i.e., additional vehicle trips) and this EIR has not identified significant environmental impacts resulting from the location of the funeral home, pavilion building, and crematorium at the proposed Project site.

5.4 NO PROJECT ALTERNATIVE

5.4.1 NO PROJECT ALTERNATIVE DESCRIPTION

If the Project is not approved, the Project site would remain undeveloped and would likely continue to support grazing. Tri-Valley residents would have to utilize existing cemeteries in the region or seek cemetery services outside of the region. Furthermore, Tri-Valley residents would not be provided with a cemetery and Funeral Home building with full-service amenities intended to accommodate a wide variety of religious and cultural standards, including a portion of the cemetery dedicated for Judaism's three major groups. Therefore, the No Project Alternative would not meet the Project objectives.

5.4.2 ENVIRONMENTAL IMPACTS

Aesthetics

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Therefore, the No Project Alternative would have less aesthetics impacts compared to the Project.

Air Quality

Under the No Project Alternative, the Project site would remain vacant, and no construction or operational emissions would be generated. While the Project could potentially reduce air quality emissions regionally by providing a new cemetery for Tri-Valley residents that leads to more efficient vehicle travel, it is too speculative to analyze and quantify the potential air quality emissions decrease in the region from the Project. Therefore, the No Project Alternative would have less air quality impacts compared to the Project.

Biological Resources

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no new ground disturbing activities would occur, the No Project Alternative would avoid potential impacts to biological resources associated with the Project. Therefore, the No Project Alternative would have less biological resources impacts compared to the Project.

Cultural Resources and Tribal Cultural Resources

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no new ground disturbing activities would occur, the No Project Alternative would avoid potential impacts to unknown cultural and tribal cultural resources

(TCRs) that could be associated with the Project. Therefore, the No Project Alternative would have less cultural resources and TCRs impacts compared to the Project.

Geology, Soils, and Seismicity

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no new ground disturbing activities would occur, the No Project Alternative would avoid potential impacts of geology, soils, and seismicity associated with the Project. Therefore, the No Project Alternative would have less geology, soils, and seismicity impacts compared to the Project.

GHG Emissions

Under the No Project Alternative, the Project site would remain vacant, and no construction or operational greenhouse gas (GHG) emissions would be generated. While the Project could potentially reduce GHG emissions regionally by providing a new cemetery for Tri-Valley residents that leads to more efficient vehicle travel, it is too speculative to analyze and quantify the potential GHG emissions decrease in the region from the Project. Therefore, the No Project Alternative would have less GHG emissions impacts compared to the Project.

Hazards, Hazardous Materials, and Wildfire

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no construction or operational activities would occur, the No Project Alternative would have less hazards, hazardous materials, and wildfire impacts compared to the Project.

Hydrology and Water Quality

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no new ground disturbing activities would occur, the No Project Alternative would avoid potential impacts to hydrology and water quality associated with the Project. Therefore, the No Project Alternative would have less hydrology and water quality impacts compared to the Project.

Land Use, Planning, and Agriculture

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. The No Project Alternative would result in no loss of agricultural land. Therefore, the No Project Alternative would have less land use, planning, and agriculture impacts compared to the Project.

Noise

Under the No Project Alternative, the Project site would remain vacant, and no construction or operational noise would be generated. Therefore, the No Project Alternative would have less noise impacts than the Project.

Transportation

Under the No Project Alternative, the Project site would remain vacant, and no construction or operational vehicles trips would be generated. While the Project could potentially reduce vehicle miles traveled (VMT) regionally by providing a new cemetery for Tri-Valley residents that leads to more efficient vehicle travel, it is too speculative to analyze and quantify the potential VMT decrease in the region from the Project. Therefore, the No Project Alternative would have less transportation impacts compared to the Project.

Public Services and Utilities

Under the No Project Alternative, the Project site would remain undeveloped and would likely continue to support grazing. Since no utility connections would occur and Project site would remain vacant, the No Project Alternative would have less public services and utilities impacts than the Project.

Energy

Under the No Project Alternative, the Project site would remain vacant, and no construction or operational energy would be consumed. While the Project could potentially reduce energy regionally by providing a new cemetery for Tri-Valley residents that leads to more efficient vehicle travel, it is too speculative to analyze and quantify the potential energy use decrease in the region from the Project. Therefore, the No Project Alternative would have less energy impacts compared to the Project.

5.5 REDUCED PROJECT FOOTPRINT ALTERNATIVE

5.5.1 REDUCED PROJECT FOOTPRINT ALTERNATIVE DESCRIPTION

The Reduced Project Footprint Alternative would limit the Project site to 20 acres, which is consistent with the North Livermore Urban Growth Boundary Initiative. Under the Reduced Project Footprint Alternative, Phase I would be developed identical to the Project (funeral home and entry plaza, the single-story pavilion building, the access road, the parking lot, two interment areas (burial lots), and landscaping. However, to achieve the 20-acre Project site, Phase II would only develop approximately 13.2 acres west of Arroyo Las Positas for interment areas, roads, new wetlands, and landscaping. It is assumed that the lakes would not be developed under the Reduced Project Footprint Alternative and landscaping areas would be reduced to include as much interment area as possible to support the Project objectives.

The Reduced Project Footprint Alternative would meet or partially meet each of the Project objectives, however it would require a significant reduction in interment areas, which could limit services for future Tri-Valley residents. Furthermore, the Reduced Project Footprint Alternative could potentially reduce the portion of the cemetery used to provide a cemetery exclusively for Judaism's three major groups.

5.5.2 ENVIRONMENTAL IMPACTS

Aesthetics

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. While Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.), more land would remain in its existing condition under the Reduced Project Footprint Alternative. Therefore, the Reduced Project Footprint Alternative would have less aesthetics impacts compared to the Project.

Air Quality

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. While Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.), more land would remain in its existing condition under the Reduced Project Footprint Alternative, which would reduce construction emissions. Operational emissions would be approximately the same as the Project under the Reduced Project Footprint Alternative. Therefore, the Reduced Project Footprint Alternative would have slightly less air quality impacts compared to the Project.

Biological Resources

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. Since less land would be developed, the Reduced Project Footprint Alternative would avoid potential impacts to biological resources on the additional 27 acres associated with the Project. Therefore, the Reduced Project Footprint Alternative would have less biological resources impacts compared to the Project.

Cultural Resources and Tribal Cultural Resources

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. Since less land would be developed, the Reduced Project Footprint Alternative would avoid potential impacts to unknown cultural resources and TCRs that could be on the additional 27 acres associated with the Project. Therefore, the Reduced Project Footprint Alternative would have less cultural resources and TCRs impacts compared to the Project.

Geology, Soils, and Seismicity

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. Since less ground disturbing activities would occur, the Reduced Project Footprint Alternative would avoid potential impacts of geology, soils, and seismicity on the additional 27 acres associated with the Project. Therefore, the Reduced Project Footprint Alternative would have less geology, soils, and seismicity impacts compared to the Project.

GHG Emissions

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. While Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.), more land would remain in its existing condition under the Reduced Project Footprint Alternative, which would reduce construction GHG emissions. Operational GHG emissions would be approximately the same as the Project under the Reduced Project Footprint Alternative. Therefore, the Reduced Project Footprint Alternative would have slightly less GHG emissions impacts compared to the Project.

Hazards, Hazardous Materials, and Wildfire

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. Since less construction and landscaping would occur, the Reduced Project Footprint Alternative would avoid potential impacts to hazards, hazardous materials, and wildfire on the additional 27 acres associated with the Project. Therefore, the Reduced Project Footprint Alternative would have less hazards, hazardous materials, and wildfire impacts compared to the Project.

Hydrology and Water Quality

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. Since less ground disturbing activities would occur, the Reduced Project Footprint Alternative would avoid potential impacts hydrology and water quality on the additional 27 acres associated with the Project. Therefore, the Reduced Project Footprint Alternative would have less hydrology and water quality impacts compared to the Project.

Land Use, Planning, and Agriculture

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. The Reduced Project Footprint Alternative would result in a smaller loss of agricultural land. Furthermore, the Reduced Project Footprint Alternative would be consistent with the North Livermore Urban Growth Boundary Initiative. Therefore, the Reduced Project Footprint Alternative would have less land use, planning, and agriculture impacts compared to the Project.

Noise

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. While Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.), more land would remain in its existing condition under the Reduced Project Footprint Alternative, which would reduce construction noise. Operational noise would be approximately the same as the Project under the Reduced Project Footprint Alternative. Therefore, the Reduced Project Footprint Alternative would have slightly less noise impacts compared to the Project.

Transportation

Under the Reduced Project Footprint Alternative, Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.). The Reduced Project Footprint Alternative would likely generate the same vehicle trips compared to the Project, since the funeral home, crematorium, and other services would still be provided. Therefore, the Reduced Project Footprint Alternative would have the same transportation impacts as the Project.

Public Services and Utilities

Under the Reduced Project Footprint Alternative, Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.). The Reduced Project Footprint Alternative would utilize the same public services and utilities compared to the Project, since the funeral home, crematorium, and other services would still be provided. Therefore, the Reduced Project Footprint Alternative would have the same public services and utilities impacts as the Project.

Energy

Under the Reduced Project Footprint Alternative, only approximately 20 acres would be developed compared to approximately 47 acres under the Project. While Phase I would be developed identical to the Project (i.e., funeral home and entry plaza, the single-story pavilion building, parking lot, etc.), more land would remain in its existing condition under the Reduced Project Footprint Alternative, which would reduce construction energy use. Operational energy use would be approximately the same as the Project under the Reduced Project Footprint Alternative. Therefore, the Reduced Project Footprint Alternative would have slightly less energy impacts compared to the Project.

5.6 ACCESS ROAD COORDINATION ALTERNATIVE

5.6.1 ACCESS ROAD COORDINATION ALTERNATIVE

As indicated in the Notice of Preparation an alternative focusing on the access issues, coupled with resolution of the Abatement Order will form the basis of one of the EIR alternatives. This alternative addresses access road issues, provides an update on the status of the Abatement Order resolution, and advances the planning of a potential connection to a proposed offsite trail in the City of Livermore. This Access Road Coordination Alternative would provide a connection that allows for better pedestrian access for the Project to South of Interstate 580 and connect to a planned trail to the north of the Project. As such, it can be considered an entrance road coordination alternative to the Project, affecting primarily the design, construction, and operation of the access road to the Project site.

Abatement Order

The applicant is currently in active negotiations with the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) to resolve an active Clean-Up and Abatement Order

No. R2-2017-1021. The Abatement Order is due to unauthorized fill placed into jurisdictional waters on these sites (wetlands) including areas that affect the access road to the Project Site. The applicant indicates that both parties are now in agreement that the roadway basic alignment should not be moved to address the Abatement Order, and that the imported soils of concern on the property have been determined to be non-hazardous and do not need to be removed from the property. The remaining negotiations are now focused primarily upon the level of mitigation to compensate for the unauthorized fill (Kahn, 2021).

The Project Description in this EIR (Subsection 2.3.2) states that the County would require Resolution of the Order, prior to any grading, building, or other construction-related permits.

Access Road/Alignment

The current understanding of the abatement order resolution is that the access road alignment will not need to move, the culvert under the north-south portion of the access road will be shortened and the drainage will be daylighted closer to the road alignment. There are no discussion involving moving the alignment of the north-south portion of the access road to the east or the west. Moving the access road would likely result in more construction and negative environmental effects. Coordination with the abatement process would indicate keeping the access road in the same place as the existing alignment of the unimproved access road.

Discussions between the County and the City of Livermore have addressed several considerations related to the future of the access road. The access road is an unimproved County Road that leads to the Project site and the City of Livermore boundary is immediately north of portions of the access road. The discussions have considered long-term plans related to the 2-lane collector street between Las Colinas Road and Redwood Road as envisioned in the City of Livermore General Plan and considered modifications that could occur to the Las Colinas overcrossing because of the Valley Link rail project (Tri-Valley, 2020). However, these projects are long-term and the 2-lane collector street to Redwood Road is not in the foreseeable future, and further complicated by potential changes in the overcrossing because of the Valley Link rail project.

Under this alternative, the north-south portion of the Las Colinas access road would connect to and enhance a nearer-term projects, specifically the Project (MVMG facilities and grounds) and a proposed offsite trail (biking and walking trail) to the north of the project site. **Figure 5-1** shows the general concept for the multi-purpose trail and the connection to the access road as well as the access road and pedestrian trail connection between the Project and the Interstate 580 overcrossing. **Figure 5-2** and **Figure 5-3** show preliminary details for the improvements to the access road, including the pedestrian trail. The offsite trail in the City of Livermore is a currently planned connection between the Las Colinas on the south and Redwood Road on the north, with a path connection (north of Arroyo Seco) also going east to connect with the recently approved Lassen Road Residential Development Project (City of Livermore, 2019). The improvements to Las Colinas access road for the proposed Project (MVMG facilities and grounds) would be designed to accommodate (connect with) this future trail to the north in the City of Livermore.

Source: RCH Group 2021; Google Earth 2021

Figure 5-1
Access Road Coordination
Alternative Map

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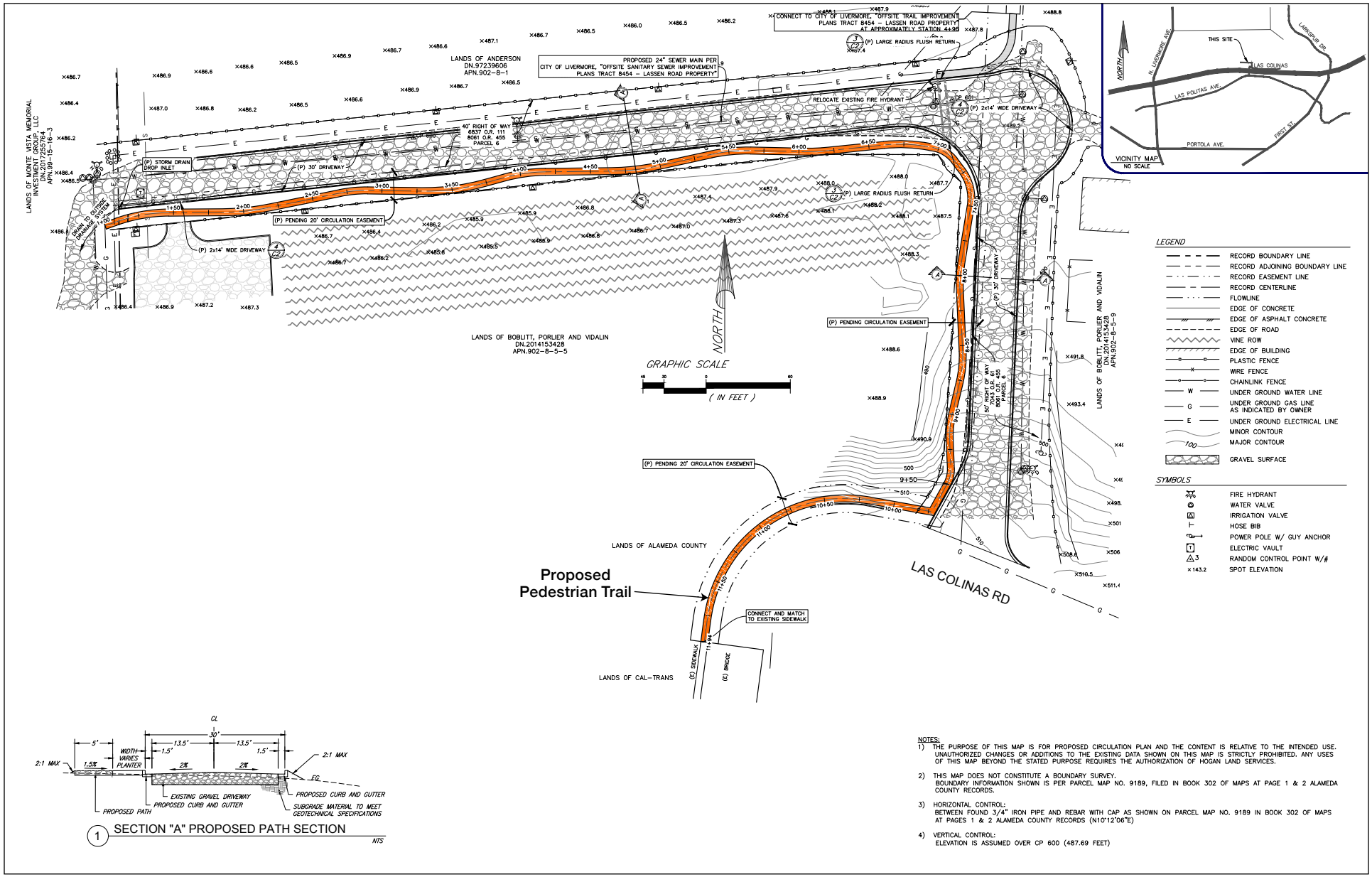
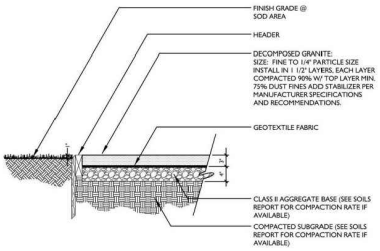


Source: Hogan Land Services 2021

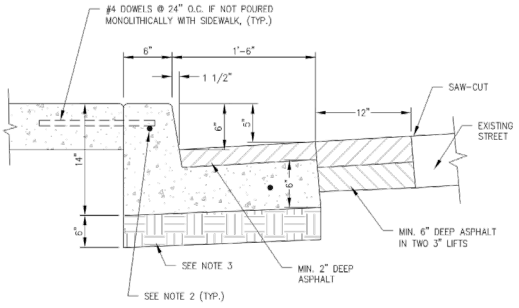
Figure 5-2
Pedestrian Trail Circulation

RCH GROUP
planning & environmental consulting



1 DECOMPOSED GRANITE DETAIL

NTS



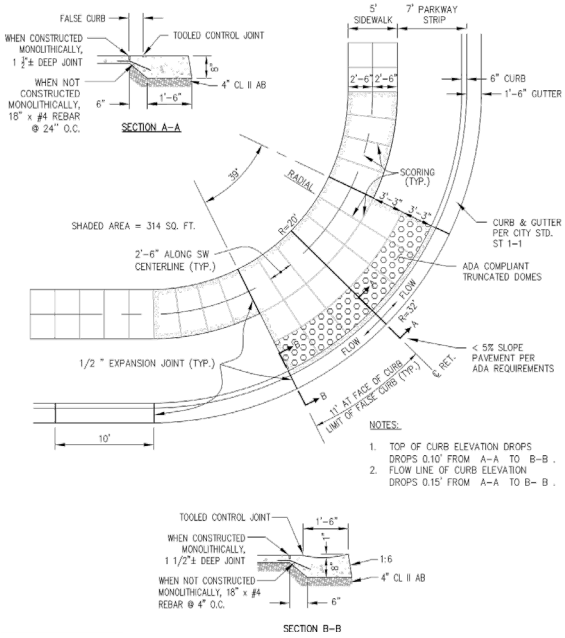
TYPE A CURB WITH ASPHALT
NTS

NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. #4 REBAR CONTINUOUS DOWELS WITH 3" MINIMUM DEPTH INTO EXISTING CURB, 24" O.C. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
3. 6" MINIMUM CLASS 2 A.B. COMPACTED TO 95%.
4. 1/2" DEEP CONTRACTION JOINTS AT 20', 1/4" DEEP CONTRACTION JOINS AT 10'.
5. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
6. ASPHALT TO BE HOT MIX ASPHALT 1/2" MED.
7. CURB AND GUTTER AND SIDEWALK CONSTRUCTION SHALL CONFORM TO CITY STD. ST 1-1.
8. ALL SOFT OR SPONGY SUB-GRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED BY THE CITY ENGINEER.
9. REINFORCING BARS SHALL BE MINIMUM GRADE 40 AND SHALL CONFORM TO SECTION 52, "REINFORCEMENT" OF THE CALTRANS STANDARD SPECIFICATIONS.
10. EPOXY USED FOR BONDING REINFORCING BARS TO EXISTING CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 95, EPOXY AND SECTION 95-2.03, "EPOXY RESIN ADHESIVE FOR BONDING NEW CONCRETE TO OLD CONCRETE" OF THE CALTRANS STANDARD SPECIFICATIONS.
11. CURB AND GUTTER SHALL BE SAWCUT AND REMOVED TO THE NEAREST CONTROL JOINT WHEN PRACTICAL AS DIRECTED BY THE CITY INSPECTOR.

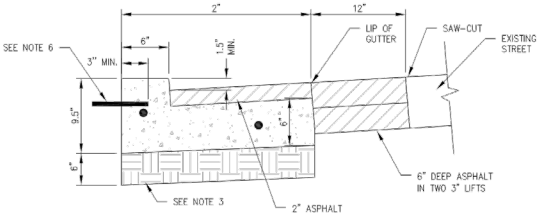
2 TYPE A CONCRETE CURB AND GUTTER WITH ASPHALT

NTS



3 LARGE RADIUS FLUSH RETURN

NTS



CURB AT DRIVEWAY
NTS

NOTES:

1. PRIOR TO BEGINNING ANY WORK, AN ENCROACHMENT PERMIT SHALL BE OBTAINED.
2. TO BE POURED MONOLITHIC WITH DRIVEWAY APPROACH.
3. 6" MINIMUM CLASS 2 A.B. COMPACTED TO 95%.
4. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 90-2, "MINOR CONCRETE" OF STATE SPECIFICATIONS. 3/4" AGGREGATE WITH 1 1/2 POUNDS OF LAMP BLACK PER CUBIC YARD. FINISH TO BE UNIFORM MEDIUM BROOMED TEXTURE.
5. ASPHALT TO BE HOT MIX ASPHALT 1/2" MEDIUM.
6. 12" #4 REBAR DOWELS, 3" MINIMUM DEPTH INTO EXISTING CURB & GUTTER. DO NOT DOWEL PRIVATE IMPROVEMENTS INTO PUBLIC IMPROVEMENTS.
7. SEE DETAIL ST 3 AND ST 4 FOR DRIVEWAY APPROACH
8. SEE DETAIL ST 1-1 FOR CURB AND GUTTER

4 CONCRETE CURB AND GUTTER AT DRIVEWAY APPROACH

NTS

Source: Hogan Land Services 2021

Figure 5-3
Pedestrian Trail Preliminary Details

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5.6.2 ENVIRONMENTAL IMPACTS

Aesthetics

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any aesthetic impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Air Quality

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any air quality impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Biological Resources

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any biological resources impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Cultural Resources and Tribal Cultural Resources

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any cultural resources impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Geology, Soils, and Seismicity

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any geology, soil, and seismicity. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

GHG Emissions

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes

to any GHG emission impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Hazards, Hazardous Materials, and Wildfire

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any hazards, hazardous materials, and wildfire impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Hydrology and Water Quality

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any hydrology and water quality impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Land Use, Planning, and Agriculture

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. This would be a make the Project more consistent with the plans of the City of Livermore. Therefore, the Access Road Coordination Alternative would have less impacts compared to the Project.

Noise

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any noise impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Transportation

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any transportation impacts. The trail could reduce vehicle trips and thus reduce some vehicle miles traveled (VMT), but this would be limited. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Public Services and Utilities

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the

corner of the access road to a planned trail coming from the north. There would be minimal changes to any public services and utilities because the Las Colinas access road would keep its current alignment and any impacts to public services and utilities would be minimal. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

Energy

Under the Access Road Coordination Alternative, the Project would coordinate the improvements of the Las Colinas access road to accommodate a trail to the Project site and a connection near the corner of the access road to a planned trail coming from the north. There would be minimal changes to any energy impacts. Therefore, the Access Road Coordination Alternative would have similar impacts compared to the Project.

5.7 SUMMARY COMPARISON OF ALTERNATIVES

The relative impacts of the various Project alternatives (in comparison to the proposed Project) are shown in **Table 5-1**.

TABLE 5-1. PROJECT ALTERNATIVES COMPARISON

EIR Chapter/Project Impact	No Project Alternative	Reduced Project Footprint Alternative	Access Road Coordination Alternative
Aesthetics	L	L	E
Air Quality	L	L	E
Biological Resources	L	L	E
Cultural Resources and TCRs	L	L	E
Geology, Soils, and Seismicity	L	L	E
GHG Emissions	L	L	E
Hazards, Hazardous Materials, & Wildfire	L	L	E
Hydrology and Water Quality	L	L	E
Land Use, Planning, and Agriculture	L	L	L
Noise	L	L	E
Transportation	L	E	E
Public Services and Utilities	L	E	E
Energy	L	L	E

KEY:
L = Less impact than the Project
E = Equal or similar impacts as the Project
G = Greater impact than the Project

SOURCE: RCH Group, 2021

Table 5-2 shows the ability of each alternative to achieve the Project objectives. As shown by the table, the No Project Alternative fails to meet the Project objectives. The Reduced Project Footprint Alternative partially meets all the Project objectives. The Access Road Coordination

Alternative would be consistent with Objective 1, and would not be applicable to Objectives 2, 3 and 4. The Access Road Coordination but would not be inconsistent with any of the Objectives. As described in the Project Description (Chapter 2) and in Section 5.2 of this Chapter, the Project objectives are as follows:

Objective 1. Develop the Project site with a cemetery that would be considered a low-intensity traffic use consistent Alameda County Measure D.

Objective 2. Provide a cemetery that is conveniently located for present and future Tri-Valley residents.

Objective 3. Provide a Funeral Home building with full-service amenities and staff that support the cemetery mission, including an appropriate and peaceful space for religious ceremony and practices intended to accommodate a wide variety of religious and cultural standards or practices for Tri-Valley residents.

Objective 4. A portion of the cemetery would be used to provide a cemetery area that would be exclusively for the Jewish Community. The Jewish community is an estimated 40,000 members in Alameda County, with approximately 10,000 members in the Tri-Valley area. This cemetery would provide services for Judaism's three major groups (Orthodox, Conservative and Reform) and accommodate religious restrictions unique to each of the major groups.

TABLE 5-2. ALTERNATIVES ABILITY TO MEET PROJECT OBJECTIVES COMPARISON

Objectives	No Project Alternative	Reduced Project Footprint Alternative	Access Road Coordination Alternative
Objective 1	N	✓	✓
Objective 2	N	X	NA
Objective 3	N	✓	NA
Objective 4	N	X	NA

KEY:
✓ = Alternative substantially achieves objective
X = Alternative partially achieves objective
N = Alternative does not achieve objective
NA = Alternative is not applicable to the objective, would not hinder objective

SOURCE: RCH Group, 2021

5.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The Reduced Project Footprint Alternative meets or partially meets all the Project objectives (as depicted in **Table 5-2**). The Reduced Project Footprint Alternative only partially meets Objective 2 and 4, since it would limit the Project site to 20 acres compared to 47 acres under the proposed Project. The reduction in Project site size creates a significant reduction in interment areas, which could limit services for future Tri-Valley residents. Furthermore, the Reduced Project Footprint Alternative could potentially reduce the portion of the cemetery used to provide a cemetery exclusively for Judaism's three major groups.

The Access Road Coordination Alternative has no impacts that would be greater than the Project (as shown in **Table 5-1**). The Access Road Coordination would result in less impacts to Land Use and Planning.

Since Reduced Project Footprint Alternative substantially meets Project Objectives 1 and 3 and partially meets Objectives 2 and 4, while reducing impacts to all resource areas except for public services and utilities, and transportation, and having no impacts greater than the Project, the Reduced Project Footprint Alternative is the environmentally superior alternative. However, the proposed Project meets all the objectives and could serve Tri-Valley residents farther into the future and a larger portion of the cemetery that would be used exclusively for the Jewish Community, compared to the Reduced Project Footprint Alternative.

5.9 REFERENCES

City of Livermore. 2019. *Lassen Road Residential Development Project Initial Study/Mitigated Negative Declaration*. September 9, 2019.

Khan, Ron. 2021. CEO/Manager*, Magen David Memorial Investment Group, LLC.* Telephone conversation with Paul Miller, RCH Group, on October 29, 2021.

Tri-Valley – San Joaquin Valley Regional Rail Authority. 2020. *Valley Link Draft Environmental Impact Report*, December 2020.

CHAPTER 6

EIR AUTHORS, PERSONS, AND ORGANIZATIONS CONTACTED

6.1 LEAD AGENCY EIR AUTHORS

Alameda County

Community Development Agency
224 West Winton Ave, Room 111
Hayward, CA, 94544

Albert V. Lopez, Planning Director

6.2 EIR CONSULTANTS

RCH Group, Inc.

Project Manager	Paul Miller, M.S.
Deputy Project Manager	Daniel Jones
Project Description & Introduction	Paul Miller, M.S. Daniel Jones
Aesthetics	Luis Rosas
Air Quality, Energy, & Greenhouse Gas Emissions Sections	Daniel Jones
Land Use and Planning and Agricultural Resources	Richard Grassetti, M.A. Luis Rosas
Noise Section:	Paul Miller, M.S. Luis Rosas
Hazards, Hazardous Materials and Wildfire:	Paul Miller, M.S. Luis Rosas
Hydrology and Water Quality	Richard Grassetti, M.A. Luis Rosas
Geology and Soils	Richard Grassetti, M.A. Nate Berls
Public Services, Utilities and Service Systems:	Luis Rosas
Transportation Section	Paul Miller, M.S.
Impact Overview (Other CEQA Topics)	Daniel Jones
Alternatives Analysis	Daniel Jones
Graphics (September People, LLC)	Linda Uehara

Barnett Environmental

Wetland and Biological Resources Assessment	Bruce Barnett, Ph.D.

Peak & Associates, Inc.

Cultural Resources Assessment	Melinda A. Peak, M.A.
Field Surveyor	Michael Lawson

Environmental Permitting Specialists

Health Risk Assessment	Ray Kapahi, MEng.

PHA Transportation Consultants

Focused Traffic Study	Pang Ho, AICP

6.3 PERSONS AND ORGANIZATIONS CONSULTED

List of other people and organizations consulted are provided in the references at the end of each section.

CHAPTER 7
ACRONYMS

7.1 ACRONYMS USED IN EIR

AAQS: Ambient Air Quality Standards

AB: Assembly Bill

ABAG: Associate of Bay Area Governments

ACDEH: Alameda County Department of Environmental Health

ACFD: Alameda County Fire Department

ACMC: Alameda County Municipal Code

ACOE: United States Army Corps of Engineers

ADA: Americans with Disabilities Act

AF: acre-feet

BAAQMD: Bay Area Air Quality Management District

BACT: Best Available Control Technology

BMPs: Best Management Practices

BTU: British thermal unit

CAFE: Corporate Average Fuel Economy

CalEEMod: California Emissions Estimator Model

CalEPA: California Environmental Protection Agency

CALgreen: California Green Building Standards Code

CalOSHA: California Division of Occupational Safety and Health

CalRecycle: California Department of Resources Recycling and Recovery

CalTrans: California Department of Transportation

CAAQS: California Ambient Air Quality Standards

CARB: California Air Resources Board

CAP: Climate Action Plan

CARI: California Aquatic Resources Inventory

CBC: California Building Code

CCR: California Code of Regulations

CDC: California Department of Conservation

CDFW: California Department of Fish and Wildlife

CDHCS: California Department of Health Care Services

CEC: California Energy Commission

CEQA: California Environmental Quality Act

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act

CERS: California Environmental Reporting System

CESA: California Endangered Species Act

CFGC: California Fish and Game Code

CFP: California Fully Protected

CFR: Code of Federal Regulations

cfs: cubic feet per second

CFWC: California Fish and Wildlife Commission

CGP: Construction General Permit

CHP: California Highway Patrol

CH_4: methane

CHRIS: California Historical Resources Information System

CI: carbon intensity

CNDDB: California Natural Diversity Database

CMA: Congestion Management Agency

CNEL: Community Noise Equivalent Level

CNPS: California Native Plant Society

COVID-19: Corona Virus Disease

CO_2: carbon dioxide

CO_{2e}: carbon dioxide equivalents

CPUC: California Public Utilities Commission

CRHR: California Register of Historical Resources

CRPR: California Rare Plant Rank

CSSC: California Species of Special Concern

CUP: Conditional Use Permit

CUPA: Certified Unified Program Agency

CT: California Threatened

CTC: County Transportation Commission

CTS: California Tiger Salamander

CWA: Clean Water Act

CZ: Conservation Zone

dBA: A-weighted decibel

dB: decibel levels

DEIR: Draft EIR

DOT: United States Department of Transportation

DPR: California Department of Pesticide Regulation

DTSC: California Department of Toxic Substances Control

EACCS: East Alameda County Conservation Strategy

EAP: Energy Action Plan

ECAP: East County Area Plan

EIR: Environmental Impact Report

EMFAC: emission factor model

EPA: Environmental Protection Agency

EPAct: Energy Policy Act of 1992

ESA: Endangered Species Act

EV: Electric Vehicle

FAR: floor area ratio

FCAA: Federal Clean Air Act

FE: Federally Endangered

FESA: Federal Endangered Species Act

FEMA: Federal Emergency Management Agency

FHWA: Federal Highway Administration

FIRMs: Flood Insurance Rate Maps

FR: Federal Register

FT: Federally Threatened

FTA: Federal Transit Administration

GDP: Gross Domestic Product

GHG: greenhouse gases

gpm: gallons per minute

GWh: gigawatt hour

GWP: global warming potential

HAP: hazardous air pollutant

HFCs: hydrofluorocarbons

HMBP: Hazardous Materials Business Plan

HRA: health risk assessment

IEPR: Integrated Energy Policy Report

in: inch

iPAC: Information for Planning and Consultation

IPCC: Intergovernmental Panel on Climate Change

ITE: Institute of Transportation Engineers

HOV: High Occupancy Vehicle

LCFS: low carbon fuel standard

L_{dn}: Day-night Average Sound Level

$L_{eq:}$ Equivalent Sound Level

LEV: low emissions vehicle

LOS: Level of service

LPA: Large Parcel Agriculture

LRA: Local Responsibility Area

LSAA: Lake or Streambed Alteration Agreement

m: meter

MBTA: Migratory Bird Treaty Act

MLD: most likely descendants

MM: mitigation measures

MMRP: Mitigation Monitoring and Reporting Program

MPOs: Metropolitan Planning Organizations

msl: mean sea level

MTC: Metropolitan Transportation Commission

MVMIC: Monte Vista Memorial Investment Group, LLC

MVMG: Monte Vista Memorial Gardens

MW: megawatt

N_2O: nitrous oxide

NAAQS: National Ambient Air Quality Standards

NAHC: Native American Heritage Commission

NCCP: Natural Communities Conservation Plan

NFHL: National Flood Hazard Layer

NHPA: National Historic Preservation Act

NHTSA: National Highway Traffic Safety Administration

NMFS: National Marine Fisheries Service

$NO_{2:}$ nitrogen dioxide

NOV: notice of violation

$NO_{x:}$ nitrogen oxides

NOP: Notice of Preparation

NPDES: National Pollutant Discharge Elimination System

NRCS: National Resources Conservation Service

NRHR: National Register of Historic Places

NWI: National Wetlands Inventory

NWIC: Northwest Information Center

O_3: ozone

O&M: operation and maintenance

OEHHA: Office of Environmental Health Hazard Assessment

OHWM: Ordinary High-Water Mark

OPR: Governor's Office of Planning and Research

OWTS: On-site wastewater treatment systems

PFCs: perfluorocarbons

PG&E: Pacific Gas and Electric

PM: particulate matter

PM2.5: fine particulate matter (less than 2.5 micrometers in diameter)

PM10: particulate matter (less than 10 micrometers in diameter)

ppm: parts per million

PRC: California Public Resources Code

PSD: Prevention of Significant Deterioration

PV: Photovoltaic

QSD: Qualified SWPPP Developer

QSP: Qualified SWPPP Practitioner

RCRA: Resource Conservation and Recovery Act

REL: reference exposure level

ROG: reactive organic gases

RPS: renewable portfolio standard

RTP: Regional Transportation Plan

RWQCB: Regional Water Quality Control Board

SAF Plan: State Alternative Fuels Plan

SARA: Superfund Amendments and Re-authorization Act of 1986

SB: senate bill

SCE: State Candidate Endangered

SCH: State Clearinghouse

SCS: sustainable community strategy

SCT: State Candidate Threatened

sf: square feet

SFBRWQCB: San Francisco Bay Regional Water Quality Control Board

SHPO: State Historic Preservation Office

SO_2: sulfur dioxide

SRA: State Responsibility Area

SF_6: sulfur hexafluoride

SWITRS: Statewide Integrated Traffic Records System

SWPPP: stormwater pollution prevention plan

SWRCB: State Water Resources Control Board

TAC: toxic air contaminant

T-BACT: Best Available Control Technology for Toxics

TCRs: tribal cultural resources

TMDL: Total Maximum Daily Loads

TIMS: Traffic Injuries and Mapping System

ug/m3: micrograms per cubic meter

USACE: United States Army Corps of Engineers

USC: United States Code

U.S. EPA: United States Environmental Protection Agency

VHFHSZ: Very High Fire Hazard Severity Zones

VMT: Vehicle Miles Traveled

VOC: volatile organic compounds

VPD: Vehicles Per Day

WDR: Waste Discharge Requirements

WOUS: Waters of the U.S.

ZEV: Zero Emissions Vehicle